Leicester and Leicestershire Strategic Distribution Sector Study

Part B Interim Report

A technical report prepared for the Leicester & Leicestershire Housing Planning & Infrastructure Group by:

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CONTENTS

1. INTRODUCTION

1.1 *MDS Transmodal and Savills* were commissioned in December 2013 by *the Leicester and Leicestershire Housing Planning and Infrastructure Group (HPIG)* to undertake a study examining the strategic distribution sector in the county. HPIG represents the county's local planning authorities, Leicestershire County Council and the *Leicester and Leicestershire Local Enterprise Partnership (LLEP)* on spatial planning matters. The main objectives of the study are to enable a better understanding of the sector and objectively determine future need, together with managing change and supporting sustainable economic growth. The completed study will recommend a strategy to enhance the area's current competitive advantage in the strategic distribution sector, and it will ultimately inform LLEP plans/strategies and the development of future local plans across Leicestershire[1].

1.2 The study is being undertaken in three phases, as follows

- Part A: Review and Research;
- Part B: Planning for Change and Growth; and
- Part C: Developing a Strategy for the Distribution Sector in Leicestershire.

1.3 An interim report covering *Part A* of the study was presented to the planning authorities and LLEP in *Spring 2014*. It essentially presented a 'baseline' position with regards to the distribution sector in Leicestershire. It provided an overview of the strategic distribution sector, both nationally and in Leicestershire, established the existing supply of large scale warehousing in the county, described the key locational characteristics enjoyed by commercially attractive logistics sites, provided an overview of employment in the Leicestershire strategic distribution sector and contribution to Gross Value Added (GVA) alongside the current policy context. It concluded that Leicestershire has established a distinct competitive advantage in the strategic logistics sector, generating significant employment and contribution to regional GVA.

1.4 This document forms the formal written report covering *Part B* of the study (the requirements of Part B, taken from the study Terms of Reference, are detailed in Appendix 1). It concerns planning for change and growth, including forecasts of future land requirements for strategic distribution in Leicestershire. Both the Part A and Part B reports will

[1] The main study area, the county of Leicestershire, is the same as that covered by the LLEP. In local Government terms, the study area comprises the City of Leicester unitary authority along with those parts of the county administered by Leicestershire County Council and the seven district councils. For ease and consistency, 'Leicestershire' is the term used throughout to refer to the LLEP area and these local authorities on a collective basis. Where relevant, areas adjacent to the main study area are also considered.

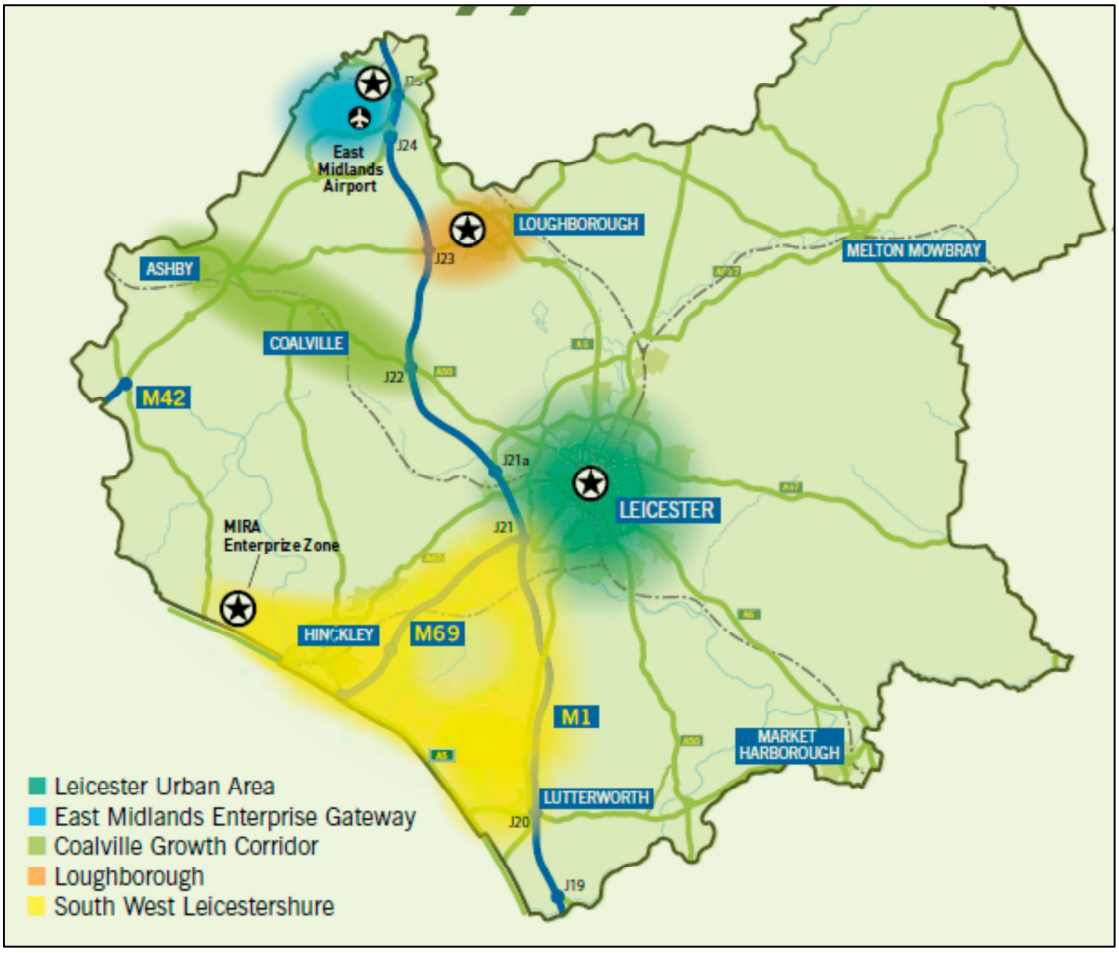
subsequently inform Part C of the study – developing a strategy. In brief, this Part B report covers the following elements:

- An overview of the key challenges and threats facing the strategic distribution sector;
- Undertakes forecasts of future freight flows to/from large scale warehousing in Leicestershire and the East Midlands;
- Forecasts future demand for large scale warehouse floor space in Leicestershire and the East Midlands, and hence the quantum of land likely to be required up to 2036;
- Assesses the quality and quantity of existing sites with B8 consents or in the planning pipeline (site supply), and hence identifying the need for additional land to come forward up to 2036;
- Recommends key 'areas of opportunity' where future new large scale warehouse floor space should be located; and
- Undertakes, at a strategic level, the likely economic and employment benefits associated with the land use forecasts.

1.5 It is important to note that this document is a technical report which will inform the future development of planning policy and economic strategy. The views expressed are those of the consultants and should not be interpreted as policy.

1.6 It is also important that this document (and the study as a whole) is considered alongside the LLEP's Strategic Economic Plan 2014-2020 (SEP). The 'ambition' of the SEP is to create an additional 45,000 jobs, lever £2.5 billion of private investment and increase Gross Value Added (GVA) by £4 billion to 2020. In particular, the SEP is promoting five growth areas in Leicestershire, as illustrated on the map below (reproduced from the SEP).

Map 1.1: The LLEP Growth Areas



1.7 Noting that there is a lack of suitable employment land for key sectors (including logistics), one of the key priorities of the SEP is the delivery of infrastructure investment, which can then be used to unlock key development sites and employment land in the identified growth areas. The East Midlands Gateway Strategic Rail Freight Interchange is also identified as one of the four 'transformational priorities' in the SEP. The LLEP's SEP is available to download from the following link: www.llep.org.uk/SEP.

2. KEY THREATS AND OPPORTUNITIES FACING THE STRATEGIC DISTRIBUTION SECTOR IN LEICESTERSHIRE

Section 2.1: Challenge from Other Regions and Port Centric Logistics

2.1 The Part A report demonstrated that the 'golden triangle'[2], of which the Leicestershire sub-region is central, has to date established a distinct competitive advantage in the logistics sector. It has become the competitive 'location of choice' in both supply chain cost and performance terms when sourcing and distributing on a national basis. A high concentration of warehouse floor space has subsequently been developed in the Leicestershire sub-region and the East Midlands region, the quantum identified being significantly larger than required to serve regional demand (see Part A report for the detailed analysis and data). The three main reasons explaining this competitive position were identified, as follows:

- The 'golden triangle' is broadly central to the major domestic production sites, the deep-sea and Channel ports (for imported cargo) and RDCs in other regions (the next stage in the supply chain).
- The release of large competitive sites by local authorities for B8 use during the 1980s which were close junctions on the M1/M6. This, combined with the above reason, meant that most inbound or outbound cargo movements could be undertaken within 4.5 hours drive time, this being half a HGV driver's daily driving limit. Consequently, a HGV could round-trip within a driver's shift (enabling a HGV to undertake at least two round-trips over a 24 hour period); and
- Historically, relatively low road haulage costs (in turn driven by low fuel costs) and competitive labour rates.

2.2 However, market conditions can and do change over time. As market conditions change, a previously held competitive advantage can diminish unless action is taken to address the changes. This could include the inability to bring forward new commercially attractive strategic sites (of the size, scale and location required by the market), a situation which would be compounded by other regions (which hitherto had not been associated with national distribution) developing sites of the size and scale required by the market. With respect to the second issue, two important emerging challenges to the golden triangle's competitive advantage in national distribution (and by extension the Leicestershire sub-region) can be identified, namely:

[2] As per the Part A report, this study has taken the broader definition of the 'golden triangle', namely the area broadly enclosed by Milton Keynes, Birmingham and north Leicestershire (along the M1 and M6 corridors). In regional terms it therefore straddles the East and West Midlands, albeit most of the area is within the East Midlands region.

- The emergence of competing inland locations/sites outside to the north and east of the 'golden triangle', in particular in the north Midlands, South Yorkshire and the East of England, which to date have not been associated with national distribution; and
- The development of B8 land within port estates (so called port centric logistics) which is intended to serve a national market.

2.3 Both of these emerging challenges involves the development of NDCs in regions/locations which to date have not generally accommodated such facilities. The north Midlands/South Yorkshire has generally been considered 'too far north' for NDCs, while historical industrial relations issues within ports (among other issues) previously rendered them uncompetitive.

2.4 As will be demonstrated further below, the key to addressing both of these challenges, and hence maintain the established competitive advantage, is the continued development of new commercially attractive strategic sites in the East Midlands, a significant proportion of which will need to be directly rail-served (in addition to the usual requirements for high quality connections to the strategic highway network).

Competing Sites to the North and East of the Golden Triangle

2.5 While the main logistics strategy adopted by the major national distributors is likely to remain as per the 'golden triangle' model described in the Part A Report i.e. goods flowing from NDCs to RDCs and then to end users, potentially the preferred inland location of the NDCs could migrate away from the golden triangle to other regions.

2.6 Former colliery and heavy industrial sites are being released for B8 development in areas to the north and east of the golden triangle (e.g. former coalfields of north Nottinghamshire and South Yorkshire etc.). Local authorities are often promoting/supporting the regeneration of such brownfield sites for job creation and remediation purposes. Examples include:

- Markham Vale, close to M1 Jct 29a near Chesterfield. The development comprises around 80ha, non rail-served; and
- Rossington Inland Port, near Doncaster. A rail-served site (in planning terms a *Strategic Rail Freight Interchange* or *SRFI* – see Part A report) offering around 500,000 sq metres of floor space and an intermodal terminal.

2.7 The Rossington Inland Port site has excellent rail connections (generous loading gauge, direct links to deep-sea ports etc..), large plots for units up to 100,000 sq metres and will be served by a new road link from the A1. However, many of the other sites being promoted are either not rail-served (e.g. Markham vale) or if rail-connections are available (e.g. it is a former rail-served colliery) they are unsuitable for large scale rail-served warehousing. This being due to their total size and configuration (not being of a scale capable of generating multiple daily

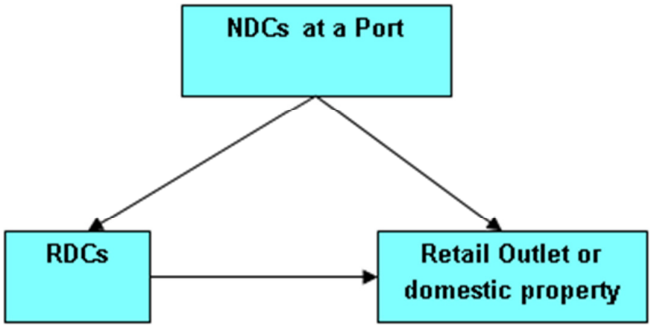
train services or the large plots now required by the market) along with the overall quality of the rail connections (such as poor loading gauge for intermodal traffics). Further, such sites are not ideally located in relation to the main deep-sea and Channel ports and domestic suppliers, and are located more distant from London and the South East (the largest onward distribution market for retail/consumer cargo). Inbound and outbound transport costs are therefore likely to be higher when compared with the golden triangle. Their attractiveness to the logistics market, however, is based on the following:

- Highly competitive rents compared with the 'golden triangle' (partly due, in many cases, to public sector contributions to the cost of site regeneration);
- Lower labour costs, being located in areas of high unemployment.

2.8 Occupiers may therefore seek these lower costs sites (at the expense of higher transport costs – inbound and outbound) given that commercially attractive sites in the Midlands might not be available.

Port Centric Logistics

2.9 The increasing sourcing of goods from eastern European and Far Eastern manufacturers suggests a 'port centric' approach' for some players in the market. This is illustrated in the flow diagram below.



2.10 The port centric model involves NDCs being located within or very close to port estates so that they can be directly served from the quay without use of public road network. As per the logistics strategy adopted by the major national distributors, outbound flows are direct to retail outlets or RDCs. When the great majority of cargo handled through a NDC is imported, it can make economic and logistical sense to store that cargo at a port, rather than transporting it to the Midlands only to re-distribute a substantial proportion back to the South East coastal regions through which it has just passed through. The port centric model

therefore removes a 'transport leg' from the supply chain (i.e. the inland haul from port to NDC), thereby saving distributors part of the overall supply chain transport costs.

2.11 Opportunities exist for port centric NDCs at London Gateway, Immingham/Killingholme, Teesport and the Mersey Ports (and with smaller scale schemes potentially available at Felixstowe and Dover). Asda and Tesco have both developed port centric NDCs within the port estate at Teesport (served by feeder vessels from mainland European ports) and further sites are currently available in/near the port. The major port centric opportunity is at the new London Gateway deep-sea container port (which opened for traffic in Autumn 2013), where 150ha of land behind the quay (with B8 consents) is currently available for port centric warehousing, sufficient to accommodate over 800,000 square metres of floor space. Sites 'within' the Mersey Ports estate include Port Warrington, Port Salford and Seaforth (redevelopment of land behind the existing port estate), with the inland sites being served by barge from Seaforth along the Manchester Ship Canal. These are medium-long term developments likely to be brought forward over the next 10-20 years. The Port of Bristol also had plans for a deep-water container berth on the Severn estuary, although recent announcements suggest this proposal has now been put on ice.

2.12 The case for a port centric strategy is therefore essentially based on the following three drivers:

- A potential lack of suitable large sites in the golden triangle, both non rail-linked sites and particularly rail served locations;
- The alternative inland locations to the north and east of the golden triangle (Nottinghamshire, Yorkshire) result in higher transport costs (and increased CO_2 emissions); and
- The ability to receive cargo into an NDC direct from the quay, thereby removing a 'transport leg' from the supply chain (costs and CO_2 emissions).

2.13 This strategy may only be cost effective when the vast majority of inbound traffic is imported via the port in question (the occupier is essentially tied to the port, whereas the golden triangle is broadly equidistant from all the main deep-sea and Channel Ports). This option is therefore potentially uneconomic where a substantial proportion of the inbound cargo handled through the warehouse is imported via other ports (e.g. Channel Ports) and/or from domestic sources.

Addressing the Challenges

2.14 The Part A report (Section 7) reviewed the draft *National Planning Statement (NPS)*, and in particular the provisions contained in the draft NPS with respect the development of *Strategic Rail Freight Interchanges (SRFIs)*. SRFIs are defined in the NPS as large multi-

purpose freight interchanges and distribution centres greater than 60ha which are linked to both the rail and trunk road system. DIRFT is an example of a current SRFI in the East Midlands region. Smaller developments (i.e. below the 60ha threshold) and individual warehouses can also be both road and rail-linked.

2.15 In all cases, it is important to appreciate that such facilities are essentially road-based distribution sites which are also rail-served, and the majority of cargo (in terms of tonnes lifted) can be expected to move by road. However, locating strategic distribution activity at such rail-served sites (e.g. at SRFIs) also allows cargo to be loaded or discharged directly from railway wagons without the need to use any intermediate road transport. This offers the market 'modal choice' and allows a proportion of the cargo to arrive/depart by rail where it offers a cost competitive solution.

2.16 Consider rail freight operating costs, which are around £11 per train km on a gate-to-gate basis for a standard intermodal train. For a trip of 250km to a NDC located on a rail-served logistics site (e.g. DIRFT) and assuming 30 container units per train, the train operating costs per unit would be approximately £92 i.e. (250km x £11)/30 containers. Terminal lift and shunting charges at both ends would amount to around £90 per unit (e.g. lift container unit to train at origin port, and then lift and shunt container unit to on-site warehousing at the rail-served inland logistics site), meaning that total door-to-door delivery costs would be around *£182 per unit delivered*.

2.17 If the inland destination NDC is not rail-served, a road haul via the public highway network is required to transfer the container unit to/from a suitable rail terminal (e.g. from DIRFT to Magna Park). In this case, terminal lift and local road haul charges would be around £220 per container unit (£150 per road haul). Total door-to-door delivery costs to the non rail-served NDC would therefore be around *£312 per unit delivered* – a significant premium over the rail-served destination. This additional transport leg (and handling) adds costs into the supply chain, thereby rendering rail more expensive when compared with road transport operating directly from origin to destination (except for long distance flows). The equivalent road haulage costs from direct port to inland destination (either rail/non rail-served) would be around *£300 per unit delivered*.

2.18 Consequently, where cargo flows are from a rail connected origin e.g. deep-sea container port to a rail-connected distribution centre or between rail-served warehouses (no road hauls), rail freight generally is always cost competitive compared with road transport over any distance given adequate volume to fill a daily full-length train. However, where one end of the trip is not rail-served, e.g. deep-sea container port to a non rail-connected distribution centre or between warehouses where only one is rail-served (and therefore requiring a road haul from a suitable rail terminal), rail freight generally becomes cost competitive with road transport at distances over 250km. Where both ends are non rail-served (i.e. a road haul is

required at both ends of the journey), rail freight generally becomes cost competitive at distances over 400km.

2.19 The above can be considered further by assessing total supply chain operating costs which would be incurred by a NDC occupier located in the golden triangle and at the competing locations/sites identified in the previous sub-sections. We have therefore considered a hypothetical 80,000 sq m (860,215 sq ft) NDC located in the golden triangle, South Yorkshire and at London Gateway, and estimated the annual costs of distributing cargo from ports/domestic suppliers via the NDC to RDCs nationally at each location. In the case of the golden triangle and South Yorkshire, NDCs at road and rail-served sites and at road only connected sites are both assumed (London Gateway being road and rail-served).

2.20 The estimated annual operating costs for a NDC at each location are shown in the table below. It is assumed that there is no warehouse rental 'premium' for a site which is both road and rail-served when compared with a site which is only road-linked.

Table 2.1: Estimated NDC Annual Operating Costs

	Golden Triangle	South Yorks	London Gateway
Floor space (sq m/sq ft)	80,000/860,215	80,000/860,215	80,000/860,215
Rental per sq ft	£6.50	£5.00	£8.00
Annual Rental	*£5.6 million*	*£4.3 million*	*£6.9 million*
Wage rate/hr	£8.50	£7.50	£10.00
Full time employees (140 sqm per FTE)	571	571	571
Annual wages	*£15.8 million*	*£13.9 million*	*£18.5 million*
Management and overheads (20% of rental and wages)	*£6.6 million*	*£5.7 million*	*£7.9 million*
Total annual costs	**£25.6 million**	**£21.8 million**	**£30.5 million**

Source data: consultants estimates and calculations

2.21 Given the lower rental and wages rates in South Yorkshire compared with the golden triangle, the annual operating costs of a warehouse of this size are around £4 million lower (albeit the golden triangle is more competitive than London Gateway, given its higher rental and wage rates). However, this is only part of the equation, and inbound and outbound transport costs need to be accounted for. This is also possible to estimate using a cost model approach for a number of operating scenarios[3], and these are shown in the table below.

[3] The GB Freight Model incorporates road and rail cost models which allows transport costs by mode to be established.

Table 2.2: Estimated per Unit Transport Costs

Flow	Transport Costs (£ per HGV equivalent unit)
Felixstowe to golden triangle NDC – road only site[1]	£319
Southampton to golden triangle NDC – road only site [1]	£314
Felixstowe to golden triangle NDC – rail-served site	£189
Southampton to golden triangle NDC – rail-served site	£184
London Gateway port centric NDC	£50
Felixstowe to South Yorks NDC – road only site [1]	£334
Southampton to South Yorks NDC – road only site [1]	£347
Felixstowe to South Yorks NDC – rail-served site	£204
Southampton to South Yorks NDC – rail-served site	£217
Dover to Golden Triangle (HGV)	£336
Dover to London Gateway (HGV)	£262
Dover to South Yorks (HGV)	£465
Domestic to/from golden triangle – rail-served site[2]	£202
Domestic to/from golden triangle – road only site[3]	£204
Domestic to/from London Gateway[2]	£257
Domestic to/from South Yorks – road only site[3]	£263
Domestic to/from South Yorks – rail-served site[2]	£250

Source data: consultants estimates and calculations

1. By rail to local rail terminal in the first instance, then local road haul to NDC
2. Mean cost weighted by cargo origin/destination, using road or rail whichever is lowest cost
3. Mean cost weighted by cargo origin/destination, using road only

2.22 Note that in general, inbound transport costs to rail-served sites from the deep-sea ports are considerable lower when compared with a road only location (further demonstrating the analysis above and partly explaining why occupiers are now seeking rail-served sites). Serving a warehouse direct from an on-site intermodal terminal is significantly more cost efficient than a local road haul to a road only warehouse.

2.23 However, the important conclusion to note from the above analysis is that inbound transport costs from the deep-sea ports to a rail-served golden triangle site are considerably lower when compared with a road only site in South Yorkshire (where a local road haul would be

required from a suitable rail terminal e.g. Doncaster to the NDC). Even for a rail-served site in South Yorkshire, the golden triangle offers marginally lower rail costs given it is less distant to the deep-sea ports. Also note that for port centric facilities, inbound transport costs from the quay are significantly lower.

2.24 Further, for imported cargo via the Dover Straits using accompanied road haulage, transport costs to the golden triangle are significantly lower when compared with South Yorkshire given the reduced distances involved. Likewise, domestic distribution to/from the golden triangle is more competitive when compared with South Yorkshire and London Gateway. The golden triangle is therefore more centrally located in relation to the main domestic sources of cargo and the main onward distribution markets for retail/consumer cargo.

2.25 Using these figures, the annual inbound and outbound transport costs to/from our 80,000 sq metre NDC can be estimated for different scenarios (an 80,000 sq metre NDC can be expected to receive and despatch around 51,000 HGV equivalent units per annum). In this case, the following scenarios have been tested:

- Scenario 1: A NDC exclusively handling deep-sea imported cargo; and
- Scenario 2: A NDC handing cargo from a mixture of sources; deep-sea (10%), EU (25%) and domestic 65%. This represents the broad split by ultimate cargo origin for consumer type goods passing along supply chains.

2.26 Scenario 2 essentially represents the broad origins of general cargo moved within Great Britain currently on a national basis. A typical NDC, in terms of cargo origins, can therefore be expected to fall somewhere between Scenarios 1 and 2.

2.27 Essentially, the number of HGV-equivalent units from each origin has been multiplied by the respective transport rate to estimate total inbound transport costs. In the case of deep-sea traffic, it is assumed that containers will arrive from Felixstowe (60%) and Southampton (40%), except for London Gateway where all containers will arrive via the port. EU imports are assumed to pass through the Dover Straits by accompanied road haulage. The table below shows the results of the exercise.

Table 2.3: Estimated Total Supply Chain Costs

Scenario 1 – Deep-sea

	£ million pa NDC operating costs	Inbound transport costs	Outbound transport costs	**Total costs**
Golden Triangle - rail-linked	£25.62	£16.66	£10.31	**£52.59**
Golden Triangle - road only	£25.62	£28.27	£10.42	**£64.31**
S Yorks - rail-linked	£21.85	£18.70	£12.73	**£53.28**
S Yorks - road only	£21.85	£30.30	£13.40	**£65.55**
London Gateway port centric	£30.51	£5.10	£13.12	**£48.73**

100% deep-sea inbound; 60% Felixstowe, 40% Southampton
Inbound 100% rail, via local terminal and road haul for road only
Internal shunt for London Gateway

Scenario 2 – Deep-sea, EU and Domestic

	£ million pa NDC operating costs	Inbound transport costs	Outbound transport costs	**Total costs**
Golden Triangle - rail-linked	£25.62	£12.65	£10.31	**£48.57**
Golden Triangle - road only	£25.62	£13.88	£10.31	**£49.81**
S Yorks - rail-linked	£21.85	£16.08	£12.73	**£50.66**
S Yorks - road only	£21.85	£17.67	£13.40	**£52.92**
London Gateway port centric	£30.51	£12.37	£13.12	**£56.00**

10% deep-sea inbound;60% Felixstowe, 40% Southampton
Deep-sea inbound 100% rail, via local terminal and road haul for road only
25% EU; all from Dover by HGV

2.28 For the deep-sea only scenario, it can be seen that the port centric solution does indeed generate the lowest cost solution, despite the higher rental and labour costs expected at London Gateway. However, such an occupier would essentially be tied to the port, whereas the golden triangle can be served from all the deep-sea ports (which in practice is likely to be the case given that importers will be using a variety of shipping lines). Importantly, under this scenario a road and rail-served site in the golden triangle is significantly more competitive when compared with a road only connected site in South Yorkshire i.e. the road only connected site in the emerging competing location, which historically has not been associated with national distribution, performs poorly against the golden triangle. There

would also appear to be a benefit (albeit smaller) for the golden triangle when compared with a rail-served site in South Yorkshire.

2.29 A similar picture emerges when handling a mixture of deep-sea, EU and domestic sourced cargo. Again, the road only connected site in the location which historically has not been associated with national distribution performs poorly against the golden triangle. Note how the London Gateway port centric option performs poorly under this scenario.

2.30 This analysis, in general terms, demonstrates the case for rail-served strategic distribution sites (such as SRFIs), as follows:

- A continuing need to develop efficient large distribution centres, much of which is replacing existing capacity, that are well located in relation to cargo origins and destinations in order to maintain and enhance supply chain's competitiveness. Nationally, around 1 million square metres of new warehouse floor space is developed annually. However, the net growth in floor space is significantly lower, meaning that much of the new-build replaces old/obsolete capacity;
- They generate financial benefits to distributors of cargo (as demonstrated above), resulting in a more efficient supply chain and competitive logistics sector – the Economic Case; and
- Sustainability benefits are generated through the modal switch of cargo from road transport to rail freight, principally reductions in the emissions of greenhouse gases but also air quality improvements, fewer road accidents and reduced vehicle congestion – the Environmental Case.

2.31 In a rational commercial market, shippers will only use rail freight (thereby generating the wider environmental/sustainability benefits) when it is able to offer a more cost competitive solution (financial benefits) when compared with road transport. It is only by developing a network of SRFIs that cost competitive rail freight transport solutions can be offered to the market.

2.32 Overall and specifically related to Leicestershire, the important conclusion which can be drawn from the analysis presented above is that, given a choice of sites, a major distribution centre operator would be expected to locate at a rail-served site in the golden triangle as it continues to offer the most competitive location, particularly when handling a mixture of deep-sea, EU and domestic sourced cargo. Consequently, the key to addressing the above identified challenges to the golden triangle (and by implication Leicestershire), and hence maintaining the sub-region's established competitive advantage, is the development of new commercially attractive strategic sites in the East Midlands which will be directly rail-served (SRFIs).

2.33 Despite this position, there are two important factors to appreciate. Firstly, as noted above even at a rail-served site road haulage will remain the dominant mode of transport for both

inbound and outbound cargo flows (they are road connected sites which also have rail terminal facilities). It is therefore important that such sites also have good quality connections to the strategic highway network (as explained in Section 5 of the Part A report). Also, locating at a rail-served site does not necessarily compel the occupier to use rail in the first instance; albeit they may wish to 'future proof' their modal choice options. Secondly, it will be unrealistic in both planning and logistics terms to expect all new large scale distribution activity to locate at a directly rail-served site. In logistical terms, not all warehouse occupiers will benefit from or be of a nature to be attracted to the rail terminal facilities offered at rail-served strategic distribution sites. On that basis, there will still be a need to plan for commercially attractive strategic logistics sites which are not connected to the railway network, which as demonstrated above still perform well compared with sites to the north/east of the golden triangle.

2.34 Overall, therefore, the key to addressing the challenges outlined, and hence maintain the established competitive advantage, is the continued development of new commercially attractive strategic sites in the East Midlands, a significant proportion of which will need to be directly rail-served (in addition to the usual requirements for high quality connections to the strategic highway network).

2.35 Conversely, the inability to bring forward a range of commercially attractive sites in Leicestershire (and the wider golden triangle) would most likely result in an overall reduction in the region's total warehouse floor space capacity. As will be discussed in Section 4 below, most new-build floor space is actually replacing existing obsolete capacity. Consequently, this replacement capacity along with the growth build element would migrate to other regions given a lack of sites in the golden triangle. This clearly has GVA and employment implications, which are addressed in Section 7 below.

Section 2.2: Rail Traffic at Golden Triangle Rail-Served Sites

2.36 Section 3 of the Part A report demonstrated strong growth rates in intermodal rail freight up to 2012, both nationally and in Leicestershire and the wider East Midlands region. The freight flow forecasts in Section 3 below will show expected continuing strong growth rates in this sector.

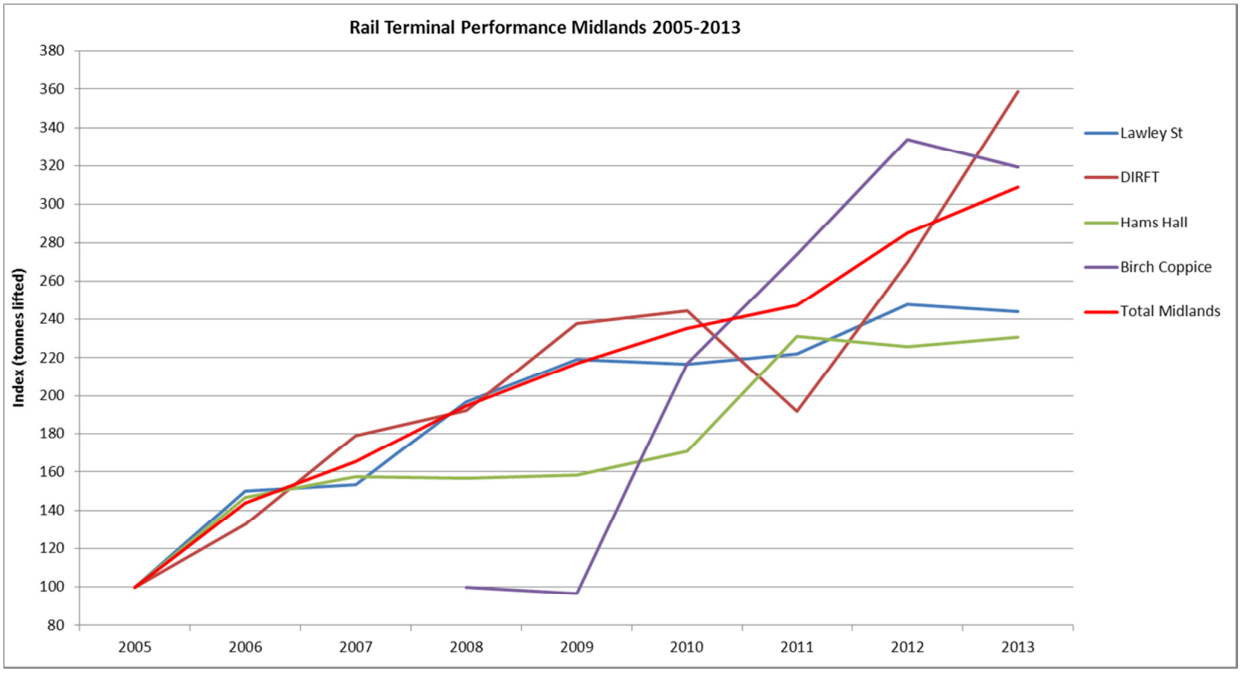
2.37 In terms of specific sites, the analysis below will demonstrate that where SRFIs have been developed they have been successful in attracting rail-based freight (distributors to/from those sites are using rail, and hence have generated the economic and sustainability benefits alluded to), we have considered the volume of cargo handled at the golden triangle's SRFIs since 2005, along with the stand-alone intermodal terminal in Birmingham (Freightliner Lawley Street). *Network Rail billing data,* which is processed by MDS Transmodal, records all rail freight activity by terminal and siding (including gross loaded tonnes of cargo).

Interrogating this data therefore allows the performance of these golden triangle SRFIs/intermodal terminals to be assessed. The graph below therefore compares total tonnes-lifted by rail freight at each site for the years 2005-2013, albeit in index form (due to confidentiality issues, however, the raw data for each site cannot be published). With the exception of Birch Coppice, 2005 equals 100 (noting that Birch Coppice only started handling intermodal traffic in 2008, hence 100 refers to 2008 traffics for that site).

2.38 Three main conclusions can be drawn from this analysis.

- The four sites in total and each of the four sites individually has experienced continual growth in traffic volumes over the period considered (2005 being the first full year that data is available in this current form). The data shows that three SRFIs and a stand-alone intermodal terminal, even though they are in reasonable close proximity to each other, can successfully co-exist and attract traffic;
- Since 2011, both Lawley Street and Hams Hall have effectively 'flat-lined' while the other sites have experienced growth. This suggests that both sites have reached throughput capacity (in respect of container storage rather than trains handled), and that new capacity will need to be provided in the golden triangle; and
- The intermodal terminal at Birch Coppice has experienced almost continual growth since 2008, while regular rail traffic never materialised in its original set-up as a directly rail-served warehouse. Clearly, the market demand intermodal rail freight over conventional box wagon traffic.

Graph 2.1: Rail Traffic to/from Golden Triangle SRFIs 2005-2013



Section 2.3: Rail-served Warehousing Schemes (including SRFIs) Planned for Leicestershire and the East Midlands

2.39 Considering the conclusions of the above analysis, we would therefore expect commercial developers of large scale distribution centres to be seeking the development of rail-served sites in the golden triangle. This is indeed the case, and a total of seven schemes, including a number of SRFIs as defined by the draft NPS, are currently under development or planned for the East Midlands region. It should be noted that one of the schemes is a significant expansion of an existing rail-served logistics facility. Each of the schemes is summarised in the tables below. Reference should be made to the key locational characteristics of a commercially attractive logistics site, which were detailed in Section 5 of the Part A report (including the rationale).

Scheme name	**East Midlands Distribution Centre**
Developer	Clowes Developments
Location	Former power station site at Castle Donington, Leicestershire
Railway connections	The site is located to the south of the freight only line running between Stenson Junction (on the Birmingham to Derby line) and Sheet Stores Junction (which is immediately to the west of Trent Junctions on the Midland Main Line). W10 loading gauge[4] – site is on the route between Birmingham and Doncaster which has recently been enhanced by Network Rail. Site will connect with the 'electric spine' route at Trent Junctions (see below).
Highway connections	2km from A50 Junction 1, then 4km to M1 Junction 24.
Size – hectares and floor space planned	Circa 60ha 230,000 sq metres (2.5 million sq ft) in total planned for site. M&S logistics centre (93,000 sq metres/1 million sq ft) being commissioned shortly (M&S' e-commerce and NDC for slow-moving goods). Circa 120,000 sq metres (1.3 million sq ft) remaining.
Planning status	Consent granted following public inquiry in 2003. Site is currently being built-out
Deliverability	Meets all the key locational characteristics of a commercially attractive logistics site to high level. On that basis and given that the scheme already has planning consent and is currently being built-out, the scheme can be considered as deliverable.

[4] See Part A report Section 5 for description of loading gauge and the various profiles. W10 is the profile required for conveying maritime containers by rail and is therefore an essential requirement for SRFIs.

Scheme name	**East Midlands Gateway**
Developer	Roxhill
Location	Lockington, Leicestershire. Immediately to the north of East Midlands Airport
Railway connections	The site is located to the south of the freight only line running between Stenson Junction (on the Birmingham to Derby line) and Sheet Stores Junction (which is immediately to the west of Trent Junctions on the Midland Main Line). W10 loading gauge – site is on the route between Birmingham and Doncaster which has recently been enhanced by Network Rail. Site will connect with the 'electric spine' route at Trent Junction (see below).
Highway connections	Site is located immediately to the west of and is planned to connect directly with M1 Junction 24.
Size – hectares and floor space planned	Circa 138ha Circa 550,000 sq metres (6 million sq ft).
Planning status	SRFI as defined by the draft NPS. Development Consent Order (DCO) was accepted for examination by the Planning Inspectorate in September 2014.
Deliverability	As noted above, the site has high quality connections to the highway and railway networks. It is well located in relation to its intended key markets i.e. national distribution from the golden triangle. It is sufficiently large and flexible in its configuration so that it can accommodate rail terminal facilities and large warehouses. It is located close to labour (Nottingham, Leicester and Derby) and away from incompatible land uses. Sections 4 & 5 below demonstrate market demand in the East Midlands. The site therefore meets all the key locational characteristics of a commercially attractive logistics site to a high level. There are no other issues in the public domain that would potentially prevent development. On that basis the scheme can be considered as deliverable. Identified as one of the four 'transformational priorities' in the LLEP SEP. Assuming DCO granted, scheme should be operational by 2017.

Scheme name	**East Midlands Intermodal Park**
Developer	Shepherd Developments and Goodman (joint-venture)
Location	Etwall, Derbyshire Immediately to the south west of A50/A38 interchange.
Railway connections	Site is located a short distance to the west of North Stafford Junction on the Birmingham to Derby line (straddles the main line towards Uttoxeter). W10 loading gauge – site is on the route between Birmingham and Doncaster which has recently been enhanced by Network Rail. Site will connect with the 'electric spine' route at Trent Junction (see below).
Highway connections	Site is located immediately to the south west of and is planned to connect directly with the A50/A38 interchange.
Size – hectares and floor space planned	Circa 255ha. Circa 555,000 sq metres (6 million sq ft).
Planning status	SRFI as defined by the draft NPS. Early stages of development. Development Consent Order application likely to be submitted to the Planning Inspectorate in 2015/6.
Deliverability	As noted above, the site has high quality connections to the highway and railway networks. It is well located in relation to its intended key markets i.e. national distribution from the golden triangle. It is sufficiently large and flexible in its configuration so that it can accommodate rail terminal facilities and large warehouses. It is located close to labour (Nottingham and Derby) and away from incompatible land uses. Sections 4 & 5 below demonstrate market demand in the East Midlands. The site therefore meets all the key locational characteristics of a commercially attractive logistics site to a high level. There are no other issues in the public domain that would potentially prevent development. On that basis the scheme can be considered as deliverable. Assuming DCO granted, scheme should be operational 2020.

Scheme name	**Daventry International Rail Freight Terminal Phase III (DIRFT III)**
Developer	ProLogis
Location	Lilbourne, Northants. Site is immediately to the north of the existing DIRFT development, between the A5 (to the west) and M1 (to the east). The proposal is located on the former Rugby Radio Station site.
Railway connections	Site is located alongside the West Coast Main Line (Northampton Loop). W10 Loading gauge.
Highway connections	Site will connect directly with the A5, then 2km to M1 Junction 18.
Size – hectares and floor space planned	Circa 175ha. Circa 700,000 sq metres
Planning status	Circa 38,000 sq me still available on Phase II site. SRFI as defined by the draft NPS. Development Consent Order granted for the scheme in July 2014 (see below also)
Deliverability	As noted above, the site has high quality connections to the highway and railway networks. It is well located in relation to its intended key markets i.e. national distribution from the golden triangle. It is sufficiently large and flexible in its configuration so that it can accommodate rail terminal facilities and large warehouses. It is located close to labour (Northampton, Rugby, Coventry and Leicester) and away from incompatible land uses. Sections 4 & 5 below demonstrate market demand in the East Midlands. The site therefore meets all the key locational characteristics of a commercially attractive logistics site to a high level. There are no other issues in the public domain that would potentially prevent development. On that basis and given that site is an extension of an existing built-out development, the scheme can be considered as deliverable (confirmed by DCO granted). Scheme should be operational by 2016.

Scheme name	**South Northants**
Developer	Ashfield Land
Location	Milton Malsor, Northants
Railway connections	Site is located to the north of the West Coast Main Line (Fast Lines), to the west of the West Coast Main Line (Northampton Loop) and to the east of the A43. W10 Loading gauge.
Highway connections	Site will connect directly with the A43, then 2km to M1 Junction 15a.
Size – hectares and floor space planned	Circa 150ha Circa 600,000 sq metres (6.5 million sq ft)
Planning status	SRFI as defined by the draft NPS. Early stages of development. Development Consent Order application likely to be submitted to the Planning Inspectorate in 2015/6.
Deliverability	As noted above, the site has high quality connections to the highway and railway networks. It is well located in relation to its intended key markets i.e. national distribution from the golden triangle. It is sufficiently large and flexible in its configuration so that it can accommodate rail terminal facilities and large warehouses. It is located close to labour (Northampton, Rugby, Coventry and Leicester) and away from incompatible land uses. Sections 4 & 5 below demonstrate market demand in the East Midlands. The site therefore meets all the key locational characteristics of a commercially attractive logistics site to a high level. There are no other issues in the public domain that would potentially prevent development. On that basis, the scheme can be considered as deliverable. Assuming DCO granted, scheme should be operational 2020-2025.

Scheme name	**Corby Eurohub (aka ProLogis Park Corby)**
Developer	ProLogis
Location	Corby, Northants. Site is located on Stanion Lane Plantation, immediately to the north of Long Croft Road. Development is an extension of the existing Eurohub site (alignments to the existing warehousing were build but sidings never installed).
Railway connections	Site is located on a spur from the Kettering to Corby line, which subsequently connects with the Midland Main Line at Kettering North Junction. W7 loading gauge – albeit that it will connect with the 'electric spine' at Kettering (see below)
Highway connections	Direct connections to the A43, then 12km to the A14
Size – hectares and floor space planned	Circa 58ha. Circa 230,000 sq metres (2.5 million sq ft)
Planning status	Not an SRFI as defined by the draft NPS. The scheme for which planning consent has been granted does not include the installation of rail terminal facilities. However, the site could be served from the adjacent Corby International Rail Freight Terminal (see below).
Deliverability	As noted above, the site has good quality connections to the highway and reasonable connections to the railway network. It is well located in relation to its intended key markets i.e. national distribution from the golden triangle. It is sufficiently large and flexible in its configuration so that it can accommodate large warehouses. It is located close to labour (Corby, Kettering and Northampton) and away from incompatible land uses. Sections 4 & 5 below demonstrate market demand in the East Midlands. The site therefore meets all the key locational characteristics of a commercially attractive logistics site to a reasonable level, although Corby is generally considered a secondary location by the logistics market. There are no other issues in the public domain that would potentially prevent development. On that basis, the scheme can be considered as deliverable. Assuming consent granted, scheme should be operational by 2020.

Scheme name	**Corby International Rail Freight Terminal**
Developer	Roxhill
Location	Corby, Northants. Site is located immediately to the north of Geddington Road. Single warehousing development on the site of the former rail-connected trade car terminal (utilising existing but mothballed rail terminal).
Railway connections	Site is located on a spur from the Kettering to Corby line, which subsequently connects with the Midland Main Line at Kettering North Junction. W7 loading gauge – albeit that it will connect with the 'electric spine' at Kettering (see below)
Highway connections	Direct connections to the A43, then 12km to the A14
Size – hectares and floor space planned	Circa 20ha. Single warehouse: 78,000 sq metres (900,000 sq ft)
Planning status	Not an SRFI as defined by the draft NPS. Planning consent granted for a single warehouse unit on an existing rail-served site
Deliverability	As noted above, the site has high quality connections to the highway and railway networks. It is well located in relation to its intended key markets i.e. national distribution from the golden triangle. It is located close to labour (Corby, Kettering and Northampton) and away from incompatible land uses. Sections 4 & 5 below demonstrate market demand in the East Midlands. The site therefore meets all the key locational characteristics of a commercially attractive logistics site to a reasonable level. There are no other issues in the public domain that would potentially prevent development. On that basis and given that the site has an existing rail connection, the scheme can be considered as deliverable.

2.40 Overall, around 2.9 million square metres of floor space is planned for the above SRFIs and rail-served sites. This equates to around 727ha of land, assuming warehouse occupies 40% of a plot footprint and that consent is granted for those schemes seeking consents. In Leicestershire, the equivalent figure is 169ha, which equates to around 23% of the regional total (noting that currently 27% of the region's strategic floor space capacity is in Leicestershire). Approximately 511ha is located within the broader definition of the 'golden triangle', with the sites in Corby and East Midlands Intermodal Park being marginally to the east and west respectively.

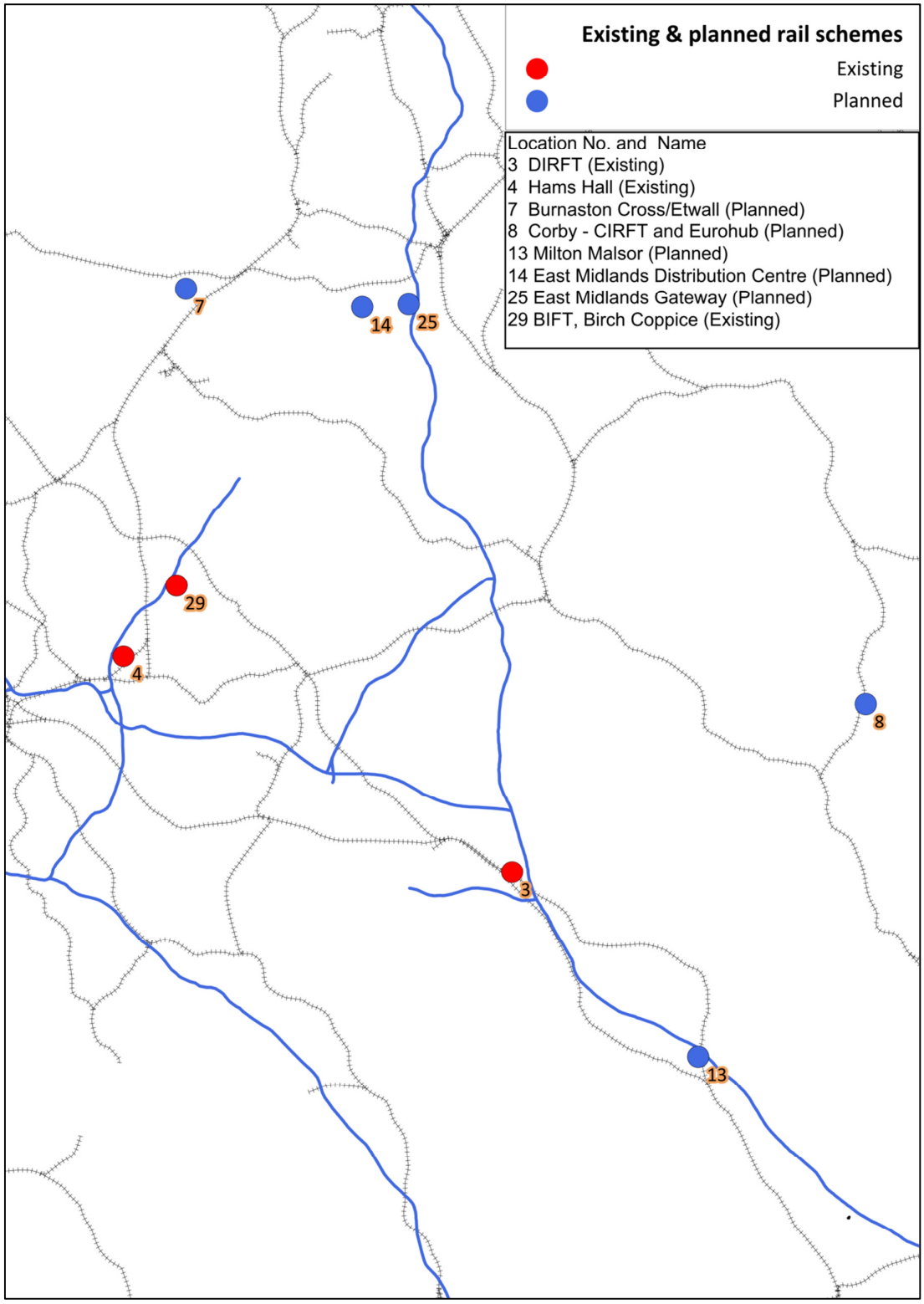
2.41 In the remainder of the golden triangle (the broader definition), a SRFI comprising 400,000 square metres of floor space (100ha) is planned for a site alongside the Bletchley-Bedford railway line to the south-east of Milton Keynes i.e. just over the East Midlands boundary in the East of England region.

2.42 The map below, which is extracted from Map 2.1 in the Part A report (Section 2), shows the location of the above schemes; the blue lines being the motorway network and the grey-dotted lines the national railway system (noting that Map 2.1 from the Part A report illustrates the location of all planned SRFIs/rail-served warehousing schemes nationally).

2.43 In July 2014, the Secretary of State for Transport granted the Development Consent Order (DCO) for DIRFT Phase III (see above). Also in July, the Secretary of State for Communities granted planning consent (following a public inquiry) for a SRFI near Radlett (Hertfordshire), which is located close to the M25 and will be served from the Midland Main Line. The Radlett scheme should provide around 350,000sqm of floor space and a new intermodal terminal. While larger than 60ha, the original application and subsequent appeal pre-dated the provisions of the Planning Act 2008 meaning the application was consequently considered under the existing Town and Country Planning system.

2.44 In both decision letters, the Secretaries of State identified a clear need for the facilities being proposed (large scale warehousing on rail-served sites) and that considerable weight should be attached to the need identified. The national policy documents concerning the development of SRFIs (see Part A) were also cited as being the relevant polices for determining the applications in each case. Further, they also stated that considerable weight should also be attached to the wider benefits of these schemes, including the expected reductions in greenhouse gas emissions. In the case of Radlett, it was determined that the need case and wider benefits out-weighed the identified harm to the greenbelt.

Map 2.1: SRFIs and Rail-Served Warehousing in the Golden Triangle (existing and planned)



Section 2.4: Rail Network Developments

2.45 The Part A report noted the intention to develop a Strategic Rail Freight Network (SFN) to facilitate the continued growth of rail freight services (Section 7.2). The SFN will be a core network of trunk freight routes, capable of accommodating more and longer freight trains, with a selective ability to handle wagons with a greater loading gauge. The major SFN enhancements which have been completed over the past 5-year Control Period (April 2009-March 2014) by Network Rail in the East Midlands are outlined below and illustrated in Map 2.2 following. Map 2.3 further below also illustrates the location in the East Midlands of the main lines and junctions quoted in the text description below.

1. Felixstowe to the West Coast Main Line (WCML) at Nuneaton via Ely, Peterborough and Leicester. Enhancement of the loading gauge to W10[5] along the entire route, thereby allowing the carriage of high-cube maritime containers on standard intermodal wagons. Previously, this route could not convey intermodal traffics, necessitating trains to run via London and the busy southern section of the WCML.

2. Birmingham (Water Orton) to Doncaster via Stenson Junction (on the Birmingham to Derby line), Sheet Stores Junction and the Erewash Valley Line. Enhancement of the loading gauge to W10 along the entire route, thereby allowing the carriage of high-cube maritime containers on standard intermodal wagons. South of Birmingham, the route to Southampton has also been upgraded to W10, thereby creating a gauge cleared route from the south coast port to the East Midlands. At Doncaster, the enhanced routes connect with the East Coast Main Line, itself being upgraded to W10 northwards to Scotland.

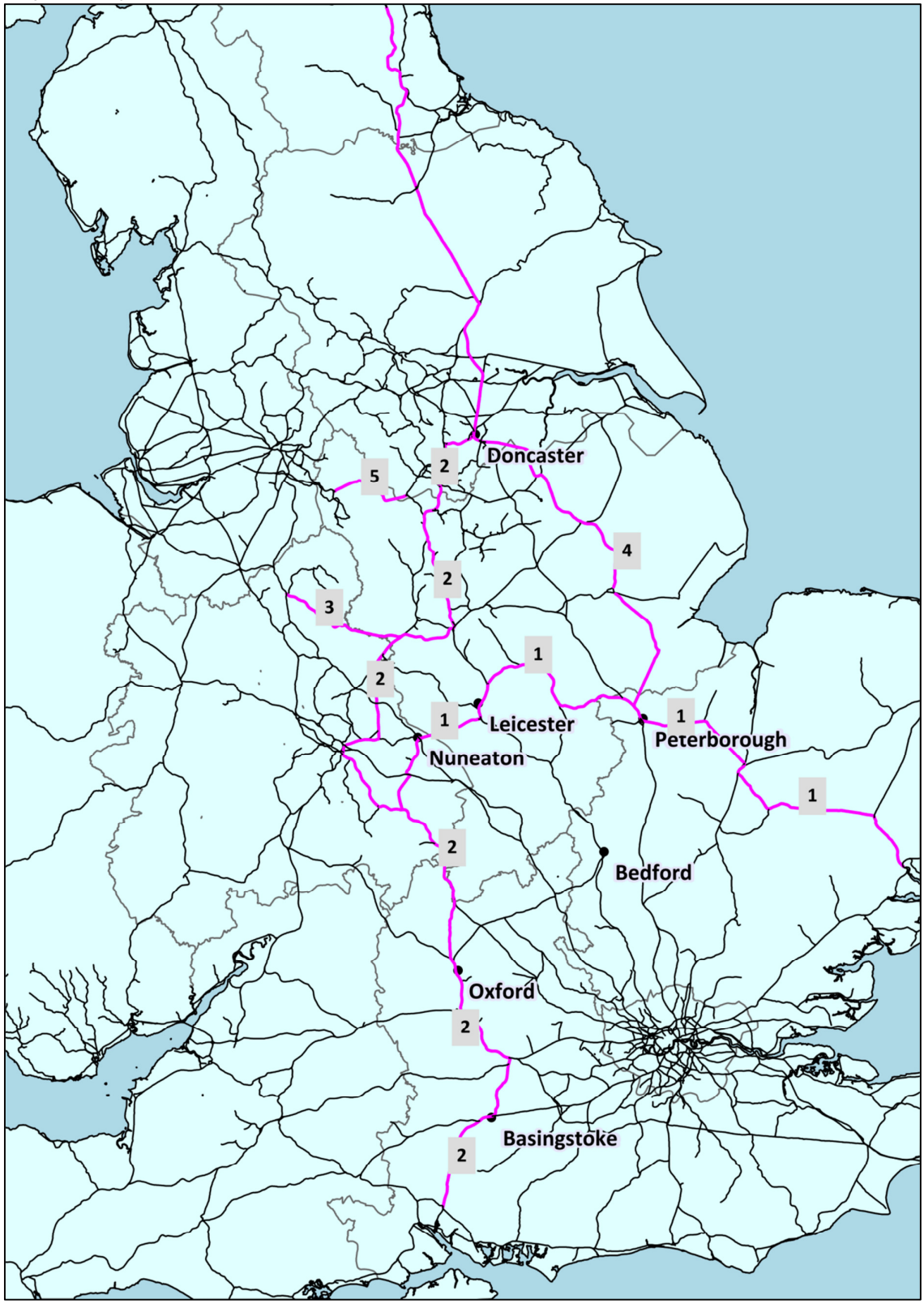
3. Derby to Stoke via Uttoxeter. Enhancement of the loading gauge to W10 along the entire route, thereby allowing the carriage of high-cube maritime containers on standard intermodal wagons. This essentially creates a gauge cleared route to the North West (including the Port of Liverpool) from the East Midlands.

4. Peterborough to Doncaster via Spalding and Lincoln. A loading gauge upgrade to W10 plus other enhancements to allow the route to become the principle freight route from the Haven Ports to Yorkshire/North East, thus avoiding the East Coast Main Line fast lines between Peterborough and Doncaster. Essentially this scheme generates additional freight and passenger capacity between Peterborough and Doncaster by segregating freight/passenger trains.

5. Train lengthening on the Hope Valley line, (mainly for aggregates trains destined for the South East.

[5] See Part A report Section 5 for description of loading gauge profiles. W10 is essentially the profile required for SRFIs

Map 2.2: Major SFN Enhancements CP4 (2009-2014)



Numbers reference paragraphs in text description above

2.46 A number of re-signalling schemes on the Midland Main Line and the Nottingham station hub scheme have also taken place over the past five years. While principally passenger schemes, these have also generated benefits for the freight sector.

2.47 As detailed in the Part A report, the Government published its *High Level Output Statement (HLOS)* and *Statement of Funds Available (SoFA)* in July 2012. Both documents set out, at a strategic level, the capacity and capability enhancements (outputs) for the national railway network the Government wants to be delivered over the following 5-year Control Period (to 2019). Both documents confirmed that the Government will continue to fund the development of the SFN, and has made available a 'ring fenced allocation' of £200 million over the 2014-2019 Control Period 'to fund SFN investments identified by the industry'.

2.48 Network Rail in co-operation with the rail freight industry have since been developing a number of SFN enhancement projects for 2014-2019 Control Period. In Leicestershire (and the East Midlands), SFN projects (i.e. schemes designed specifically to enhance freight capability and capacity) confirmed for funding are outlined below and illustrated in Maps 2.2 following (noting that the precise works required to deliver these schemes is still being considered). Again, Map 2.3 further below also illustrates the location of the main lines and junctions quoted in the text description below.

1. Felixstowe to the WCML at Nuneaton via Ely, Peterborough and Leicester. While the loading gauge has been recently enhanced to W10 (see above), other infrastructure constraints (such as antiquated signalling, at grade junctions and single tracking) have limited the capacity for freight traffic along the route. In the East Midlands, the section of the route from Syston Junction to Wigston Junction via Leicester is a particular capacity constraint. Between Syston and Leicester, essentially one track has to handle freight and CrossCountry passenger trains in both directions, while south of Leicester freight trains then have to cross the northbound line 'at grade' in order to access the route to Nuneaton. While the final scheme has yet to be confirmed, it is likely to involve the installation of additional tracks and grade separation at either Wigston or Syston junctions. When the capacity upgrade is completed, this route is likely to become the main freight route to the West Midlands and North West, thus diverting trains away from London and the busy southern section of the WCML.

2. The electric spine. This project involves the creation of an electrified and W10 gauge cleared route from the Port of Southampton to South Yorkshire via Basingstoke, Oxford, Bedford (via the re-instated Oxford to Bletchley line[6]), Leicester and Derby.

[6] The Oxford to Bletchley line was closed in the 1960s. The East-West Rail Consortium (a group of local authorities) have long since campaigned for its reopening, thereby allowing passenger trains to operate from Oxford to Milton Keynes and Bedford (via the existing Bletchley-Bedford line). Funding for this scheme has also been provided for in the next Control Period to 2019.

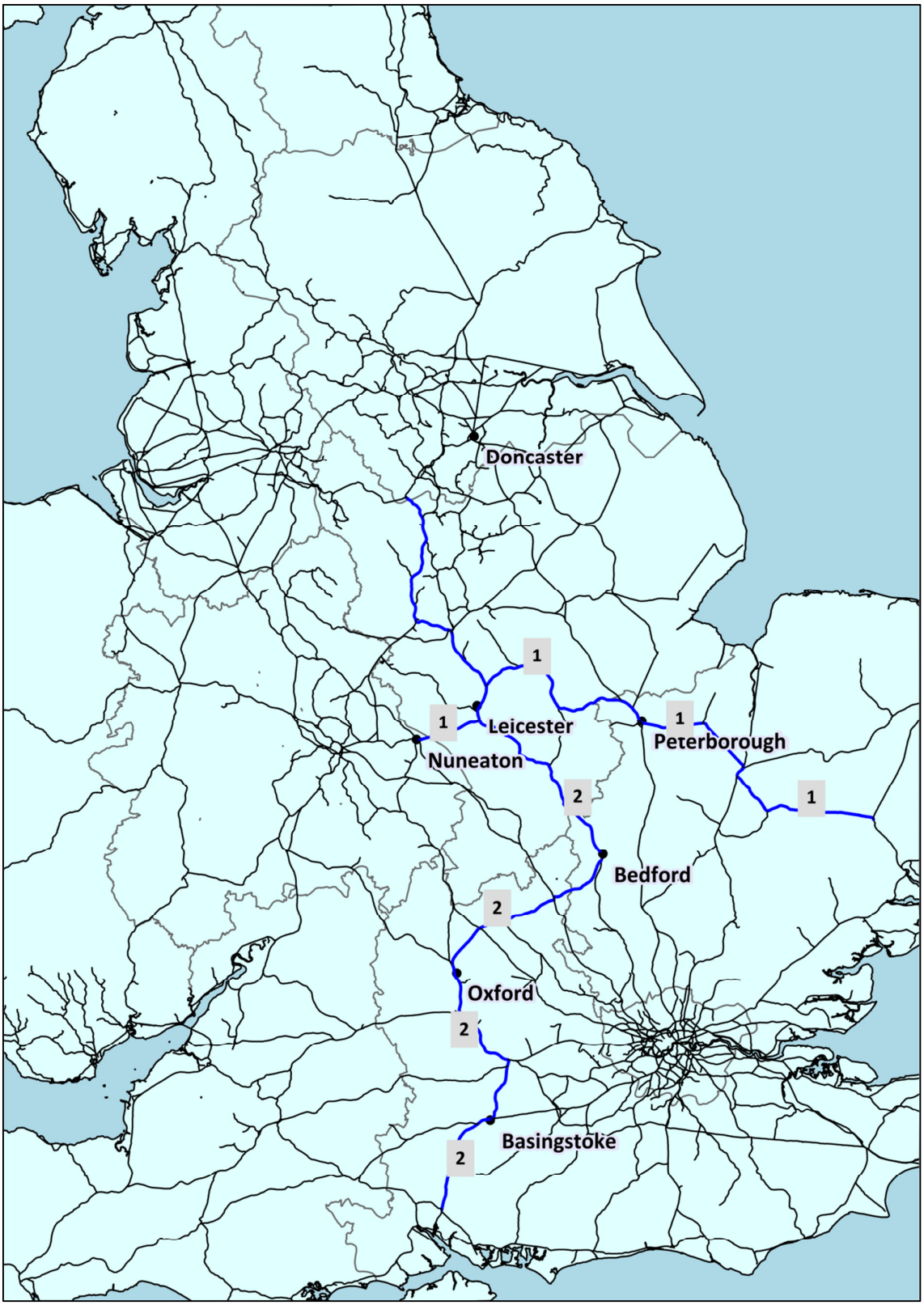
2.49 The route between Southampton and Basingstoke is already electrified (by means of a 'third-rail', albeit that replacement by overhead wires has been mooted), while the route from Reading to Oxford is to be electrified by 2018 as part of Network Rail's Great Western Main Line electrification scheme (using overhead wires). Similarly, Network Rail is also to electrify the Midland Main Line (MML) north of Bedford (also using overhead wires) by 2019 to Sheffield and Nottingham (the line from London to Bedford is already electrified). Two short electrification 'in-fills' (Basingstoke-Reading and Oxford-Bedford) will consequently generate a fully electrified route from Southampton to Yorkshire via Leicestershire (the 'electric spine').

2.50 The installation of overhead electric wires involves clearance work at low over-line bridges. Consequently, route electrification therefore usually delivers W10 loading gauge as a side benefit for the freight sector, this being the loading gauge profile required for the carriage of high-cube maritime containers on standard intermodal wagons. The electric spine scheme will therefore generate a W10 cleared from Southampton to Yorkshire via Leicestershire.

2.51 In addition to the above specific SFN schemes, a number of other enhancement projects are planned for the Midland Main Line during CP5 (2014-2019). These are essentially 'passenger' schemes, albeit there maybe some 'spin-off' benefits for the freight sector (the precise works required to deliver these schemes is still being considered). These are:

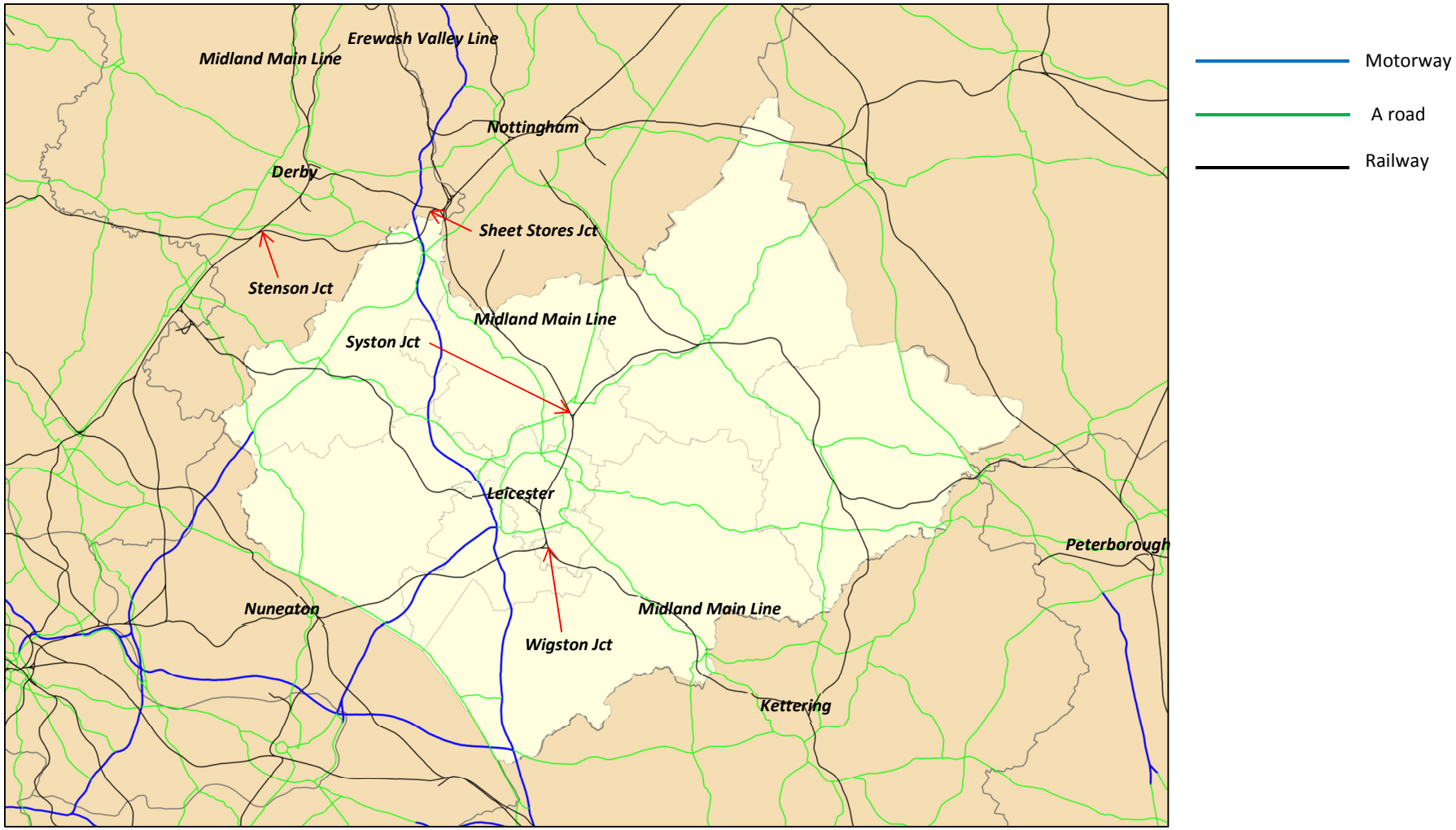
- Midland Main Line electrification (see above – loading gauge enhancement)
- Derby station area re-signalling and re-modelling (improved performance and operational flexibility through the segregation of services through Derby Station);
- Midland Main Line train lengthening; and
- London-Sheffield linespeed improvements.

Map 2.3: SFN Enhancements Proposed 2014-2019



Numbers reference paragraphs in text description above

Map 2.4: Leicestershire and East Midlands Railway Network



2.52 The combination of the recent upgrades along with the proposed projects to be delivered in the current Control Period has significant implications in terms of where rail connected strategic distribution in the East Midlands should be located. As discussed in the Part A report, commercially attractive sites will be those where the adjoining railway lines and the approach routes are gauge cleared to at least W9, and preferably to W10 and W12. From the above, property developers will be seeking to develop SRFIs along the following routes (either directly on or a short distance from):

- The Midland Main Line: Bedford-Market Harborough-Leicester-Trent Junctions-Derby;
- Peterborough-Syston-Leicester-Wigston-Nuneaton;
- Tamworth-Derby (and the freight only line from Stenson Junction to Sheet Stores Junction); and
- Derby-Uttoxeter-Stoke.

2.53 More specifically, commercially attractive sites will be those where the above railway routes pass nearby to junctions the strategic highway network. However, this issue is dealt with in detail in Section 6 below (Key Areas of Opportunity).

Section 2.5: Highway Developments

2.54 In terms of committed and funded developments on the strategic highway network, the *M1 Jct 28-31 'Smart Motorway'* scheme is currently being implemented and due to be completed by Spring 2015. This is a Highways Agency scheme, and when completed will comprise variable speed limits and hard-shoulder running to provide additional capacity and ease congestion at peak times.

2.55 The ideas listed below are in the early stages of exploration by Leicestershire County Council as part of the South West Leicester and Leicestershire Transport Project.

- The possibility of a new M1 Junction 20a. A new Motorway Junction approximately mid-way between Junctions 20 (Lutterworth and Magna Park) and 21 (Leicester and M69), with the potential to link with the A426. The intention would be to divert traffic away from the existing Junction 21 (e.g. traffic to/from south Leicester, Oadby, Wigston, Blaby etc which currently has to go via Junction 21), which is at capacity and suffers from network stress at peak times;
- The possibility of a new junction on the M69, between existing junctions 2 and 3, which would potentially give at least a new point of access from the A47 to the M69; and
- The possibility of adding south facing slip roads at M69 Junction 2, which would need to be complemented by a Sapcote southern by-pass. Currently, M69 Junction 2 only has north facing slip-roads, meaning that only southbound vehicles can exit the motorway and

northbound vehicles enter the motorway at this interchange. The additional slips would therefore permit entries and exits in all directions.

2.56 It should be noted that whilst these possible ideas have been discussed with the Highways Agency, their agreement would be necessary to take them forward. None of these ideas are currently committed and funded, and they have no status in planning terms.

Section 2.6: Airfreight at East Midlands Airport

2.57 East Midlands Airport published its Sustainable Development Plan (Land Use) in Spring 2014. Updating the Airport's Master Plan first published in 2006, the document has five main objectives, namely:

- To identify the land, the uses and the facilities required to support the operation of an airport capable of handling 10 million of passengers annually and 1.2 million tonnes of cargo;
- To identify the principal elements of airport infrastructure and the sequencing of development;
- To set out a policy for the use and the development of airport land that is integrated with the Community, Economy and Surface Access and Environment Plans;
- Provide an up-to-date input to the North West Leicestershire Core Strategy; and
- Provide guidance and information to airport users, occupiers, developers, statutory agencies and the local community.

2.58 The Sustainable Development Plan (Land Use) can be downloaded from the airport's website using the following link: http://www.eastmidlandsairport.com/developmentplan/landplan/

2.59 The 2006 Master Plan forecast that airfreight volumes would increase to 723,000 tonnes by 2010 and to reach 1.2 million tonnes by 2016. These forecasts were also in line with those included in the 2003 *Future of Air Transport* White Paper (DfT). In the period since the last Master Plan, cargo growth has been substantially lower than forecast, reaching 267,000 tonnes in 2013. Cargo volumes have been affected by the global recession; albeit in contrast to passenger traffic cargo throughput has not significantly declined and has been generally flat throughout the recession (see Section 8 – Part A report).

2.60 A review of the airport's cargo forecasts was carried out for the Sustainable Development Plan. These forecasts assume that total air freight demand in Great Britain doubles from 2012 levels (2.3 million tonnes) to 4.4 million tonnes by 2040 (a combined annual growth rate of 2.3%). The updated forecasts also assume that East Midlands Airport's cargo throughput is continued to be carried on dedicated freight aircraft, and also that the express service freight market will grow at a faster rate than the traditional freight market. The forecast for future

cargo tonnage is for some *618,000 tonnes* in 2035 and some *700,000 tonnes in 2040*. The airport's forecasts assume that the mail flight network and overall mail volumes will remain relatively unchanged from the current 35,000 tonnes as a result of structural changes to the mail market. This is as a result of the shift from letters to parcels.

2.61 The Sustainable Development Plan (Land Use) concludes that sufficient land is currently available within the airport boundary (i.e. providing direct 'air-side' access to the aircraft parking apron) to accommodate these growth forecasts. Land has been reserved in the Master Plan for the further development of the DHL building at Cargo West and land will also be safeguarded for a second major integrator hub in Cargo East.

2.62 The DHL building opened in 2000 and it was always intended that the site would be developed in phases. Land continues to be available for further phased development on the western side of the building as and when it may be required. This gives the opportunity for additional parcel handling facilities and associated support services.

2.63 Likewise, land will be reserved within the airport boundary for the development of an integrator hub at Cargo East on land between the Pegasus Business Park and the runway/taxiway. This will enable the development of additional apron to serve the new hub operation. The building will be of a significant scale and will provide for the sortation systems required by the integrated carriers and also landside vehicle access for vans and for HGV's.

Section 2.7: Summary – SWOT Assessment

2.64 The above analysis and the contents of the Part A report effectively comprise an extended 'SWOT assessment' of the strategic distribution sector in Leicestershire and the wider East Midlands region. The table below summarises the main findings and conclusions in the SWOT format.

Strengths 1. Historic competitive advantage in the logistics sector (as evidenced by the analysis in the Part A report). Consequently, an established presence and skill-base in Leicestershire. 2. Central location alongside the strategic highway network (M1, M6, A14). The ability to round-trip a HGV to most cargo origins and destinations within a driver's shift (Part A). 3. Central location alongside the Strategic Rail Freight Network (SFN) – a number of rail routes passing through Leicestershire have recently been upgraded or about to be upgraded. Direct rail connections with all the deep-sea container ports, the Channel Tunnel and key domestic origins and destinations (see above). 4. Well located in relation to key markets – deep-sea ports, Channel Port and other regions. 5. Significant employment in the logistics sector and a major contribution to regional GVA (as evidenced by the analysis in the Part A report).	**Weaknesses** 1. The inability to bring forward the development of commercially attractive sites, a significant proportion of which will need to be directly rail-served, as a means of maintaining and enhancing the Leicestershire's competitive advantage (see above)
Opportunities 1. The development of rail-served large scale strategic distribution sites (SRFIs) as a means of maintaining and enhancing the region's competitive advantage in the logistics sector (see above). 2. The development of road only large scale strategic distribution sites as a means of maintaining and enhancing the region's competitive advantage in the logistics sector (see above). 3. The ability to receive and distribute cargo in a sustainable and competitive manner – albeit dependent on the development of SRFIs. 4. To build on the established range of commercially competitive sites in Leicestershire.	**Threats** 1. The development of B8 sites in areas hitherto not associated with national distribution, particularly the northern Midlands and South Yorkshire. 2. The development of port centric logistics facilities.

3. FREIGHT FLOW FORECASTS TO 2036

3.1 The main aim of this Section of the report is threefold, namely:

- For the period up to 2036, presenting a forecast of freight flows to, from and within in the East Midlands region and Leicestershire sub-region, for both road and rail;
- Assessing how the forecast freight flows over that time period compare with current freight flows; and
- For the period up to 2036, presenting a forecast of goods delivered directly to distribution centres in the East Midlands region and Leicestershire sub-region.

3.2 The outputs from this exercise are important, as they feed into the forecast of land use requirements to 2036 (see Sections 4 and 5 following). The selected forecast years are 2021, 2026, 2031 and 2036.

Section 3.1: Background and Forecasting Methodology

3.3 Network Rail, on behalf of a Freight Market Study Working Group, published a *Freight Market Study* in October 2013. The outputs from the study will inform Network Rail's long term planning process (LTPP)[7]. The Freight Market Study Working Group comprised the following organisations, representing the freight/logistics industry plus key stakeholders:

- Network Rail;
- The Freight Transport Association (FTA);
- The main rail freight operators – Freightliner, DB Schenker, DRS and GBRf;
- Rail Freight Group (RFG);
- Department for Transport, Transport Scotland and the Welsh Government;
- Office of Rail Regulation; and
- Association of Train Operating Companies.

3.4 It is important to note that the FTA and RFG represent a diverse range of shippers who utilise both road haulage and rail freight in their supply chains, along with the main rail freight and road haulage operators. To inform the study, a set of rail freight demand forecasts were produced by MDS Transmodal for the working group. Forecasts for 13 commodity groups were undertaken, including intermodal rail from the ports, Channel Tunnel and domestic sources, which were subsequently combined to form forecasts for all rail freight traffics.

[7] LTPP – a long term route planning and decision making process which will inform where investment in capacity and capability enhancements will be required over the next 30 years.

3.5 The forecasting methodology and assumptions varied for each commodity grouping. As explained in Appendix 1 of the Freight Market Study, *MDS Transmodal's GB Freight Model* was used to produce the intermodal rail traffic forecasts. The baseline assumptions for the forecasts, which were subsequently applied by the GB Freight Model, were initially agreed by the Freight Market Study Working Group following consultation with industry parties. For intermodal traffics, one of the key assumptions adopted was a significant expansion in the amount of strategic logistics floor space which is located on rail-served sites (including SRFIs). Nationally, the forecasts assumed an additional *10 million square metres of rail-served floor space*. All of the East Midlands schemes detailed in Section 2 above (just less than 3 million square metres of floor space) are therefore included in the baseline assumptions. The overall national rail freight forecasts, as presented in the Freight Market Study, are re-produced in the table below.

Table 3.1: National Rail Freight Forecasts

	Millions tonnes lifted (compound annual growth from 2012)			
	2012*	2023	2033	2043
TOTAL	**111.3**	**127.0 (1.1%)**	**161.1 (1.7%)**	**211.7 (2.0%)**
Selected commodity groups				
Ports and Channel Tunnel intermodal	15.7	34.1 (6.7%)	51.8 (5.6%)	72.8 (4.9%)
Domestic intermodal	2.3	16.6 (18%)	35.1 (13.2%)	61.5 (10.9%)

** actual*

Source: Network Rail Freight Market Study 2013

3.6 The road and rail forecasts presented below are consistent with these recent national rail freight demand forecasts. While the Freight Market Study only published the rail freight demand forecasts, due to the *GB Freight Model*'s forecasting technique, it also produces associated road freight forecasts at the same time (essentially it forecasts total freight traffic regardless of mode, with the forecast mode-split then undertaken subsequently by the model). The road freight forecasts presented below are therefore the road outputs associated with the national rail freight demand forecasts.

3.7 When considering the outputs presented below, it is important to note that while the forecasts were published by Network Rail as part of its freight market study (and used to inform its long term route planning), they are not Network Rail's demand forecasts. As explained above (and in the market study document itself), the forecasts were commissioned by the *Freight Market Study Working Group* and undertaken using baseline assumptions the working group themselves agreed following consultation with industry parties. Given the composition of the working group (as outlined above), by implication the assumptions adopted (including the expectation of a significant expansion in the amount of floor space

which is rail-served) and forecasts produced have 'buy-in' from the wider freight industry and key stakeholders, and can therefore be considered the freight/logistics industry's long term demand forecasts. The forecasts were also produced on an unconstrained basis; effectively they assume that there are no capacity constraints or other infrastructure issues which would prevent their delivery.

3.8 Further, as stated in the Part A report, the recently published draft NPS for National Networks also includes these forecasts, noting that it considers them 'robust' and 'that the Government has accepted them for planning purposes'. On this basis, they can also be considered the Government's current long term demand forecasts.

Section 3.2: Road Freight Forecasts for East Midlands and Leicestershire to 2036

3.9 The table below presents road freight forecasts for the East Midlands region and the Leicestershire sub-region for 2021, 2026, 2031 and 2036, along with a comparison of the 2036 forecast year's figures with current freight flows. Appendix 2 presents the forecasts for each year along a comparison with current freight flows. As per the Part A report, the forecasts are only for those commodities which at some point along the supply chain will pass through large scale distribution centres. The adjoining West Midlands region is also included i.e. the two regions which are generally accepted to incorporate the golden triangle.

3.10 It should be noted that for all the tables presented below in this Section, the figures presented are the actual or forecast tonnes-lifted for the years indicated. For example in Table 3.2 below, for Leicestershire in 2012 a total of 18.2 million tonnes were delivered by road freight, which is forecast to grow to 20.6 million tonnes in 2021, 21.9 million tonnes in 2026, 23.2 million tonnes in 2031 and 24.5 million tonnes in 2036. This represents a total growth of 6.3 million tonnes between 2012 and 2036 (i.e. do not sum across rows). Also shown are is the total percentage growth between 2012 and 2036 along with the compound annual growth rate i.e. the year-on-year growth rate assuming a steady rate of growth over the time period considered.

Table 3.2: Road Freight Forecasts for Years 2021, 2026, 2031 and 2036, Distribution Centre Commodities *Source: GB Freight Model.*

	000s tonnes lifted					Growth	% growth	
Cargo Destination	2012	2021	2026	2031	2036	2012-2036	2012-2036	CAGR
East Midlands	74,286	85,920	92,384	98,847	105,129	30,843	42%	1.5%
of which:								
Leicestershire	18,171	20,564	21,894	23,223	24,455	6,284	35%	1.2%
West Midlands	72,432	75,489	77,188	78,886	80,404	7,972	11%	0.4%
Total East and West Midlands	146,718	161,409	169,571	177,733	185,533	38,815	26%	1.0%
Total Great Britain	667,862	722,411	752,717	783,022	804,655	136,793	20%	0.8%
	000s tonnes lifted					Growth	% growth	
Cargo Origin	2012	2021	2026	2031	2036	2012-2036	2012-2036	CAGR
East Midlands	80,066	92,871	99,985	107,099	112,563	32,497	41%	1.4%
of which:								
Leicestershire	21,031	24,260	26,053	27,847	29,201	8,170	39%	1.4%
West Midlands	70,177	73,238	74,939	76,640	77,806	7,629	11%	0.4%
Total East and West Midlands	150,243	166,110	174,924	183,739	190,369	40,126	27%	1.0%
Total Great Britain	667,862	722,411	752,717	783,022	804,655	136,793	20%	0.8%

1. CAGR – compound annual growth rate. The year-on-year growth rate assuming a steady rate of growth over the time period considered.

3.11 Overall, the forecasts suggest that total traffic delivered by road in the East Midlands region will grow by around 31 million tonnes up to 2036 when compared with 2012 levels. This equates to a total growth of 42% or 1.5% annually on a compound growth basis. For Leicestershire, the forecasts suggest that total traffic delivered by road will grow by around 6 million tonnes up to 2036 when compared with 2012 levels. This equates to a total growth of 35% or 1.2% annually on a compound growth basis. This represents a reversal of the 2005-2012 trend as presented in the Part A report (Section 3). The national figure is only for a 20% growth rate over the same period of time or 0.8% annually on a compound basis. The higher growth rates for the East Midlands, when compared with the West Midlands and national figure, reflects the significant development of the SRFIs in the region, as outlined in sub-section 2.3 above.

Section 3.3: Rail Freight Forecasts for East Midlands and Leicestershire to 2036

3.12 The table below presents rail freight forecasts for 2021, 2026, 2031 and 2036, along with a comparison of the 2036 forecast year's figures with current freight flows. Appendix 2 presents the forecasts for each year along a comparison with current freight flows. As per the Part A report, the forecasts are only for intermodal rail freight traffics only i.e. deep-sea maritime containers and other unit loads, where the cargo conveyed will be passing through a distribution centre at some stage in the supply chain. The adjoining West Midlands region is also included.

Table 3.3: Rail Freight Forecasts for 2026, 2031 and 2036, Intermodal Traffics by Origin and Destination *Source: GB Freight Model*

	000s tonnes lifted					Growth	% growth	
Cargo Destination	2012	2021	2026	2031	2036	2012-2036	2012-2036	CAGR
East Midlands	1,097	5,069	7,276	9,483	13,020	11,923	1087%	10.9%
of which:								
Leicestershire	-	528	822	1,115	1,652	0		
West Midlands	2,491	5,491	7,158	8,825	10,835	8,344	335%	6.3%
Total East and West Midlands	3,588	10,561	14,434	18,308	23,855	20,267	565%	8.2%
Total Great Britain	18,233	46,902	62,830	78,757	99,935	81,702	448%	7.3%
	000s tonnes lifted					Growth	% growth	
Cargo Origin	2012	2021	2026	2031	2036	2012-2036	2012-2036	CAGR
East Midlands	1,214	4,934	7,001	9,068	12,900	11,686	963%	10.3%
of which:								
Leicestershire	-	370	576	782	1,207	0		
West Midlands	2,412	5,078	6,560	8,041	10,074	7,662	318%	6.1%
Total East and West Midlands	3,626	10,013	13,561	17,109	22,974	19,348	534%	8.0%
Total Great Britain	18,233	46,902	62,830	78,757	99,935	81,702	448%	7.3%

3.13 Overall, the forecasts suggest that total intermodal rail freight traffic delivered in the East Midlands region will grow by around 12 million tonnes up to 2036 when compared with 2012 levels. This equates to a total growth of nearly 11% annually on a compound growth basis. For Leicestershire, the forecasts suggest that total traffic delivered will grow from zero in 2012 to around 1.7 million tonnes up to 2036. The national figure is for a 448% growth rate over the same period of time or 7.3% annually on a compound basis. Again, the higher growth rates for the East Midlands reflects the significant development of the SRFIs in the region, as outlined in Section 2 above.

3.14 The table below presents rail freight forecasts to 2036 by traffic type. The major growth is forecast to be in traffics to/from the deep-sea container ports and domestic traffics. Domestic traffics mainly comprises cargo moving from NDCs in the Midlands to rail-served RDCs and end-users in more remote regions e.g. Scotland, along with backload traffic from those same regions to the Midlands based NDCs.

Table 3.4: Rail Freight Forecasts to 2036, Intermodal Traffics by Type

	000s tonnes lifted	
Destination Region and Type	2012	2036
East Midlands:	**1,097**	**13,020**
of which:		
Channel Tunnel	68	340
Import from Port	271	6,538
Domestic	757	6,143
West Midlands:	2,491	10,835
of which:		
Channel Tunnel	96	209
Import from Port	2,343	6,807
Domestic	52	3,819
Total East and West Midlands	*3,588*	*23,855*
of which:		
Channel Tunnel	*164*	*549*
Import from Port	*2,614*	*13,345*
Domestic	*809*	*9,962*

Table 3.4 continued

Origin and Type	000s tonnes lifted 2012	2036
East Midlands:	**1,214**	**12,900**
of which:		
Channel Tunnel	64	201
Export to Port	211	2,932
Domestic	939	9,768
West Midlands:	2,412	10,074
of which:		
Channel Tunnel	49	106
Export to Port	2,323	6,070
Domestic	40	3,897
Total East and West Midlands	*3,626*	*22,974*
of which:		
Channel Tunnel	*113*	*307*
Export to Port	*2,534*	*9,002*
Domestic	*979*	*13,665*

Source: GB Freight Model

Section 3.4: Total Freight Flow Forecasts to 2036

3.15 The table below presents therefore presents the total freight forecasts for 2021, 2026, 2031 and 2036 for the East Midlands region and the Leicestershire sub-region. Again, Appendix 2 presents the forecasts for each year along a comparison with current freight flows. Overall, the forecasts suggest that total traffic delivered in the East Midlands region will grow by around 43 million tonnes up to 2036 when compared with 2012 levels. This equates to a total growth of 57% or 1.9% annually on a compound growth basis. For Leicestershire, the forecasts suggest that total traffic delivered will grow by around 8 million tonnes up to 2036 when compared with 2012 levels. This equates to a total growth of 44% or 1.5% annually on a compound growth basis.

Table 3.5: Total Forecast Freight Flows to 2036

	000s tonnes lifted					Growth	% growth	
Cargo Destination	2012	2021	2026	2031	2036	2012-2036	2012-2036	CAGR
East Midlands	75,383	90,989	99,660	108,330	118,149	42,766	57%	1.9%
of which:								
Leicestershire	18,171	21,092	22,715	24,338	26,107	7,936	44%	1.5%
West Midlands	74,923	80,980	84,346	87,711	91,239	16,316	22%	0.8%
Total East and West Midlands	150,306	171,970	184,005	196,041	209,388	59,082	39%	1.4%
	000s tonnes lifted					Growth	% growth	
Cargo Origin	2012	2021	2026	2031	2036	2012-2036	2012-2036	CAGR
East Midlands	81,280	97,805	106,986	116,167	125,463	44,183	54%	1.8%
of which:								
Leicestershire	21,031	24,630	26,630	28,629	30,408	9,377	45%	1.5%
West Midlands	72,589	78,317	81,499	84,681	87,880	15,291	21%	0.8%
Total East and West Midlands	153,869	176,122	188,485	200,848	213,343	59,474	39%	1.4%

Source: GB Freight Model

3.16 The above forecasts, however, do not establish the likely future volume of goods which can be expected to be delivered directly to distribution centres in the East Midlands and Leicestershire sub-region. As per the existing traffics analysis in the Part A report, they reflect goods being lifted along the supply chain i.e. manufacturer/port to distribution centres to retail outlets. The analysis in Part A subsequently concluded that around 45% of current road freight traffic destined for the East Midlands was being delivered direct to a distribution centre (with the remainder being delivered direct to stores or to other facilities), and also assuming that 100% of rail freight is delivered direct to a distribution centre (given the nature of this traffic, it is reasonable to assume that 100% of these flows will be direct to a distribution centre).

3.17 It is reasonable to assume that the proportion of goods being delivered directly to large scale warehouses in the East Midlands region up to 2036 will be the same as the 2012 percentage. On this basis, the volume of unitised goods likely to be delivered directly to large scale warehouses in 2026 can be calculated. This is shown in the tables below, while the equivalent figures for 2026 and 2031 are presented in Appendix 3.

Table 3.6: Forecast Traffic 2036 Destined for East Midlands Distribution Centres

	000s tonnes lifted		
East Midlands	Total	To distribution centre	% to distribution centre
Road	105,129	47,308	45%
Rail	13,021	13,021	100%
Total	118,150	60,329	51%

	000s tonnes lifted		
Leicestershire	Total	To distribution centre	% to distribution centre
Road	24,455	11,005	45%
Rail	1,652	1,652	100%
Total	26,107	12,657	48%

4. FORECAST OF LAND USE REQUIREMENTS TO 2036

4.1 Given the need to maintain and enhance Leicestershire's competitive position through the continued development of new commercially attractive strategic sites (Section 2), a forecast of future demand for new-build large scale warehousing in the East Midlands region and Leicestershire sub-region has been undertaken. The output from this exercise is an estimate of the *total gross warehouse new-build* which can be expected up to 2036. Planners often consider the 'net change' in floor space, but for warehousing the gross new-build rate is the more important figure as, in many cases, new capacity will need to be accommodated at new sites. For example, most existing sites are not rail-served and many will not have the requisite plot size/configuration for the very large scale units now required by the market (see Sections 4 and 5 from Part A report). From the new-build figure, the amount of 'new' land required can consequently be estimated.

4.2 The traditional approach to employment land forecasting is to relate employment levels to floor space. More specifically, future growth in employment is related to future demand for floor space/land. While this provides a suitable forecasting method for many land-use types (e.g. B1), applying the same approach to the logistics sector is unreliable and ultimately produces inaccurate results, for three main reasons:

- The correlation between employment density and floor space in the logistics warehousing sector is weak. Facilities of broadly the same floor space can have widely varying employment densities, as employment levels are generally related to cargo type and site activity. For example, RDCs handling food produce are very labour intensive whereas NDCs storing white goods will have a fairly low employment density. Also, in some parts of the logistics sector employment levels are highly seasonal in nature;
- Demand for floor space is related to cargo volume and throughput; and
- It takes no account of the fact that there is a continual need to replace old warehouse stock which becomes 'life expired'.

4.3 Given this position, a different approach to forecasting future warehouse new-build is required. This needs to take into account the fact that new-build warehousing is a combination of two factors, namely:

- The requirement to continually replace existing warehouse capacity which is 'life expired' (replacement build); and
- The need for additional floor space to handle long-term growth in traffic volumes (growth build).

4.4 Most newly built floor space is a 'like-for-like' replacement for existing warehouse stock which is 'life expired'. This is for a number of reasons. Firstly, the useful economic life of a

modern warehouse building is around 30 years (many developers will depreciate their warehouse stock over a 25-30 year economic life), after which the building can be substantially refurbished and then re-let for a similar use (e.g. for new occupier and cargo type) or occasionally demolished, allowing the plot to be 'recycled' for new buildings (potentially new-build warehousing). While most older buildings may be physically sound (i.e. they are not physically obsolete), they can become functionally obsolete e.g. they are unable to accommodate modern automated stock handling equipment or transport equipment such as double-deck trailers. Essentially, buildings reach the end of their useful economic life and are no longer suitable for their original designed use, thereby necessitating a more modern direct replacement facility for the existing occupier.

4.5 This process consequently requires new sites to be brought forward (or new plots at existing sites), thereby allowing occupiers to re-locate to new buildings and releasing the existing facility for refurbishment or plot recycling. It should also be noted that this process also permits land adjacent to or within urban areas, which in all other respects are now poorly suited for strategic distribution (e.g. due to poor road connections, small/irregular shaped plots or housing close by) to be released for other more appropriate uses, including both employment and non-employment uses e.g. new residential developments.

4.6 Secondly, economies of scale can be gained through merging operations based at multiple sites to one new location. For example, 2 x 20,000 square metres warehouse operations are combined at one new 40,000 square metres facility – the new-build rate is 40,000 square metres but the net change will be zero on the basis that the old warehouses are demolished. The ability to operate fewer but larger distribution centres has been facilitated by advances in modern ICT inventory management systems which have permitted much larger warehouses to be operated more efficiently than was previously the case.

4.7 Finally, changing market conditions, both within specific companies/sectors and in the wider economy, means that warehouse operations might need to relocate in order to remain competitive. Occupiers who previously sourced goods from domestic suppliers but now predominantly import from Eastern European and deep-sea markets may seek a new location at a rail-linked site in order to remain competitive. This trend also has further implications for warehouse demand. Domestically manufactured goods would normally have been stored at the factory site prior to despatch to the retailers' distribution networks. However, imported goods still require facilities in which they can be stored before they are required by the retailers. Given that there are significant costs associated with the storage of maritime containers on the quay at deep-sea ports (shipping lines are normally permitted a short period of free demurrage, after which the port charges for storage), this implies a growing need for additional warehousing floor space simply to store imported goods which are seasonal in nature and/or have long lead times (i.e. need for 'buffer storage'). As a result, a proportion of newly built floor space is simply to 'stand still' (i.e. will be built anyway regardless of traffic growth).

4.8 Demand for warehouse floor space is also linked to cargo volume. Therefore, future economic growth in the wider economy along with the forecast population increases will lead to growing demand for consumer goods. This in turn will lead to increasing demand for additional warehouse floor space. Consequently, new warehouses are constructed partly to accommodate growing traffic volumes over the long term. For example, the new distribution centres which have been commissioned by the major grocery retailers over the past few years have partly been to accommodate their expansion into 'non-food' lines i.e. volume growth.

4.9 Considering the above, the inability to bring forward a range of commercially attractive sites in Leicestershire (and the wider golden triangle) would most likely result in an overall reduction in the region's total warehouse floor space capacity. This is because the replacement capacity, along with the growth build element, would subsequently migrate to other regions given a lack of sites in the golden triangle. This clearly has Gross Value Added and employment implications, which are addressed in Section 7 below.

4.10 On this basis, the forecasting methodology accounts for the replacement build and growth build elements separately in the first instance. The two elements are then added together to produce an estimate of total gross warehouse new-build. In affect, the forecasts have been undertaken on the basis that existing distribution centre occupiers in Leicestershire and the wider East Midlands will commission their new warehouse facilities in broadly the same location as their redundant building i.e. they do not re-locate to the competing regions or ports discussed in sub-section 2.1. Unless otherwise specified, the analysis below considers gross new-build along with the amount of land required to accommodate that gross new-build, and not the 'net change' in the region's/sub-region's floor space. In line with the freight flow analysis in Section 3, the forecast years are 2021, 2026, 2031 and 2036.

Section 4.1: Replacement Build

4.11 In order to estimate the 'replacement build' element (i.e. floor space which will become functionally obsolete or in some cases physically obsolete), the existing stock of large scale warehousing[8] in the East Midlands region needs to be considered. This was undertaken in Section 4 of the Part A report, and showed that the East Midlands region currently hosts just over 8 million square metres of floor space across 334 large scale warehouse units. In Leicestershire itself, around 2.25 million square metres of floor space across 89 warehouse units were identified.

[8] As defined in the Part A report, units greater than 9,000sqm (approx 1000,000 sq ft)

4.12 On the basis that the useful life of a modern warehouse building is 30 years, over the next 22 years up to 2036 we could therefore expect around 73% of the existing warehouse stock in the region to require replacement (i.e. 22 years/30 years = 73%). This means that up to 2036 we can expect around 5.9 million square metres of new warehouse floor space to be built in the East Midlands region simply to replace existing stock i.e. the 'replacement build' element. Out of this regional total, around 1.6 million square metres of the existing capacity in Leicestershire can expect to be replaced up to 2036. This is shown in the table below for 2036, alongside the equivalent figures for forecast years 2021, 2026 and 2031, and is considered the 'high' replacement scenario. The 'land required' (in hectares) at this stage simply reflects the quantum of land needed to accommodate the floor space, and they are based on the widely recognised figure that a warehouse occupies 40% of a plot footprint. It is not a forecast of the 'new land' that will need to be brought forward up to 2036; this is addressed in Section 5 following.

Table 4.1: Existing Large Scale Warehouse Floor Space and Gross Replacement New-Build to 2036 – 30 year life (high scenario)

	000s sq m			
	East Midlands		Leicestershire	
	2013	2021	2013	2021
Existing floor space	8,056		2,250	
Replacement build		2,417		675
Land required (ha)		604		169

Assumes:

30% of stock replaced between 2013 and 2021

Land required - floor space is 40% of plot footprint

	000s sq m			
	East Midlands		Leicestershire	
	2013	2026	2013	2026
Existing floor space	8,056		2,250	
Replacement build		3,222		900
Land required (ha)		806		225

Assumes:

40% of stock replaced between 2013 and 2026

Land required - floor space is 40% of plot footprint

	000s sq m			
	East Midlands		Leicestershire	
	2013	2031	2013	2031
Existing floor space	8,056		2,250	
Replacement build		4,511		1,260
Land required (ha)		1,128		315

Assumes:

56% of stock replaced between 2013 and 2031

Land required - floor space is 40% of plot footprint

	000s sq m			
	East Midlands		of which, Leicestershire	
	2013	2036	2013	2036
Existing floor space	8,056		2,250	
Replacement build		5,881		1,643
Land required (ha)		1,470		411

Assumes:

73% of existing stock replaced up to 2036

Land required - floor space is 40% of plot footprint

4.13 Alternatively, we have also considered a scenario where the rate of replacement begins to slow compared with historical trends. This may extend the useful life to around 40 years. This suggests that around 50% of the existing stock will require replacement up to 2036. This low 'replacement' scenario is shown in the table below for 2036, alongside the equivalent figures for 2021, 2026 and 2031.

Table 4.2: Existing Large Scale Warehouse Floor Space and Gross Replacement New-Build to 2036 – 40 year life (Low Replacement Scenario)

	000s sq m			
	East Midlands		Leicestershire	
	2013	2021	2013	2021
Existing floor space	8,056		2,250	
Replacement build		1,813		506
Land required (ha)		453		127

Assumes:

22.5% of stock replaced between 2013 and 2021

Land required - floor space is 40% of plot footprint

	000s sq m			
	East Midlands		Leicestershire	
	2013	2026	2013	2026
Existing floor space	8,056		2,250	
Replacement build		2,417		675
Land required (ha)		604		169

Assumes:

30% of stock replaced between 2013 and 2026

Land required - floor space is 40% of plot footprint

	000s sq m			
	East Midlands		Leicestershire	
	2013	2031	2013	2031
Existing floor space	8,056		2,250	
Replacement build		3,384		945
Land required (ha)		846		236

Assumes:

42% of stock replaced between 2013 and 2026

Land required - floor space is 40% of plot footprint

	000s sq m			
	East Midlands		of which: Leicestershire	
	2013	2036	2013	2036
Existing floor space	8,056		2,250	
Replacement build		4,028		1,125
Land required (ha)		1,007		281

Assumes:

50% of existing stock replaced between 2013 and 2036

Land required - floor space is 40% of plot footprint

Section4.2: Growth Build

4.14 In order to estimate the growth build element (i.e. additional floor space to handle long-term growth in traffic volumes), two factors need to be considered, namely:

- The current (2012) volume of cargo which is delivered directly to large scale distribution centres in the East Midlands region and Leicester sub-region; and

- For the years 2021, 2026, 2031 and 2036, the volume of cargo forecast to be delivered directly to large scale distribution centres in the East Midlands region and Leicester sub-region.

4.15 The current volume of cargo delivered direct to distribution centres in the East Midlands was estimated to be around 34.6 million tonnes in 2012. (see Section 3 of Part A report). The forecast volume of cargo delivered direct to large scale distribution centres for the forecast years 2021, 2026, 2031 and 2036 is presented in Appendix 3 (based on the analysis from Section 3 above). The forecast volume of cargo for delivery direct to large scale distribution centres in the East Midlands region in 2036 is estimated to be around 60 million tonnes, a growth of around 26 million tonnes over 2012 levels. As noted above in Section 3, these forecasts are consistent with the recently produced (and industry agreed) national rail freight demand forecasts, which the Government has subsequently accepted for planning purposes (draft NPS).

4.16 The growth in annual traffic (compared with 2012 levels) for each of the forecast years has subsequently been converted into the need for additional floor space i.e. the growth build element, using generally accepted 'conversion factors' which relates annual tonnage throughput and floor space at large scale 'high bay' type warehouses. These are also presented in Appendix 3.

Section 4.3: Total New-build and Land Requirements

4.17 By combining the 'replacement build' and 'growth build' elements, the total gross warehouse new-build which can be expected by 2036 can be calculated. This is shown in the tables below together with the associated land requirements for the high and low replacement scenarios.

4.18 It should be noted that for all the forecasts presented in the tables below (and in Section 5), the gross new-build figures (in square metres) and the associated land required (in hectares) represent a progression from the current day to the year indicated i.e. it is not a cumulative total and also do not sum across the rows. For example, referring to the table below for Leicestershire a total of 762,000 sqm is forecast to be built from the current day up to 2021 and 1,036,000 sqm is forecast to be built from the current day up to 2026 etc.. (in other words 274,000 sqm is built between 2021 and 2026). It is not 762,000 sqm built up to 2021 and then a further 1,036,000 sqm built between 2021 and 2026 etc...

Table: 4.3: Total Gross New-Build Floor Space and Associated Land Requirements to 2036 (high replacement scenario)

	000s sq m			
Year	2021	2026	2031	2036
Leicestershire				
Replacement build	675	900	1,260	1,643
Growth Build	87	136	185	244
Total	**762**	**1,036**	**1,445**	**1,886**
Land required (ha)	**191**	**259**	**361**	**472**
	000s sq m			
	2021	2026	2031	2036
East Midlands				
Replacement build	2,417	3,222	4,511	5,881
Growth Build	501	779	1,059	1,405
Total	**2,918**	**4,001**	**5,570**	**7,286**
Land required (ha)	**730**	**1,000**	**1,393**	**1,822**

Land required - floor space is 40% of plot footprint

Table: 4.4: Total Gross New-Build Floor Space and Associated Land Requirements to 2036 (low replacement scenario)

	000s sq m			
Year	2021	2026	2031	2036
Leicestershire				
Replacement build	506	675	945	1,125
Growth Build	87	136	185	244
Total	**594**	**811**	**1,130**	**1,369**
Land required (ha)	**148**	**203**	**282**	**342**
	000s sq m			
	2021	2026	2031	2036
East Midlands				
Replacement build	1,813	2,417	3,384	4,028
Growth Build	501	779	1,059	1,405
Total	**2,314**	**3,196**	**4,442**	**5,433**
Land required (ha)	**579**	**799**	**1,111**	**1,358**

Land required - floor space is 40% of plot footprint

4.19 The above analysis therefore estimates that the total gross warehouse new-build which can be expected up to 2036 across the East Midlands region is in the order of 7.3 million square metres for the high replacement scenario. On the basis of a lower replacement build element, the total gross warehouse new-build which can be expected up to 2036 is around 5.4 million square metres. For Leicestershire, the total gross warehouse new-build which can be expected up to 2036 is in the order of 1.9 million square metres for the high replacement scenario and 1.4 million square metres for the lower replacement scenario.

4.20 On the basis that all of the forecast new-build were to locate at new sites, the amount of land that would need to be brought forward across the East Midlands region by 2036 is between 1,358ha (low) and 1,822ha (high), given that the warehouse itself normally occupies around 40% of the total plot footprint. On the same basis, between 342ha (low) and 472ha (high) would need to be brought forward by 2036 in Leicestershire. This, however, will not be the case and the issue of demand versus existing site supply is addressed in Section 5 below. However, to put the demand analysis into context, the 7.3 million square metres expected for the high scenario equates to a mean build rate of around 317,000 sq metres per annum. As discussed in the Part A report, take-up in the East Midlands region in 2013 was just less than 500,000 square metres.

4.21 While 'high' and 'low' land use forecasts have been considered above, it is our view that the 'high' replacement scenario should be considered as the preferred option going forward for planning purposes. This is for three principal reasons:

1. Market evidence suggests that while many existing older buildings may be physically sound (i.e. they are not physically obsolete), they are increasingly becoming functionally obsolete. To a great extent, this situation is being driven by changes in the retail sector, and in particular the large growth rates for e-commerce. Traditionally, the principal function of many NDCs in the Midlands was to hold stock before its transfer to RDCs or direct to retail stores. Both inbound and outbound cargo flows were therefore at the 'pallet level'. However, the growth of e-commerce (and in particular the growth of direct home deliveries) means that an increasing proportion of outbound flows from NDCs are at the individual consignment level (in an envelope or small box/package which is subsequently collected by Royal Mail or parcel couriers). This requires different picking, handling and packaging solutions compared with 'pallet level' operations, which are generally based around fork-lift truck type equipment moving palletised goods to/from pallet racks. It is often the case that the modern automated picking, handling and packaging systems required for e-commerce cannot be 'retro-fitted' into older buildings. Consequently, combining e-commerce and the traditional NDC function under the one roof will often require a new building rather than the adaption of an existing facility (e.g. the new M&S warehouse at Castle Donington was specifically commissioned and designed to handle e-commerce and slower moving store lines under the same roof, but it also replaced existing capacity at other sites).

2. Similarly, economies of scale can now be gained by operating fewer but larger distribution centres, facilitated by advances in modern ICT inventory management and handling systems. Operations are therefore 'merged' into a large new-build, with much of the new floor space replacing existing capacity at other sites. As will be discussed below, a number of the consented sites in Leicestershire do not have the capacity for these larger units, suggesting more land needs to be allocated at new sites.

3. Section 3 of the Part A report demonstrated strong growth rates in intermodal rail freight up to 2012, both nationally and in Leicestershire and the wider East Midlands region. The freight flow forecasts in Section 3 showed expected continuing strong growth rates in this sector. This is being driven by an increasing desire for some occupiers, as evidenced by the analysis throughout this document and the Part A report, to re-locate their existing operations to rail-served sites in order to achieve the financial benefits associated with rail freight. For example, Sainsbury's have recently opted to build a new NDC at DIRFT, taking advantage of the site's rail terminal, much of which will essentially be a like-for-like replacement of existing floor space capacity currently at non rail-served sites.

4.22 Consequently, we should expect the 'replacement build' element to be at the faster rate indicated above i.e. the high replacement scenario. Further, from a logistics market and regional/sub-regional competitiveness perspective, there is also what can be considered the 'more is better' factor. In order to maintain and enhance the competitive position currently enjoyed by the region/sub-region, it is vitally important that the market in future is offered a geographical spread of commercially attractive sites available to satisfy individual operator locational requirements (i.e. sites at the right locations – good motorway links, well located relative to markets, large plots, 24/7 operation etc..). This will be achieved by delivering a supply of B8 sites at the higher end of the land use forecasts detailed above. Conversely, a restricted spatial spread at less advantageous locations, implied by the lower end of the land use forecasts, will have the opposite effect.

5. EXISTING AND FUTURE SITE SUPPLY – IDENTIFYING THE GAPS

5.1 The main aim of this section of the report is threefold, namely:

- To consider the likely demand to 2036 at rail-served sites in Leicestershire and the East Midlands region, along with the quantum of land proposed for the various SRFIs and other rail-served warehousing schemes in the region;
- To consider the likely demand to 2036 at road only connected sites in Leicestershire and the East Midlands region, along with the quality and quantum of land currently available at suitable existing sites which have vacant plots; and
- Assess whether there is likely to be short-fall of suitable sites up to 2036 i.e. demand to 2036 being greater than existing site supply and currently being brought forward.

5.2 The land use forecasts in Section 4 suggest that between 1,358ha and 1,822ha would need to be brought forward across the East Midlands region by 2036, on the basis that all of the future demand will require plots at new sites (noting that the high scenario is the preferred option). For Leicestershire, the figures are between 342ha (low) and 472ha (high).

5.3 However, expecting all new-build warehousing to locate at new sites is unrealistic from both a planning and logistics market perspective. Consequently, these forecast figures are a 'gross requirement', and it does not represent the total amount of additional land which will need to be brought forward through Local Plans as it has not taken into account the following:

- The proposals for a number of Strategic Rail Freight Interchanges (SRFIs), which are coming forward for examination through the Development Consent Order (DCO) process;
- The amount of land currently available at suitable existing sites which have vacant plots and already have consents for B8 development;
- The amount of land at suitable sites 'in the planning pipeline' (rail and non rail-linked) which could also accommodate new-build warehousing; and
- The amount of land at existing suitable sites where the in-situ buildings could feasibly be refurbished or the plot recycled for new-build warehousing following decommissioning of the present buildings.

5.4 However, it is also important to understand that:

- In many cases new-build floor space will not 'fit' onto existing plots at general industrial sites or on 'recycled' brownfield land. This is particularly the case when a large new building is replacing two or more smaller facilities. Essentially the size and configuration of existing sites will often be unsuitable for the type of modern buildings demanded by the market (see Part A report). Also, when the other commercially attractive sites criteria are considered (see Part A), it may be the case that many existing sites are no longer fit-for-purpose for

strategic distribution e.g. located close to or within urban areas and a substantial distance away from the motorway network. As noted above, in planning terms this situation can often presents opportunities to 'release' land for other uses, such as housing; and

- The NPPF expects that developments which generate large volumes of freight (i.e. including strategic logistics facilities) to be located on sites where the use of sustainable transport modes can be maximised. Further, the logistics market itself, particularly operators of large distribution centres, are demanding facilities located alongside rail terminals[9]. Most existing sites are not and cannot be rail-linked (the only site in the region currently rail-served is DIRFT, albeit that East Midlands Distribution Centre is about to be commissioned and that Eurohub in Corby was designed to be rail-served but the connections were never installed).

5.5 The implication of the above is that some new large sites will need to be brought forward over the long term to accommodate a significant proportion of the forecast gross new-build, given that such sites will be capable of being rail-served and will have the large plots required for modern distribution buildings. Existing B8 sites, sites in the planning 'pipeline' and recycled land could potentially accommodate the remainder of the expected new-build which will not demand a rail-served location or require a very large plot. The next stage of the analysis, therefore, has considered the quantity and quality of current land supply in the region and Leicestershire sub-region along with the emerging SRFIs currently at various stages in the DCO process. From this analysis, it will be possible to identify and quantify the amount of additional land at strategic sites which will need to come forward up to 2036.

Section 5.1: Rail-Served Sites (Including SRFIs) – Demand and Supply

5.6 We have considered the proportion of the forecast gross new-build likely to demand a plot at a rail-served site, along with the quantum of land which will potentially be brought forward at rail-linked sites up to 2036 (though again noting that even at a rail-served site, road haulage will remain the dominant mode of transport for both inbound and outbound cargo flows). This includes land currently available at existing rail-served sites with B8 consents and the various SRFIs proposed for the region and currently being considered by the planning/DCO process (includes the expansion of existing SRFIs and new schemes).

5.7 At present, the only major development of rail-served warehousing in the East Midlands region is at DIRFT (Phases I and II). Currently, the site accommodates around 520,000 square metres of floor space, equating to *around 6.5%* of the regional total floor space capacity. There is currently no rail-served floor space in Leicestershire, albeit the East Midlands Distribution Centre scheme is about to be commissioned. If a continuation of this existing

[9] In line with market demand (see Part A) and the description of SRFIs in the NPS, as a minimum requirement a rail-linked or rail-served strategic site is considered to be one with an intermodal terminal capable of serving on-site warehousing without use of the public road network. Sites may also have rail sidings directly alongside some or all of the warehousing units.

proportion is assumed going forward, the amount of rail-served land that would need to be brought forward up to 2036 is shown in the table below.

Table 5.1: Gross New-Build Floor Space and Land Required at Rail-served Sites to 2036 – Continuation of Existing Proportion of Floor Space at Rail-served sites[10]

	Gross New-build (000s sq m)					Land Required (ha)		
Year	2021	2026	2031	2036	2021	2026	2031	2036
Leicestershire								
Total - high	762	1,036	1,445	1,886	191	259	361	472
Total - low	594	811	1,130	1,369	148	203	282	342
Rail served - high	50	67	94	123	12	17	23	31
Rail served - low	39	53	73	89	10	13	18	22
East Midlands								
Total - high	2,918	4,001	5,570	7,286	730	1,000	1,393	1,822
Total - low	2,314	3,196	4,442	5,433	579	799	1,111	1,358
Rail served - high	190	260	362	474	47	65	91	118
Rail served - low	150	208	289	353	38	52	72	88

Land required - floor space is 40% of plot footprint

Total gross new-build as per Tables 4.3 and 4.4

5.8 However, we should expect a much greater proportion of the future new-build to locate at rail-served sites across the region. As alluded to previously, evidence for this approach is provided from a number of sources.

1. National planning policy alongside the mode-shift and sustainability policies being pursued by Government. These were reviewed in the Part A report (Section 7), and in summary they identify a clear need for new SRFI capacity to be developed and encourage new large freight generating schemes to be developed at rail/water served sites (NPPF, draft NPS etc..). Recent planning consent decision letters (DIRFT III and Radlett SRFI) state that considerable weight should be attached to this need identified. Mode shift will only be generated, and the wider sustainability and greenhouse gas benefits achieved, when logistics floor space is directly rail-served (as this provides the commercial incentive for shippers to use rail-freight).

2. The large growth rates over the past decade in the use of rail, particularly on flows from the deep-sea ports to the English Midlands and north of England (as described in Section 3 of the Part A report).

[10] Noting again that for all the forecasts presented in this Section, the gross new-build figures (in square metres) and the associated land required (in hectares) represent a progression from the current day to the year indicated i.e. it is not a cumulative total and also do not sum across the rows.

3. The ability to access reliable and cost competitive rail freight services is becoming a key commercial requirement of the logistics industry, particularly distribution into and out of large scale NDCs. The development of competitive rail-linked strategic distribution sites is a crucial component in meeting this requirement. A number of major retailers have begun to contract rail services to transfer goods from their warehouses in the Midlands to their Scottish distribution centres e.g. Asda and Tesco. Sainsbury's have recently opted to build a new NDC at DIRFT, taking advantage of the site's rail terminal.

4. The need, as evidenced in Section 2 above, to develop large rail-served sites as a means of maintaining and enhancing regional competitiveness, and combating the emerging threat from other regions. The important conclusion to be drawn from analysis is that, given a choice of sites, a major distribution centre operator would be expected to locate at a rail-served site in the golden triangle as it offers the most competitive location.

5. The national rail freight demand forecasts (as presented in Section 3 above), which suggest significant growth rates for intermodal rail freight over the next 20-30 years. The baseline assumptions for these forecasts include a significant expansion in the quantum of floor space which is rail-served. It is worth noting again that these forecasts have 'buy-in' from the wider freight industry and key stakeholders and can be considered the freight/logistics industry's long term demand forecasts. Further, the recently published draft NPS for National Networks also includes these forecasts, noting that it considers them 'robust' and 'that the Government has accepted them for planning purposes'.

6. A total of seven SRFIs (as defined by the draft NPS) or warehousing schemes which will have access to rail are currently under development or planned for the East Midlands region, providing around 2.9 million square metres of floor space. Given that rail-served sites are more complicated and capital intensive when compared with road only connected sites, it is unlikely that the promoters of these schemes would be pursuing their development in the absence of significant demand from the occupier market for rail-served distribution centre facilities.

5.9 Taking this evidence into account, we have therefore considered a much greater proportion of future new-build locating at rail-served sites, to satisfy both the policy and commercial requirements, while at the same time recognising that not all warehouse occupiers will benefit from or be of a nature to be attracted to rail-served strategic distribution sites (meaning that there will still be a need to plan for a significant proportion of future demand going to commercially attractive strategic logistics sites which are not connected to the railway network). This has taken into account the size of warehouse units currently located at the existing rail-served strategic distribution site in the East Midlands (DIRFT), other similar strategic developments elsewhere (e.g. Hams Hall) and the size of units being suggested by the developers of the planned for SRFIs in the region. From this, we conclude that it is

warehousing units above 25,000 square metres that will benefit from or be of a nature to be attracted to sites with rail terminal facilities.

5.10 Further, it is large scale warehouses greater than 25,000 square metres that will require the large plot sizes being planned for at SRFIs. The evidence presented in Part A suggests that the market is increasingly demanding facilities in excess of 50,000 square metres (12.5ha plot). Plots of this size are generally not available at existing general industrial sites or on 'recycled' brownfield land, meaning that new logistics sites will be required.

5.11 We have therefore considered the proportion of the current regional total floor space capacity which is in units greater than 25,000 square metres. Analysis of MDS Transmodal warehouse database for the East Midlands (sourced from VOA records – see Part A report) suggests that around 4.7 million square metres of the region's floor space capacity is in units greater than 25,000 square metres. This equates to *58% of the regional total*. This figure is consistent with the forecasts produced by MDS Transmodal and Savills for the East Midlands Development Agency in 2006 (which considered the size of new build units over the recent past). On that basis, the amount of land which will need to be brought forward at rail-served sites up to 2036 is shown in the table below. It is our view that this greater proportion of future new-build locating at rail-served sites (when compared with the existing position) should be considered as the preferred option going forward for planning purposes.

Table 5.2: Gross New-Build Floor Space and Land Required at Rail-served Sites to 2036 – Units More Than 25,000 sq metres to Rail-served Sites (58% of forecast demand)

	Gross New-build (000s sq m)					Land Required (ha)		
Year	2021	2026	2031	2036	2021	2026	2031	2036
Leicestershire								
Total - high	762	1,036	1,445	1,886	191	259	361	472
Total - low	594	811	1,130	1,369	148	203	282	342
Rail served - high	442	601	838	1,094	111	150	209	274
Rail served - low	344	470	655	794	86	118	164	199
East Midlands								
Total - high	2,918	4,001	5,570	7,286	730	1,000	1,393	1,822
Total - low	2,314	3,196	4,442	5,433	579	799	1,111	1,358
Rail served - high	1,693	2,321	3,231	4,226	423	580	808	1,057
Rail served - low	1,342	1,853	2,576	3,151	336	463	644	788

Land required - floor space is 40% of plot footprint

Total gross new-build as per Tables 4.3 and 4.4

5.12 The preferred high replacement scenario suggests 1,057ha of rail-served land will need to be developed by 2036 across the East Midlands region. For Leicestershire, 274ha of rail-served land will need to be developed by 2036.

5.13 We have therefore considered the quantum of land that is currently being developed or proposed for the region at rail-served sites, both for the large SRFIs (as defined in planning terms) and the smaller schemes. From the descriptions in Section 2.3 above, the following table outlines the floor space remaining and the quantum of land available at rail-served sites which have B8 consents in the region, along with the floor space/land planned for those schemes either currently being considered by the planning/DCO process or likely to be seeking consent over the next few years.

Table 5.3: Site Supply - Rail-served Warehousing and SRFIs Operational/Planned for the East Midlands

Development	County	Approx Floor Space Remaining or Planned (sq m)[1]	Hectares[2]
Existing B8 Consent			
East Midlands Distribution Centre	Leicestershire	120,000	20
CIRFT, Corby	Northants	78,000	20
DIRFT II	Northants	38,000	10
DIRFT III (SRFI)	Northants/Warwickshire	730,000	182
Planned (awaiting or seeking consent)			
Eurohub (ProLogis Corby)[3]	Northants	230,000	58
East Midlands Gateway (SRFI)	Leicestershire	557,000	139
East Midlands Intermodal Pk (SRFI)	Derbyshire	552,000	138
South Northants (SRFI)	Northants	600,000	150
	TOTAL	**2,905,000**	**717**

1. Developer's published estimate 2. Calculated from floor space estimate, based on 40% of plot footprint
3. Not planned to be directly rail-linked but could be served from the adjacent CIRFT rail terminal
Source: Savills and developer's publicity or SRFI application

5.14 Around 717ha of land at rail-served sites can be expected to be developed up to 2036 in the region (though the analysis in Section 2 suggests that consent is granted and the schemes are operational by 2026). In Leicestershire, the equivalent figure is 159ha, which equates to around 22% of the regional total (noting that currently 27% of the region's strategic floor space capacity is in Leicestershire). Approximately 491ha is located in the broader 'golden triangle', with the sites in Corby and East Midlands Intermodal Park being marginally to the east and west respectively. The table below consequently compares the forecast demand

with the likely land supply at rail-served sites to 2036. We have assumed that all of the schemes outlined in the table above receive consent by 2021.

Table 5.4: Land Required at Rail-served Sites, Potential Site Supply and Shortfall to 2036

	ha			
Year	2021	2026	2031	2036
Leicestershire				
Supply - Land planned for rail-served sites	159	159	159	159
Forecast demand - high	111	150	209	274
Forecast demand - low	86	118	164	199
Shortfall – high*	48	9	-50	-115
Shortfall – low*	73	41	-5	-40
East Midlands				
Supply - Land planned for rail-served sites	717	717	717	717
Forecast demand - high	423	580	808	1,057
Forecast demand - low	336	463	644	788
Shortfall – high*	294	137	-91	-340
Shortfall – low*	381	254	73	-71

** land supply – forecast demand*

5.15 The preferred high replacement scenario suggests that around *115ha of new land at rail-served sites* will need to be brought forward by 2036 once existing consents and potential sites are accounted for. This suggests *one further SRFI* will need to be brought forward within Leicestershire up to 2036 (and towards the end of the planning period considered), given that the SRFIs currently planned for the region are in the 100-150ha size range. Across the region as a whole, the preferred high replacement scenario suggests a further 340ha of land at new rail-served sites will need to be brought forward by 2036. Similarly, this suggests another *3 SRFIs* will need to be brought forward up to 2036 in addition to those currently being planned, again taking into account the size of the SRFIs currently being developed. When considered in practical terms, on the basis of a high replacement scenario two or more of the SRFIs required in the region up to 2036 could be accommodated within Leicestershire.

Section 5.2: Road Only Sites – Demand and Supply

5.16 While a much greater proportion of future new-build can be expected to locate at rail-served sites, as concluded earlier there will still be a need to plan for commercially attractive strategic logistics sites (with an appropriate geographical spread) which are not rail-served. In logistical terms, not all warehouse occupiers will benefit from or be of a nature to be attracted to the rail terminal facilities offered at rail-served strategic distribution sites, and as demonstrated in Section 2, road based only distribution still performs well compared with sites to the north/east of the golden triangle. Therefore, having accounted for the proportion of future demand that will seek a rail-served location, we have subsequently considered the remaining proportion of forecast demand (42%) which will need to be accommodated at commercially attractive strategic logistics sites which are not connected to the railway network. This could be vacant plots at existing general industrial sites, new sites or 'recycled' land at existing B8 sites. This is shown in the table below.

Table 5.5: Gross New-Built Floor Space and Land Required at Road-only Connected Sites to 2036

	Gross New-build (000s sq m)					Land Required (ha)		
Year	2021	2026	2031	2036	2021	2026	2031	2036
Leicestershire								
Total - high	762	1,036	1,445	1,886	191	259	361	472
Total - low	594	811	1,130	1,369	148	203	282	342
Road only - high	320	435	607	792	80	109	152	198
Road only - low	249	341	474	575	62	85	119	144
East Midlands								
Total - high	2,918	4,001	5,570	7,286	730	1,000	1,393	1,822
Total - low	2,314	3,196	4,442	5,433	579	799	1,111	1,358
Road only - high	1,226	1,681	2,339	3,060	306	420	585	765
Road only - low	972	1,342	1,866	2,282	243	336	466	571

Land required - floor space is 40% of plot footprint

Total gross new-build as per Tables 4.3 and 4.4

5.17 The preferred high replacement scenario suggests 765ha of land at non rail-served sites will need to be developed by 2036 across the East Midlands region. For Leicestershire, 198ha of land at non rail-served sites will need to be developed by 2036 (preferred high replacement scenario).

5.18 As per the rail-served sites analysis, we have subsequently considered the quantum of land that is currently available at existing (non rail-served) sites *with B8 consents* in Leicestershire and across the wider region. Only those sites meeting the criteria for commercially attractive

sites (as described in Part A) were considered i.e. large plots, well located in relation to markets and the strategic highway network etc.. This is analysis shown in the tables below.

Table 5.6: Site Supply - Existing Road-only Sites with B8 Consents in Leicestershire

Site	District	Strategic B8 Land Available (ha)	Approximate floor space available (sq m)	Comments
Optimus Point Glenfield Road, Kirby Road/Ratby Lane	Blaby	12.5	62,400	Developer – Wilson Bowden. Part of the Blaby SUE. Outline consent for B1, B2 and B8 uses. Good accessibility from A46 at Junction 21a of M1 motorway. Design and build available for buildings from 1394 sq m to 46,451 sq m. Currently actively marketed by DTZ.
New Lubbesthorpe	Blaby	14.2	56,700	Developer – Hallam Land. Outline planning permission for B1/B2/B8. Part of Lubbesthorpe SUE. Adjacent to M1/M69 motorways. Funding now obtained for new bridge to be constructed over M1 to improve connectivity with Leicester City centre Bridge completion date anticipated August 2015. B8 units not currently marketed.
Barwell West. Ashby Road, Barwell. (Part of Barwell SUE)	Hinckley and Bosworth	3.1	12,400	Developer- Barwood/Taylor Wimpey. Outline consent as part of Barwell SUE. Connectivity reasonable with Junction 2 of M69 circa 5 miles to South. Capacity for one isolated large scale distribution unit but located adjacent to new residential development. Not currently actively marketed.

Logix 2, Rugby Road, Burbage (Hinckley Logistics Park))	Hinckley and Bosworth	3.2	15,800	Developer – Goodman. Detailed B8 consent. Located 1.5 miles from Junction 1 of M69 via A5, 17 miles from Junction 21 of M1. Connectivity good but potentially affected by A5 congestion. One speculative 15,329 sq m unit currently under construction and available November 2014. Currently marketed by Savills and NRS.
Interlink Distribution Park, Stanton, nr Bardon. (Prime Link)	Hinckley and Bosworth/North West Leicestershire	2.75	11,000	Developer – Wilson Bowden. B1, B2, B8 consent Formed part of Coalville SUE. Good connectivity – 2.5 miles from Junction 22 of M1 motorway. Design & Build opportunities available from 1,394-11,000 sq m (15,000-118,404 sq ft). Capacity for only one large scale distribution unit. Currently marketed by Wilson Bowden.
Interlink Distribution Park, Stanton, nr Bardon. Maximus 22	Hinckley and Bosworth/North West Leicestershire	5.9	23,226	Developer - Maximus. B1, B2, B8 outline consent. Good connectivity – 1.5 miles from J22 of the M1. Could accommodate a single building of 23,226 sq m or several smaller buildings. Currently marketed by CBRE and NRS.

Ivanhoe Business Park, Ashby de la Zouch	North West Leicestershire	3.5	15,800	Developer – Clowes. B1, B2, B8 outline consent. Located 2 miles from J13 of the A42 and 11 miles from J22 of the M1. Connectivity reasonable. Design and Build opportunities are from 929 - 15,794 sq. m (10,000 - 170,000 sq. ft) therefore capacity for only one large scale distribution unit. Currently marketed by DTZ and Salloway.
Total		**45.15**	**196,326**	

Source: Savills

Table 5.7: Existing Road Only Sites with B8 Consents – Rest of East Midlands

Site	Strategic B8 Land Available (ha)	Approximate B8 floor area available (sq m)	Comments
Derbyshire			
Dove Valley Park, Dove Valley Park, Derby, DE65 5BY	19	72,000	Developer – Clowes
	24	120,000	Located on A50 – M1/M6 link road at Foston. (Phase 2)
Derby Logistics Park, Derbyshire, DE21 7BH	24	172,800	Developer –Goodman 2 miles east of Derby, adjacent to A6 with good access to M1.
Markham Vale, Chesterfiled, Derbyshire, S44 5HY	31	124,000	Developer - Henry Boot Junction 29A of M1.
West Hallam Industrial Park, Cat & Fiddle Lane, Ilkeston, DE7 6HE	25	65,032	Developer – Delancey 7.8 miles from J25 of M1, 8.5 miles north east of Derby.
Northamptonshire			
Prologis Park, Kettering' Northamptonshire	12.5	32,700	Developer – Prologis 3 miles from Junction 7 of A14
Warth Park Warth Park Way Wellingborough NN9 6NY	15	80,000	Developer- Roxhill Adjacent to the main arterial route (A45); 3.4 miles from the A14 to the east and 21 miles from the M1 to the west.

Prologis Apex Park, Daventry, Northamptonshire	17.2	66,000	Developer- Prologis. Adjacent to A45, 1.5 miles north of Daventry town centre, close to M1.
G Park, Daventry Northamptonshire	6.5	32,000	Developer – Gazeley 7.5 miles from J17 M1.
Nottinghamshire G Park, Newark, Nottinghamshire, NG24 2ER	39	768,000	Developer – Gazeley 40 miles from J21 of M1 via A46 (duelled)
Blenheim Industrial Estate, Nottinghamshire, NG6 8WB	6.5	32,500	Developer - Wilson Bowden J26 of M1 2 miles; 4.5 miles north west of Nottingham City Centre
Future Point, Newark, Nottinghamshire, NG24	48.5	103,000	Developer - Catesby Access to J27 of M1 28 miles to the west via A46.
Castlewood, J28. Mansfield, Nottinghamshire, NG17 1JF	24	18,580	Developer - Clowes Adjacent to J28 of M1
Vertical Park, Nottingham, DN22 8DQ	81	185,800	Developer - Gladman. Location remote.
Nottingham 26, Eastwood, Nottinghamshire	22.3	83,612	Developer IM. Adjacent J26 of M1. Outline consent for B1/B2/B8.
Summit Park, Mansfield, Nottinghamshire	18.2	84,913	Developer Sladen Estates. 4.5 miles from Junction 28 of M1.
Sherwood Oaks, Mansfield	6	27,870	Developer Regal 8 miles from Junction 28 of M1.

Warwickshire			
Birch Coppice Regional Logistics Site	20	80,000	Developer - IM. Intermodal Freight Park at Junction of M42/A5. About to speculatively build circa 14,000 sq m
Rugby Gateway, Rugby CV23 0WE	36	167,000	Developer – Roxhill Adjacent J1 M6
Whitley Business Park, Coventry	7.5	37,500	Developer - St Modwen Direct access to A45. M6 J2 at 6 miles.
Total	**483.2**	**2,353,307**	

Source: Savills

5.19 Around 45ha is identified in Leicestershire and 483ha in the rest of the East Midlands and at sites just over the regional boundary in the West Midlands region (528ha in total across the region). It should be noted that only 160ha in total is identified within the broader definition of the 'golden triangle' (equating to approximately 30% of the land available). Many of the sites identified are to the north and east of the golden triangle (on former colliery sites north Nottinghamshire and eastern Northants). Markham Vale, G-Park Newark, Future Point Newark and Vertical Park are the largest sites with availability, all of which are in areas to the north and east of the golden triangle which have been identified as being the key threat to Leicestershire's hitherto comparative advantage (Section 2).

5.20 Consequently, taking the above existing supply into account the table below consequently compares the forecast demand with the likely land supply to 2036.

Table 5.8: Land Required at Non Rail-served Sites, Potential Land Supply and Shortfall to 2036

Year	ha 2021	2026	2031	2036
Leicestershire				
Total Supply - Available at current sites	45	45	45	45
Forecast Demand - high	80	109	152	198
Forecast Demand - low	62	85	119	144
Shortfall – high*	-35	-64	-107	-153
Shortfall – low*	-16	-40	-74	-99
East Midlands				
Total Supply - Available at current sites	528	528	528	528
Forecast Demand - high	306	420	585	765
Forecast Demand - low	243	336	466	571
Shortfall – high*	222	108	-57	-237
Shortfall – low*	285	192	62	-43

** land supply – forecast demand*

5.21 The preferred high replacement scenario suggests around *153ha of new land at road only sites* will need to be brought forward within Leicestershire up to 2036. To put this figure into context, the *Bardon Hill* development near Coalville has a gross land area of around 160ha i.e. plot footprints plus service roads etc.. Similarly, across the region as a whole the high replacement scenario suggests around 237ha of new land will need to be brought forward up to 2036. However, as noted above many of the sites identified are to the north and east of the golden triangle (on former colliery sites north Nottinghamshire and eastern Northants). Markham Vale, G-Park Newark, Future Point Newark and Vertical Park are the largest sites with availability, all of which are in areas to the north and east of the golden triangle which have been identified as being the key threat to Leicestershire's hitherto comparative advantage (Section 2).

5.22 It was noted in Section 4 that while many older buildings may be physically sound (i.e. they are not physically obsolete), they can become functionally obsolete e.g. they are unable to accommodate modern automated stock handling equipment or transport equipment such as double-deck trailers. Essentially, buildings reach the end of their useful economic life and are no longer suitable for their original designed use. In such cases and on the basis that the site in question is commercially attractive to the market (i.e. good road connections, close to labour, large plot etc..), the existing functionally obsolete building can be substantially

refurbished and then re-let for a similar use (e.g. for new occupier and cargo type). Occasionally, the unit may be demolished, allowing the plot to be 'recycled' for a new building (in some cases it may be cheaper to clear the plot and develop a new-build unit). Conversely, some existing plots and sites will be unsuitable for re-development for strategic distribution e.g. not of the size and configuration required for modern buildings, poor highway connections or close to residential. Such land adjacent to or within urban areas can be released for other employment uses or non employment use such as residential.

5.23 The amount of land which could potentially be 'recycled' in this manner up to 2036 at existing commercially attractive sites in the East Midlands/Leicestershire should therefore be factored into the above demand/supply equation (and before a 'search' or 'call' for new sites is commenced). A high level assessment of existing industrial land and sites with B8 consents, based on the limited data currently at hand, has been undertaken and this suggests that across the East Midlands around 200ha of land at commercially attractive sites could potentially be recycled for further strategic distribution activity up to 2036 (either the refurbishment of the existing building or demolition and re-build). Around 90ha of this land is estimated to be located in Leicestershire.

5.24 On the basis that these figures are robust and broadly accurate the table below illustrates, purely for example purposes, the impact on the supply-demand-shortfall figures presented above for Leicestershire to 2036.

Table 5.9: Demand, Potential Land Supply and Shortfall to 2036 – Accounting for Recycled Land

	Ha
Leicestershire	
Supply available at current sites	45
Forecast Demand - high	198
Forecast Demand - low	144
Shortfall – high*	-153
Shortfall – low*	-99
Potential recycled land	90
Shortfall (inc recycled land) – high	-63
Shortfall (inc recycled land) – low	-9

** supply – forecast demand*

5.25 Clearly, the quantum of floor space which could be refurbished or land at existing plots which could be recycled for new-build warehousing has the potential to reduce significantly the

amount of new land that needs to be allocated. However, investigations concluded there is currently no reliable data or relevant primary research readily at hand for Great Britain that would allow the above figure to be verified or otherwise in a robust manner (i.e. could withstand 'testing' at examination or inquiry). It is understood that developers ProLogis have previously examined this issue, but this was based on sites and units near Lyon in France. Also, it is not possible to conduct the necessary primary research within this study, given its scope and budget, that would allow a robust figure to be established. Such primary research would involve substantial surveying of existing landlords, developers and occupiers. On that basis, it is not possible at present to robustly quantify the amount of recycled land potentially available up to 2036, and as a result the figures quoted above have not therefore been included in the supply-demand analysis.

5.26 Given that a short fall between future demand and existing supply has been identified (see above), identifying and quantifying the amount of recycled land potentially available (and where it is located) should be undertaken before a 'search' or 'call' for new sites is commenced. The outputs from this exercise can then be 'deducted' from the short fall and consequently assist in determining the quantum of new land that will need to be brought forward in local plans and strategies. However, this exercise would be best undertaken by means of a future study commission, which could undertake the necessary surveying of occupiers/landlords and ultimately arrive at a robust quantification.

5.27 It is likely that the opportunities to recycle plots for new buildings will be at the more modern 'out of town' sites, originally developed during the 1980s and 1990s, which offer large uniform plots, have good connections to the strategic highway network, are located away from incompatible land uses and are well located relative to end-users. However, in many cases existing plots and sites will be unsuitable for re-development for strategic distribution e.g. not of the size and configuration required for modern buildings, poor highway connections or close to residential (such land adjacent to or within urban areas can be released for non employment use). Such land, now poorly suited for strategic distribution, can potentially be released for non-employment use. This can include new residential developments.

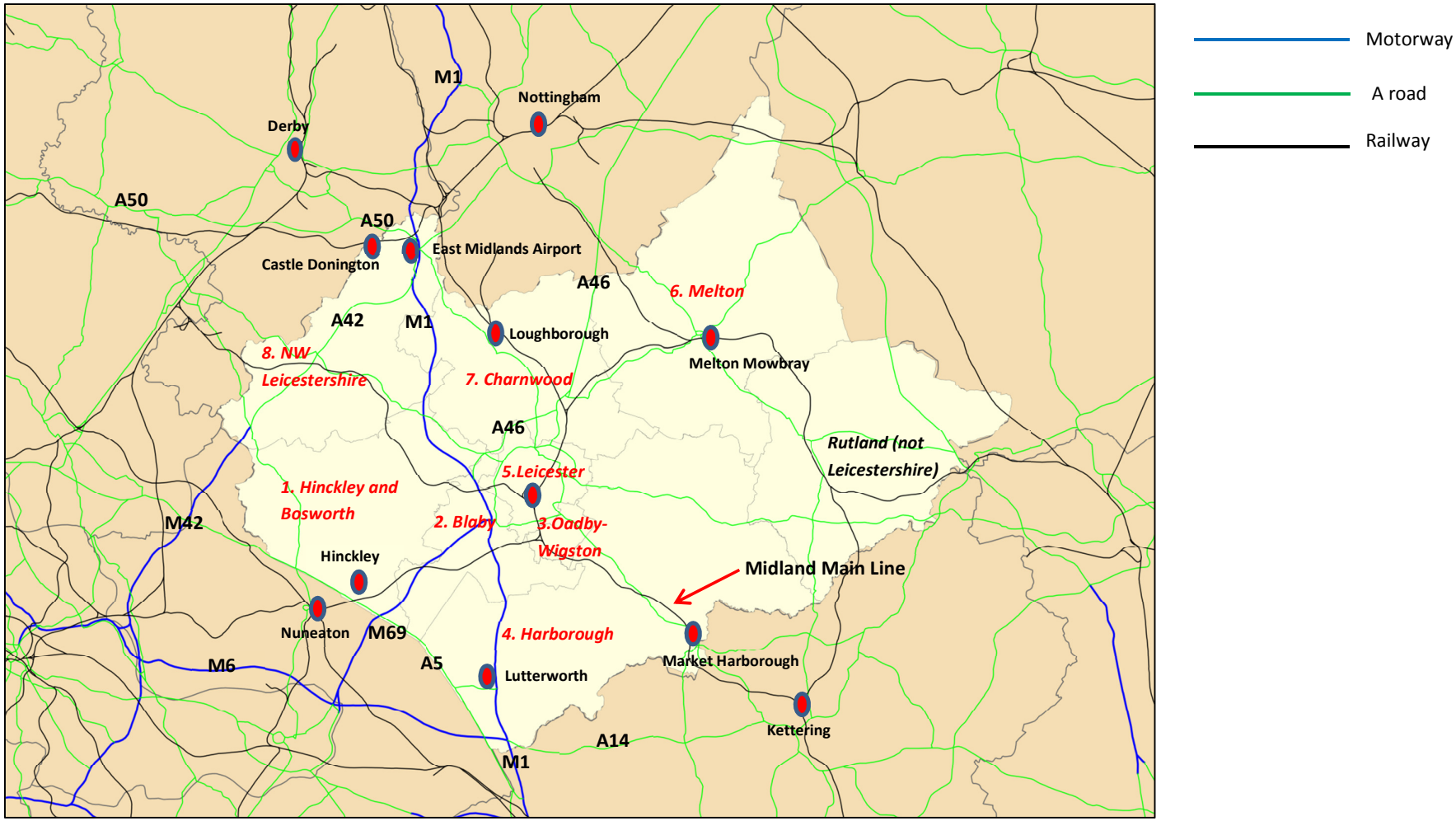
6. KEY AREAS OF OPPORTUNITY

6.1 Given the land short-fall identified in the analysis from the previous Section and using a criteria based approach, the main aim of this section has been to identify general broad areas across Leicestershire and the East Midlands region where new commercially attractive logistics sites should be located (key areas of opportunity). These would be sites, of the size, scale, location and transport connectivity required by the market, which could potentially be available to 'fill' the long-term short-fall identified in the previous section. In line with the study terms of reference, the report does not consider, assess or recommend specific sites.

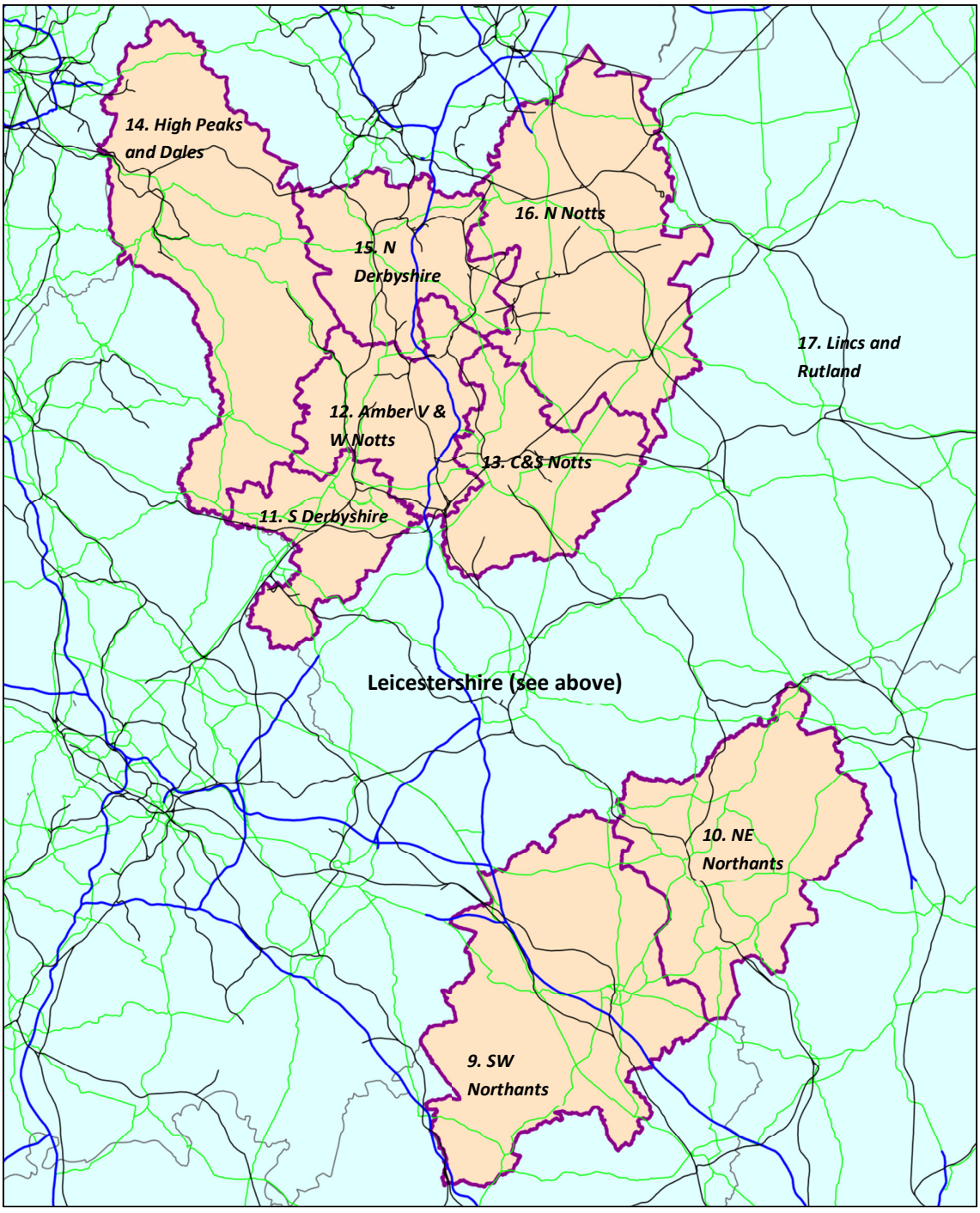
6.2 The first task was to divide the East Midlands region into a number of broad sub-regions. The sub-regions, which have been defined solely for the purposes of this study, are the eight local planning authorities within the county of Leicestershire, along with groupings of local planning authorities in the rest of the East Midlands which reflect transport corridors in the region (these are the same sub-regions adopted for the *East Midlands Logistics Study in 2006*, undertaken by MDST and Savills[11]). The 17 sub-regions are displayed in the following maps.

[11] East Midlands Logistics Study, for the East Midlands Development Agency 2006 (MDST and Savills)

Map 6.1: East Midlands Sub-regions - Leicestershire



Map 6.2: East Midlands Sub-regions – not Leicestershire



6.3 The following is a brief description of each sub-region's delimitation.

Leicestershire

1. Hinckley and Bosworth.
2. Blaby.
3. Oadby and Wigston.
4. Harborough.
5. Leicester.
6. Melton.
7. Charnwood.
8. North West Leicestershire.

Rest of East Midlands

9. SW Northants - Covers the administrative authorities of Northampton, Daventry and South Northants.
10. NE Northants - Covers the administrative authorities of Corby, Kettering, Wellingborough and East Northants.
11. S Derbyshire - Covers the administrative authorities of South Derbyshire and Derby.
12. Amber Valley and West Notts - Covers the administrative authorities of Amber Valley, Ashfield, Broxtowe and Erewash.
13. Central and S Notts - Covers the administrative authorities of Nottingham, Gedling and Rushcliffe
14. High Peak and Dales - Covers the administrative authorities of High Peak, Derbyshire Dales and the Peak District national park.
15. N Derbyshire - Covers the administrative authorities of Chesterfield, North East Derbyshire, Bolsover and Mansfield.
16. N Notts - Covers the administrative authorities of Bassetlaw and Newark & Sherwood.
17. Lincolnshire and Rutland.

6.4 Each sub-regional area has subsequently been assessed against the following criteria:

- Good connections with the strategic highway network i.e. served by motorways or long-distance dual carriageways, or likely to be served by such routes when taking into account known highway infrastructure upgrades;
- Good connections with the railway network i.e. served by a railway line offering a generous loading gauge (minimum W9, therefore able to convey the tallest intermodal units) or those routes which are earmarked for capacity and/or loading gauge enhancements (enhancement projects for the SFN over the 2014-2019 Control Period);
- Appropriately located relative to the markets to be served – specifically, location in relation to the 'golden triangle'; and
- Is accessible to labour and located close to areas of employment need.

6.5 These are essentially the criteria outlined and described in the Part A report concerning commercially attractive strategic logistics sites, albeit minus the criteria which relate specifically to actual sites (size, configuration and neighbouring land uses). It should be noted that the assessment takes into account the highway and railway infrastructure upgrades as described in Section 2 earlier.

6.6 Broad areas within the eight Leicestershire sub-regions which meet all the criteria are identified below. These are essentially where the qualifying railway lines and strategic highway corridors are in proximity, meaning they are suitable for road and rail-served served strategic distribution

1. Hinckley and Bosworth - Southern part of market area where Leicester-Nuneaton railway line passes close to the M69/A5.
2. Blaby - Central part of market area (on east-west axis) where Leicester-Nuneaton railway line passes close to the M69 and M1.
7. Charnwood - Central part of the market area (on north-south axis) where the Midland Main Line passes alongside the A6 and A46. Eastern part of the market area where the Peterborough-Leicester line passes alongside the A46.
8. North West Leicestershire - Northern part of market area where M1, A42, A50 passes close to the freight only line connecting the Midland Main Line (at Trent Junctions) to the Derby-Birmingham line.

6.7 On a similar basis, broad areas within the eight Leicestershire sub-regions which meet the criteria with the exception of 'good connections to the railway network' have also been identified. These are potential areas suitable for road-only based strategic distribution.

1. Hinckley and Bosworth – *Road only* in the north-eastern part of the market area along the M1
2. Blaby – *Road only* in the southern part of the market area with direct access to the M1
4. Harborough - *Road only* in the western and north-western part of the market area with direct access to M1, M6, A14 and A5.
7. Charnwood - *Road only* in the western part of the market area along the M1
8. North West Leicestershire - *Road only* in the western part of the market area along the A42 corridor. *Road only* in the eastern part of the market area along the M1

6.8 The assessment is presented in the Appendix 4 to this report, while the key areas of opportunity are outlined below.

Leicestershire – Key Areas of Opportunity

6.9 The broad areas identified within each Leicestershire sub-region above have been combined and re-organised reflecting transport corridors in order to form *Key Areas of Opportunity* within Leicestershire. These are listed below in no particular order of priority.

Rail and road served Key Areas of Opportunity

- Key Area A: *Leicester to Hinckley corridor* – combining the areas identified within Hinckley and Bosworth (1.) and Blaby (2.);
- Key Area B: *Midland Main Line North corridor* – the areas identified within Charnwood (7.); and
- Key Area C: *East Midlands Airport to south Derby corridor* – the area identified within North West Leicestershire (8.).

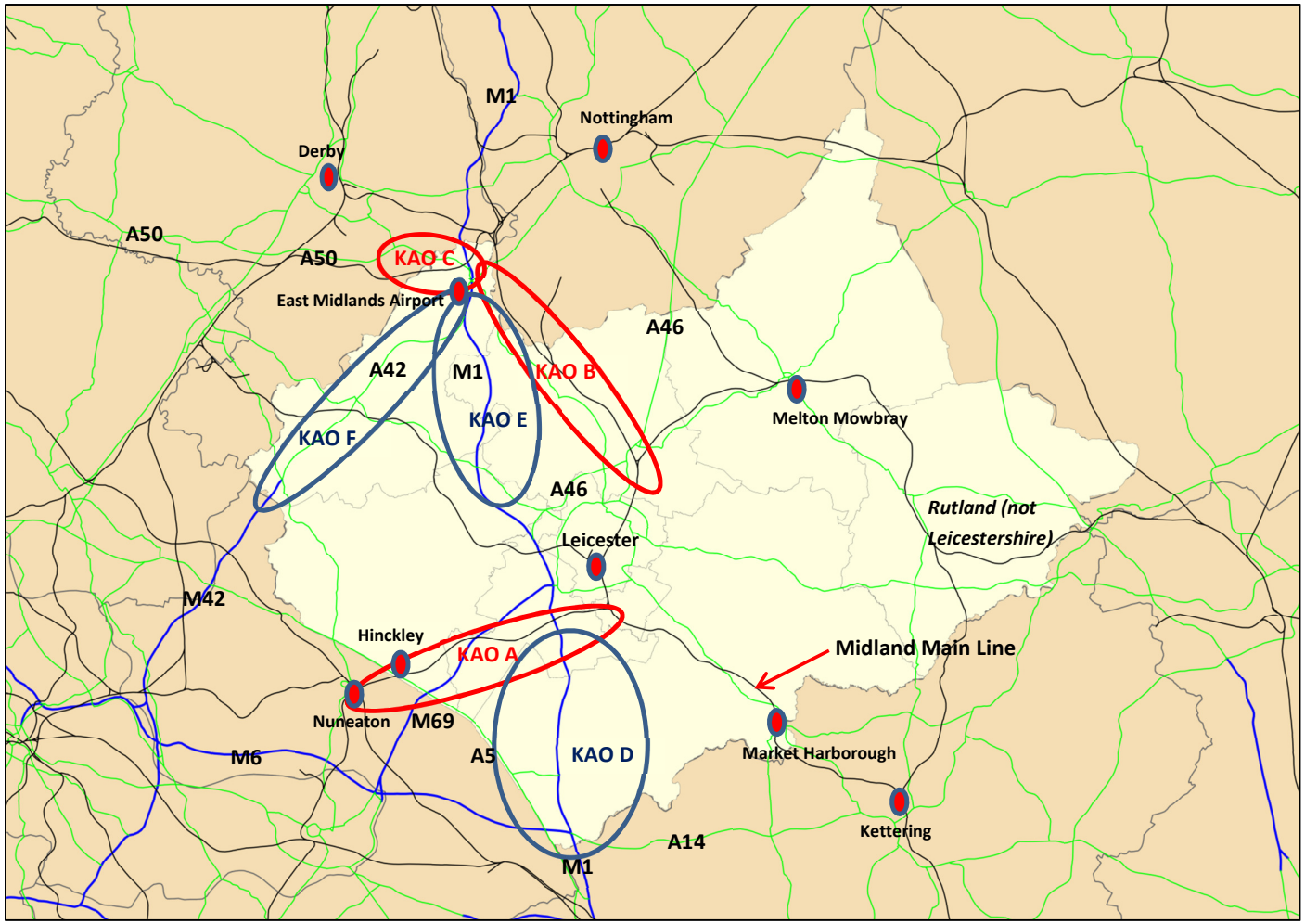
Road-only served key Areas of Opportunity

- Key Area D: *M1 South corridor* – the areas identified within Blaby (2.) and Harborough (4.)
- Key Area E: *M1 North corridor* – combining the areas identified within Hinckley and Bosworth (1.), Charnwood (7.) and North West Leicestershire (8.)
- Key Area F: M42/*A42 corridor* – combining the areas identified in North West Leicestershire (8.)

6.10 Maps 6.3 shows (indicatively) these key areas of opportunity. It should be noted that the Key Areas of Opportunity cover multiple local authorities and potentially extend into neighbouring authorities outside Leicestershire. Those enclosed in red are key areas of opportunity for both rail and road only connected sites, while those enclosed in blue are key areas of opportunity for road only connected sites. It is broadly within these identified key areas of opportunity where individual sites commercially attractive to the logistics market might be located. These are therefore the key areas where the planners will need to focus their searches and consider making provision for new strategic logistics sites. As noted earlier, in line with the study terms of reference specific sites have not been assessed or recommended.

Map 6.3: Key Areas of Opportunity - Leicestershire

(NB: Boundaries of key areas are not definitive and are shown for indicative purposes only)



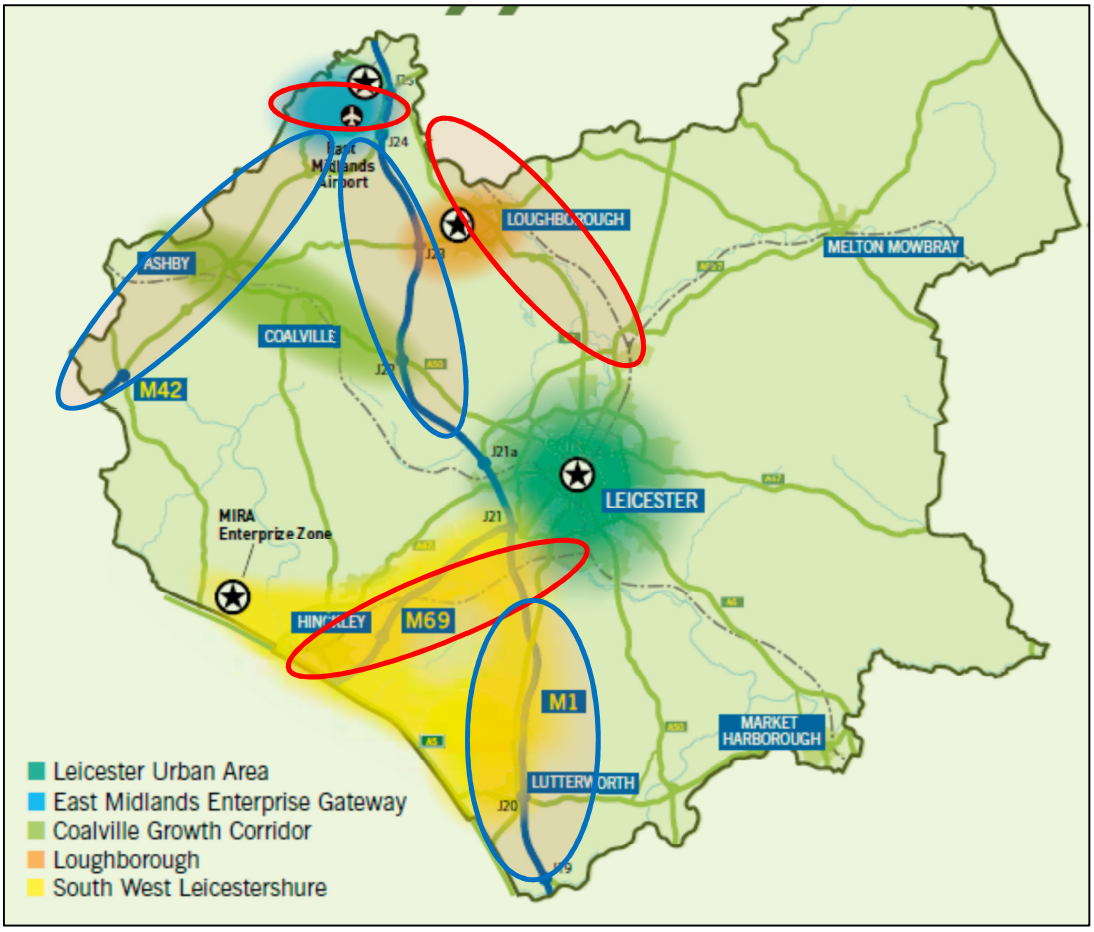
Key Areas of Opportunity (KAO) – road linked

Key Areas of Opportunity (KAO) – both rail-linked and road only connected sites

6.11 Two interesting observations emerge from this analysis. Firstly, with respect to Key Area A (Leicester-Hinckley), the combined affect of the railway enhancement schemes and the potential highway proposals currently being explored by Leicestershire County Council (Section 2) would be to open up the sub-regional area between the M69 and M1 as key areas of opportunity for rail-linked strategic distribution (i.e. the southern part of Hinckley and Bosworth and the central part of Blaby local government areas). While this sub-regional area is served by the Leicester-Nuneaton railway line, it is currently poorly served with regards to connections to the strategic highway network (limited access at M69 Junction 2 and access to the M1 being via circuitous routes to M1 Junction 21/M69 Junction 3). In the absence of better highway connectivity, these sub-regional areas could not be considered as key areas of opportunity. Likewise, parts of Key Area D (M1 South) would also become potential areas for road only connected strategic distribution should it be possible to create a new point of access to the M1; this would not be the case without improved access to the strategic highway network.

6.12 Secondly, with the exception of the City of Leicester all of the identified key areas of opportunity coincide with the LLEP's Strategic Economic Plan Growth Areas. This is shown on the map below.

Map 6.4: LLEP Growth Areas and Key Areas of Opportunity



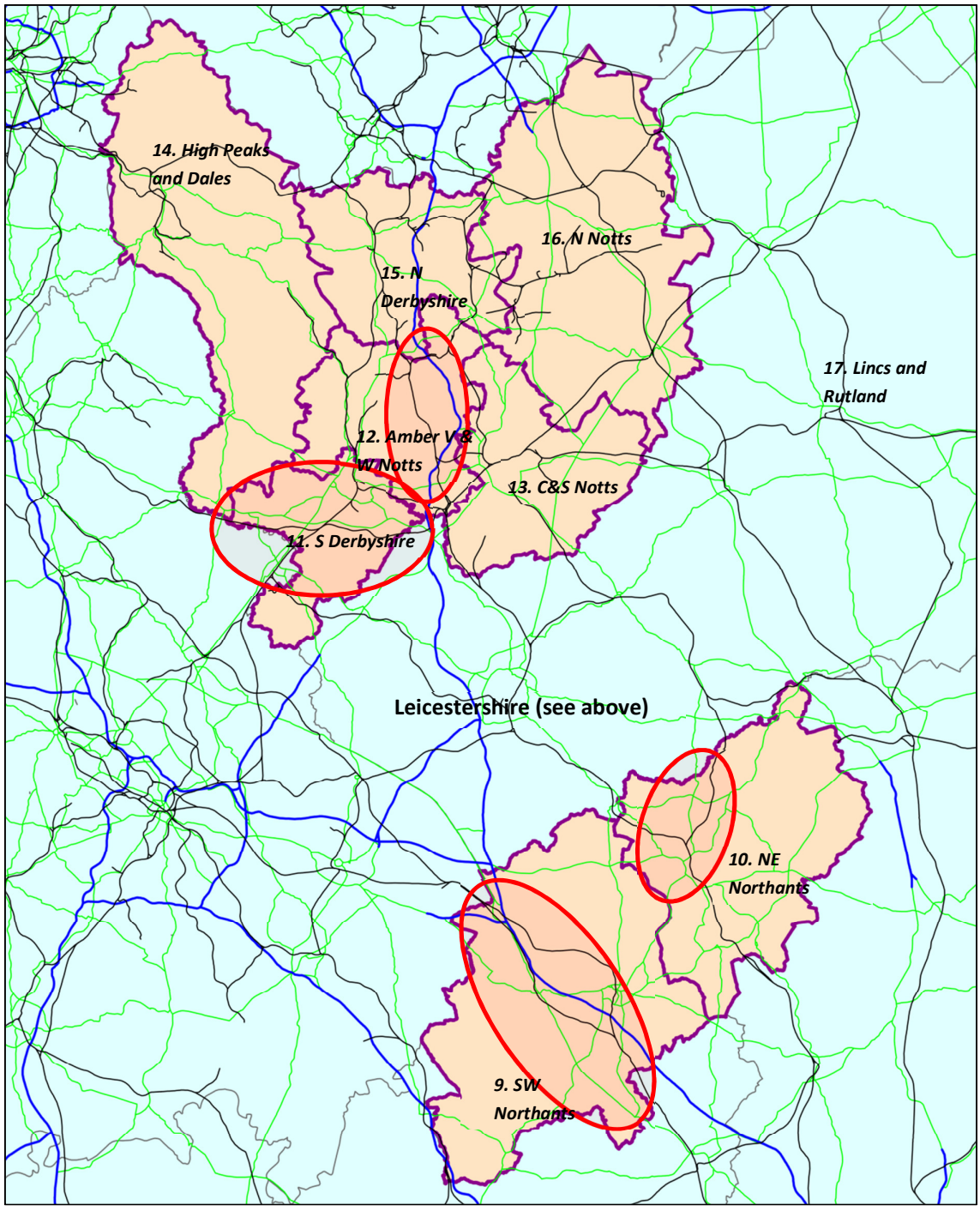
6.13 One sub-regional area which currently cannot be considered a key area of opportunity is the A6/Midland Main Line corridor to the south and south-east of Leicester (central part of the Harborough market area on north-south axis). Despite the railway enhancements planned for the Midland Main Line (electric spine and loading gauge enhancement), this area currently suffers from poor road connectivity with the strategic highway network; either via south Leicester and the A563 to the M1 at Junction 21, or south to the A14 at Rothwell. This is a significant impediment to the area's attractiveness to the logistics sector.

Rest of East Midlands – Key areas of Opportunity

6.14 Broad areas within the rest of the East Midlands sub-regions which meet all the criteria are outlined below and illustrated on the map following.

10. SW Northants - Broad north-south axis through the centre of the market area where the West Coast Main Line passes close to the M1 and A43.
11. NE Northants - Broad east-west axis through the centre of the market area where the Midland Main Line passes close to the A14.
12. S Derbyshire - Broad east-west axis through the southern part of the market area where the freight only line connecting the Midland Main Line to the Derby-Birmingham line (and by the Derby-Birmingham line passes close to the A50 and A38.
13. Amber Valley and West Notts - Broad north-south axis along the eastern edge of the market area where the Midland Main Line (Erewash valley Line) passes close to the M1 and A38.

Map 6.5: Key Areas of Opportunity – Rest of East Midlands



6.15 At this stage of the analysis, it is necessary to consider whether there is a hierarchy of key areas of opportunity. Some areas may meet the criteria to a higher level than others, and logically will therefore accommodate the most commercially attractive sites. Consequently a further analysis of the recommended sub-regions has therefore been conducted.

6.16 Essentially, only those key areas of opportunity meeting each of the four criteria to the highest level (i.e. offering both road and rail connected opportunities, central golden triangle location and close to available labour) have been considered for inclusion in the top category (termed the 'best key areas of opportunity'). Six 'best key areas of opportunity' have been identified, of which three are located in Leicestershire. A further four areas meet the criteria, albeit to a lower level (either not offering rail connections or being located slightly to the north of the golden triangle), of which three are in Leicestershire. These have been termed 'good key areas of opportunity'. The best and good key areas of opportunity are listed below (in no particular order of priority).

Best key areas of opportunity – Leicestershire

- Key Area A: *Leicester to Hinckley corridor*;
- Key Area B: *Midland Main Line North corridor*; and
- Key Area C: *East Midlands Airport to south Derby corridor*.

Best key areas of opportunity – Rest of East Midlands

- SW Northants (10.);
- NE Northants (11.); and
- S Derbyshire (12.)

Good key areas of opportunity – Leicestershire

- Key Area D: *M1 South corridor;*
- Key Area E: *M1 North corridor;* and
- Key Area F: M42/*A42 corridor.*

Good key areas of opportunity – Rest of East Midlands

- Amber Valley and West Notts (13.)

Identifying and Assessing Specific Sites

6.17 With respect to identifying and assessing specific sites to fill the short fall identified, Section 5 of the Part A report set out the key locational characteristics of a commercially attractive logistics site. For completeness, the criteria are listed below, while reference should be made to the Part A report for an explanation/description of the rationale underlying the identified criteria.

6.18 Commercially attractive rail-served strategic logistics sites are considered to be ones which meet the following criteria:

- Good connections with the strategic highway network;
- Appropriately located relative to the markets to be served;
- Offers modal choice; is served by a railway line offering a generous loading gauge (minimum W9), available freight capacity and connects to key origins/destinations directly without the requirement to use long circuitous routes;
- Is sufficiently large and flexible in its configuration so that it can accommodate an intermodal terminal and internal reception sidings;
- Is sufficiently large and flexible in its configuration so that it can accommodate the size of distribution centre warehouse units now required by the market;
- Is accessible to labour, including the ability to be served by sustainable transport, and located close to areas of employment need; and
- Is located away from incompatible land-uses

6.19 It is against these criteria that future commercially attractive sites should be identified and assessed. Road only sites can be considered ones which meet all the other criteria outlined above, bar the modal choice requirements outlined above and the rail terminal facilities criteria.

7. EMPLOYMENT AND ECONOMIC BENEFITS

7.1 The Part A report presented a detailed analysis of existing employment in the strategic distribution sector in Leicestershire and the subsequent contribution to Gross Value Added. The main aim of this section of the report is twofold, namely:

- To estimate the total additional employment likely to be generated in the Leicestershire sub-region and East Midlands region resulting from meeting the forecast growth in warehouse floor space capacity; and
- The contribution to regional Gross Value Added resulting from the generated employment.

7.2 Section 4 forecast that large scale warehouse floor space capacity in Leicestershire would increase by around 244,000 sq metres up to 2036. For the East Midlands region, the growth in floor space is forecast to be around 1.4 million sq metres over the same period. When considering the estimated generated employment, it is the net growth in floor space (the growth build element) that needs to be considered rather than the gross new-build floor space. For example, consider a distributor who currently occupies a 40,000 square metre facility in Leicestershire which employs 500 full-time equivalent or FTE (at 80 sqm per FTE) The existing unit is now functionally obsolete and the distributor subsequently moves to a new 60,000 square metres facility in the county which would employ 750 FTEs. Assuming that existing staff transfer to the new building when the old one closes, the new jobs consequently generated by the new-build warehouse would be 250 FTEs.

7.3 Using the employment density ratio for large high-bay warehousing presented in the Part A report i.e. 80 sq metres per FTE, the number of direct jobs the forecast growth in warehouse floor space capacity is likely to generate can be estimated. In Leicestershire, this is estimated to be just over 3,000 jobs up to 2036, while across the wider East Midlands the figure is estimated to be around 17,500.

7.4 In addition, we would expect further jobs to be created in the wider logistics sector supporting this activity. The BRES 2012 (Provisional) dataset allows the number of employees nationally in warehousing and storage activities to be compared with the number employed in wider supporting roles e.g. HGV drivers. This is shown in the table below, and suggests that for every one warehousing job a further 1.35 jobs are supported in the wider sector.

Table 7.1: Total Employees in Warehousing/Storage and the Wider Logistics Sector

Job	SIC Code	Total Employees (000s)
Rail freight	49200	5.5
Road freight	49410	190.6
Rail terminals	52211	0.1
Services incidental to land transport	52219	71.3
Cargo handling land transport	52243	0.5
Warehousing and storage	52103	199.2
Warehousing:support jobs		1.35

Source: BRES 2012 Provisional

7.5 On that basis, in Leicestershire just over 4,100 jobs are likely to be created in supporting activities while across the wider East Midlands the figure is estimated to be around 23,700. The table below therefore shows the total estimated employment generation associated with the new-build and land use forecasts from Sections 4 and 5. For Leicestershire, by delivering in full the new-build forecasts in Sections 4 and 5 (by means of allocating sufficient land through local plans) it is estimated that just over *7,100 new jobs* will be created.

Table 7.2: Estimated Job Creation – Direct and Supporting Activities

	East Midlands	Leicestershire
Floor space growth to 2036 (000s sq m)	1,405	244
Direct jobs created (FTEs)	17,567	3,050
Supporting jobs created (FTEs)	23,716	4,117
Total	**41,283**	**7,167**

80 sq m per Full Time Equivalent.

A ratio of 1 warehousing job to 1.35 jobs in supporting activities (e.g. road transport and cargo handling)

7.6 The forecast growth in warehouse floor space capacity will subsequently deliver additional Gross Value Added (GVA). Taking the national GVA per job data for the warehousing and storage sector (Sector 52.1) in the ONS Annual Business Survey and adjusting to GVA per FTE (by using the ratio of FTE jobs to employment from the latest BRES data), GVA per FTE job is around £41,500. It is also assumed that national average productivity rates hold during the 20 years. On that basis, the table below estimates the impact on regional GVA resulting from the direct and supporting jobs created. For Leicestershire, by delivering in full the new-build forecasts in Sections 4 and 5 (by means of allocating sufficient land through local plans), it is estimated that *GVA will increase by around £297 million* (at 2014 prices).

Table: 7.3: Estimated Job Creation and Impact on GVA

GVA	£million (2014 prices)	
	East Midlands	Leicestershire
Direct jobs	£729.0	£126.6
Supporting jobs	£984.2	£170.9
Total	**£1,713.3**	**£297.4**

7.7 The economic benefit estimates presented above are predicated on all the forecast new-build being accommodated within the region/sub-region i.e. sufficient land at suitable sites is brought forward to meet the implied short-fall (as per the analysis in Section 5). However, the inability to bring forward a range of commercially attractive sites in Leicestershire (and the wider golden triangle) would most likely result in an overall reduction in the region's total warehouse floor space capacity. As noted in Section 4 above, most new-build floor space is actually replacing existing obsolete capacity (in most cases functionally obsolete but in some cases physically obsolete units). Consequently, the replacement capacity along with the growth build element would migrate to other regions given a lack of sites in the golden triangle, leading to an overall reduction in regional floor space and employment in the sector. This clearly has GVA and employment implications.

7.8 For example, again consider a distributor who currently occupies a 40,000 square metre facility in Leicestershire which employs 500 FTEs, and who seeks to develop a new 60,000 square metres facility which would employ 750 FTEs. If the distributor were forced to relocate to another region due to a lack of suitable sites, the net reduction in floor space would be 40,000 square metres and job losses of 500 FTEs (on the basis that the old warehouse unit is demolished).

7.9 The identified land 'short-fall' for the high replacement scenario (Section 5), when equated as warehouse floor space, is just over 15% of the existing capacity in the region. We have therefore estimated the impact on employment resulting from an overall 10%, 15% an 20% reduction in the region/sub-region's warehouse floor space capacity (when compared with the existing total, as per the Part A report). The same methodology as used to estimate jobs created has been adopted. The estimated reduction in warehousing and wider logistics sector supporting employment is presented in the table below.

Table 7.4: Estimated Reduction in Employment

	East Midlands	Leicestershire
Existing floor space (000s sq m)	8,056	2,250
Total floor space - 10% reduction (000s sq m)	7,250	2,025
Total floor space - 15% reduction (000s sq m)	6,848	1,913
Total floor space - 20% reduction (000s sq m)	6,445	1,800
Direct jobs (FTEs) - 10% reduction	10,070	2,813
Direct jobs (FTEs) - 15% reduction	15,105	4,219
Direct jobs (FTEs) - 20% reduction	20,140	5,625
Supporting jobs (FTEs) - 10% reduction	13,595	3,797
Supporting jobs (FTEs) - 15% reduction	20,392	5,695
Supporting jobs (FTEs) - 20% reduction	27,189	7,594
Total jobs (FTEs) - 10% reduction	23,665	6,609
Total jobs (FTEs) - 15% reduction	35,497	9,914
Total jobs (FTEs) - 20% reduction	47,329	13,219

80 sq m per Full Time Equivalent.

A ratio of 1 warehousing job to 1.35 jobs in supporting activities (e.g. road transport and cargo handling)

7.10 The impact on GVA resulting from these job reductions is presented in the table below.

Table 7.5: Estimated Job Reduction and Impact on GVA

GVA	£ million (2014 prices)	
	East Midlands	Leicestershire
Direct jobs (FTEs) - 10% reduction	-£417.9	-£116.7
Direct jobs (FTEs) - 15% reduction	-£626.9	-£175.1
Direct job losses (FTEs) - 20% reduction	-£835.8	-£233.4
Supporting jobs (FTEs) - 10% reduction	-£564.2	-£157.6
Supporting jobs (FTEs) - 15% reduction	-£846.3	-£236.4
Supporting jobs (FTEs) - 20% reduction	-£1,128.3	-£315.1
Total - 10% reduction	-£982.1	-£274.3
Total - 15% reduction	-£1,473.1	-£411.4
Total - 20% reduction	-£1,964.2	-£548.6

7.11 The analysis above therefore estimates that between *3,500 and 7,500 full-time equivalent jobs would be lost* from Leicestershire due to the inability to bring forward the new sites in-line with the land use forecasts. For Leicestershire (LLEP area), this would subsequently generate *a reduction in regional GVA of between £274 million and £548 million* (at 2014 prices).

8. SUMMARY AND CONCLUSION

8.1 The combined analysis throughout Parts A and B has clearly demonstrated the importance of the logistics/distribution sector to the sub-regional economy. The area has, to date, established a distinct competitive advantage in the strategic logistics sector. This position was evidenced by the analysis undertaken in Section 4 (warehouse floor space) and Section 6 (Employment) of the Part A report. Section 4 showed that a significant quantum of large scale warehouse floor space has been developed in the golden triangle (of which Leicestershire is part), with a significant proportion of this floor space serving the national market rather than a regional hinterland (capacity being significantly more than is required to handle the volume of cargo distributed into the East Midlands regional economy).

8.2 Consequently, the sector has generated high levels of employment and provides a significant contribution to both regional and LLEP area Gross Value Added (above the national average in each case). The LLEP Economic Growth Plan 2012-2020 gives a figure of 51,300 jobs in the LLEP area in distribution and logistics, accounting for 12% of LLEP area employment. Gross Value Added in 2012 attributable to wholesale/retail, transport/storage and food activities was £3,794 million or around 21% of the LLEP area total.

8.3 Market conditions can and do change over time, and as market conditions change a previously held competitive advantage can diminish unless action is taken to address the changes. Two important emerging challenges to the golden triangle's competitive advantage in national distribution (and by extension the Leicestershire sub-region) have been identified, namely:

- The emergence of competing inland locations/sites to the north and east of the 'golden triangle', in particular former colliery and heavy industrial sites in the north Midlands, South Yorkshire and the East of England,; and
- The development of B8 land within port estates (so called port centric logistics) which is intended to serve a national market.

8.4 Both of these emerging challenges involves the development of NDCs in regions/locations which to date have not generally accommodated such facilities. The north Midlands/South Yorkshire has generally been considered 'too far north' for NDCs, while historical industrial relations issues within ports (among other issues) previously rendered them uncompetitive. In the first case, the main logistics strategy adopted by the major national distributors is likely to remain as per above (i.e. goods flowing via NDCs and RDCs to end-users), but the location of the NDCs could migrates away from the golden triangle to these other regions. The latter issue involves serving RDCs direct from NDCs located within ports.

8.5 On the basis that Leicestershire wishes to maintain the identified established competitive advantage (alongside the resultant economic benefits) and grow the sector, it was shown in Section 2 of the Part B report that the key to addressing the challenges outlined is the continued development of new commercially attractive strategic sites across the golden triangle (and by implication Leicestershire), a significant proportion of which will need to be directly rail-served (in addition to the usual requirements for high quality connections to the strategic highway network). A supply chain cost analysis demonstrated that, given a choice of sites, a major distribution centre operator would still be expected to locate in the golden triangle as it continues to offer the most competitive location, particularly when handling a mixture of deep-sea, EU and domestic sourced cargo.

8.6 Given the need to maintain and enhance Leicestershire's competitive position through the continued development of new commercially attractive strategic sites, a forecast of future demand for new-build large scale warehousing in the East Midlands region and Leicestershire sub-region up to 2036 was undertaken in Part B. The preferred high replacement land use forecast suggests that, once existing consents and pipeline sites are accounted for, around 115ha of new land at rail-served sites will need to be brought forward by 2036. This suggests *one further SRFI* will need to be brought forward within Leicestershire up to 2036 (and towards the end of the planning period considered), given that the SRFIs currently planned for the region are in the 100-150ha size range. On a similar basis, the preferred high replacement scenario suggests around *153ha* of new land at non rail-served sites will need to be brought forward within Leicestershire up to 2036.

8.7 The analysis undertaken in Section 7 above suggests that meeting the land use forecasts, by means of allocating sufficient land through local plans, will have the potential to generate around *7,000 new full-time jobs* in Leicestershire. The contribution to Gross Value Added in Leicestershire resulting from the generated employment is estimated to be *additional £297million* (at 2014 prices).

8.8 Conversely, the inability to bring forward a range of commercially attractive sites in Leicestershire (and the wider golden triangle) would most likely result in an overall reduction in the region's total warehouse floor space capacity. As described throughout Part B, the vast majority of new-build floor space is actually replacing existing obsolete capacity. Consequently, this replacement capacity along with any growth build element would migrate to other regions given a lack of sites in the golden triangle (along with the jobs sustained by the existing capacity).

8.9 Section 7 above estimates that *between 3,500 and 7,500 full-time equivalent jobs would be lost from Leicestershire* due to the inability to bring forward the new sites in-line with the land use forecasts. For Leicestershire, this would subsequently generate a *reduction in regional Gross Value Added of between £274 million and £548 million* (at 2014 prices).

8.10 The main focus of any strategy for the strategic logistic sector in Leicestershire should therefore be the identification and allocation of new land at commercially attractive strategic sites, the purpose of which is to maintain and enhance the established competitive advantage, enabling the sector to growth in a sustainable manner.

APPENDIX 1

Study Terms of Reference Part B

B. Planning for Change / Growth - Strategic Spatial Planning Context (40%)

Identify future strategic distribution need to 2031 (and indicatively to 2036) and apply the insight from Part A to formulate growth options to meet Leicester & Leicestershire's need in the most sustainable and beneficial way.

a. Define / describe and analyse the strategic distribution sector in Leicester & Leicestershire – including types of operations (i.e. SRFI, RDC's, NDC's), physical characteristics (i.e. pattern, nature / age of current stock), markets and operators (i.e. food, non-food, manufacturing, express operators, internet fulfilment etc.) and any functional relationships / dependencies both within & beyond the Leicester & Leicestershire area.

b. Undertake and critically assess the Strengths Weaknesses Opportunities and Threats (SWOT) of the Leicester & Leicestershire strategic distribution sector, in the context of the wider Golden Triangle / adjacent LPA areas. Identify any significant economic, infrastructure, or environmental challenges and interdependency / competition issues that present potential constraints or opportunities for sector growth in Leicester & Leicestershire / or it's constituent parts (LPA areas).

c. Forecast the future Strategic Distribution Sector (B8) requirement for Leicester & Leicestershire to 2031(and indicatively to 2036) – assess any alternative scenarios (i.e. base-case / low, medium, high growth) and their relative merits in delivering economic growth aspirations (e.g. GVA, job creation / skills match)

d. Differentiate forecast requirements between the need for road-based, rail-linked and airport-linked provision for the sector and any provision to serve specific sub markets / priority sectors (see footnote [4.]).

e. Review the quantitative & qualitative adequacy of current sites & potential land supply across Leicester & Leicestershire against forecast need and identify gaps.

f. Identify reasonable option/s to fill gaps (meet forecast need) for the preferred growth scenario (to be agreed via the Duty to Cooperate mechanism) – taking account of the evidence & insight provided by Part A & preceding elements of Part B of the study. Each

option should consider the; type, spatial pattern (nodes / direction of), quantitative distribution across the area, and any changes to the future role & contribution of existing sites / property.

g. Assess the relative merits of the option/s in terms of sustainable development (e.g. economic, social and environmental effects) at a strategic level. Recommend & justify a preferred option, and reasons for discounting alternative options, for managing and delivering strategic distribution growth to meet need in Leicester & Leicestershire

h. In the event that Leicester & Leicestershire can't wholly meet its own development requirements for strategic distribution, recommend actions and establish parameters for Duty to Co-operate discussions across county boundaries.

i. Identify key criteria to guide / inform the selection of suitable sites for strategic distribution use at the LPA level.

The recommended option will need to be considered through the Duty to Co-operate framework within (and if necessary beyond) Leicester and Leicestershire, including via the Leicester and Leicestershire Members Advisory Group (MAG).

APPENDIX 2

Freight Flow Forecasts Data Tables

Road Freight Forecasts to 2031

Destination	000s tonnes lifted 2012	2031	Growth 2012-2031	% growth 2012-2031	CAGR
East Midlands	**74,286**	**98,847**	**24,561**	**33%**	**1.5%**
of which:					
Leicestershire	***18,171***	***23,223***	***5,052***	***28%***	***1.3%***
West Midlands	72,432	78,886	6,454	9%	0.5%
Total East and West Midlands	*146,718*	*177,733*	*31,015*	*21%*	1.0%
Total Great Britain	*667,862*	*783,022*	*115,160*	*17%*	0.8%

Origin	000s tonnes lifted 2012	2031	Growth 2012-2031	% growth 2012-2031	CAGR
East Midlands	**80,066**	**107,099**	**27,033**	**34%**	**1.5%**
of which:					
Leicestershire	***21,031***	***27,847***	***6,816***	***32%***	***1.5%***
West Midlands	70,177	76,640	6,463	9%	0.5%
Total East and West Midlands	*150,243*	*183,739*	*33,496*	*22%*	1.1%
Total Great Britain	*667,862*	*783,022*	*115,160*	*17%*	0.8%

Rail Freight Forecasts to 2031

Destination	000s tonnes lifted 2012	2031	Growth 2012-2031	% growth 2012-2031	CAGR
East Midlands	**1,097**	**9,483**	**8,386**	**764%**	**12.0%**
of which:					
Leicestershire	-	1,115			
West Midlands	2,491	8,825	6,334	254%	6.9%
Total East and West Midlands	3,588	18,308	14,720	410%	9.0%
Total Great Britain	*18,233*	*78,757*	*60,524*	*332%*	*8.0%*

Origin	000s tonnes lifted 2012	2031	Growth 2012-2031	% growth 2012-2031	CAGR
East Midlands	**1,214**	**9,068**	**7,854**	**647%**	**11.2%**
of which:					
Leicestershire	-	782			
West Midlands	2,412	8,041	5,629	233%	6.5%
Total East and West Midlands	3,626	17,109	13,483	372%	8.5%
Total Great Britain	*18,233*	*78,757*	*60,524*	*332%*	*8.0%*

Total Traffic to 2031

Destination	000s tonnes lifted 2012	2031	Growth 2012-2031	% growth 2012-2031	CAGR
East Midlands	**75,383**	**108,330**	**32,947**	**44%**	**1.9%**
of which:					
Leicestershire	***18,171***	***24,338***	***6,167***	***34%***	***1.5%***
West Midlands	74,923	87,711	12,788	17%	0.8%
Total East and West Midlands	150,306	196,041	45,735	30%	1.4%

Origin	000s tonnes lifted 2012	2036	Growth 2012-2036	% growth 2012-2036	CAGR
East Midlands	**81,280**	**116,167**	**34,887**	**43%**	**1.9%**
of which:					
Leicestershire	***21,031***	***28,629***	***7,598***	***36%***	***1.6%***
West Midlands	72,589	84,681	12,092	17%	0.8%
Total East and West Midlands	153,869	200,848	46,979	31%	1.4%

Road Freight Forecasts to 2026

Destination	000s tonnes lifted 2012	2026	Growth 2012-2026	% growth 2012-2026	CAGR
East Midlands	**74,286**	**92,384**	**18,098**	**24%**	**1.6%**
of which:					
Leicestershire	***18,171***	**21,894**	***3,723***	***20%***	***1.3%***
West Midlands	72,432	**77,188**	4,756	7%	0.5%
Total East and West Midlands	*146,718*	*169,571*	*22,853*	*16%*	1.0%
Total Great Britain	*667,862*	**752,717**	*84,855*	*13%*	0.9%

Origin	000s tonnes lifted 2012	2026	Growth 2012-2026	% growth 2012-2026	CAGR
East Midlands	**80,066**	**99,985**	**19,919**	**25%**	**1.6%**
of which:					
Leicestershire	***21,031***	**26,053**	***5,022***	***24%***	***1.5%***
West Midlands	70,177	**74,939**	4,762	7%	0.5%
Total East and West Midlands	*150,243*	*174,924*	*24,681*	*16%*	1.1%
Total Great Britain	*667,862*	*752,717*	*84,855*	*13%*	0.9%

Rail Freight Forecasts to 2026

Destination	000s tonnes lifted 2012	2026	Growth 2012-2026	% growth 2012-2026	CAGR
East Midlands	**1,097**	**7,276**	**6,179**	**563%**	**14.5%**
of which:					
Leicestershire	-	**822**			
West Midlands	2,491	**7,158**	4,667	187%	7.8%
Total East and West Midlands	3,588	14,434	10,846	302%	10.5%
Total Great Britain	*18,233*	**62,830**	*44,597*	*245%*	9.2%

Origin	000s tonnes lifted 2012	2026	Growth 2012-2026	% growth 2012-2026	CAGR
East Midlands	**1,214**	**7,001**	**5,787**	**477%**	**13.3%**
of which:					
Leicestershire	-	**576**			
West Midlands	2,412	**6,560**	4,148	172%	7.4%
Total East and West Midlands	3,626	13,561	9,935	274%	9.9%
Total Great Britain	*18,233*	**62,830**	*44,597*	*245%*	9.2%

Total Traffic to 2026

Destination	000s tonnes lifted 2012	2026	Growth 2012-2026	% growth 2012-2026	CAGR
East Midlands	**75,383**	**99,660**	**24,277**	**32%**	**2.0%**
of which:					
Leicestershire	***18,171***	***22,715***	***4,544***	***25%***	***1.6%***
West Midlands	74,923	84,346	9,423	13%	0.8%
Total East and West Midlands	150,306	184,005	33,699	22%	1.5%

Origin	000s tonnes lifted 2012	2026	Growth 2012-2026	% growth 2012-2026	CAGR
East Midlands	**81,280**	**106,986**	**25,706**	**32%**	**2.0%**
of which:					
Leicestershire	***21,031***	***26,630***	***5,599***	***27%***	***1.7%***
West Midlands	72,589	81,499	8,910	12%	0.8%
Total East and West Midlands	153,869	188,485	34,616	22%	1.5%

Road Freight Forecasts to 2021

Destination	000s tonnes lifted 2012	2021	Growth 2012-2021	% growth 2012-2021	CAGR
East Midlands	**74,286**	**85,920**	**11,634**	**16%**	**1.6%**
of which:					
Leicestershire	***18,171***	**20,564**	***2,393***	***13%***	**1.4%**
West Midlands	72,432	75,489	3,057	4%	0.5%
Total East and West Midlands	*146,718*	*161,409*	*14,691*	*10%*	*1.1%*
Total Great Britain	*667,862*	*722,411*	*54,549*	*8%*	*0.9%*

Origin	000s tonnes lifted 2012	2021	Growth 2012-2021	% growth 2012-2021	CAGR
East Midlands	**80,066**	**92,871**	**12,805**	**16%**	**1.7%**
of which:					
Leicestershire	***21,031***	**24,260**	***3,229***	***15%***	**1.6%**
West Midlands	70,177	73,238	3,061	4%	0.5%
Total East and West Midlands	*150,243*	*166,110*	*15,867*	*11%*	*1.1%*
Total Great Britain	*667,862*	*722,411*	*54,549*	*8%*	*0.9%*

Rail Freight Forecasts to 2021

Destination	000s tonnes lifted 2012	2021	Growth 2012-2021	% growth 2012-2021	CAGR
East Midlands	**1,097**	**5,069**	**3,972**	**362%**	**18.5%**
of which:					
Leicestershire	-	**528**			
West Midlands	2,491	5,491	3,000	120%	9.2%
Total East and West Midlands	3,588	10,561	6,973	194%	*12.7%*
Total Great Britain	*18,233*	**46,902**	*44,597*	*245%*	*14.7%*

Origin	000s tonnes lifted 2012	2021	Growth 2012-2021	% growth 2012-2021	CAGR
East Midlands	**1,214**	**4,934**	**3,720**	**306%**	**16.9%**
of which:					
Leicestershire	-	**370**			
West Midlands	2,412	5,078	2,666	111%	8.6%
Total East and West Midlands	3,626	10,013	6,387	176%	*11.9%*
Total Great Britain	*18,233*	*46,902*	*28,669*	*157%*	*11.1%*

Total Traffic to 2021

Destination	000s tonnes lifted 2012	2021	Growth 2012-2021	% growth 2012-2021	CAGR
East Midlands	**75,383**	**90,989**	**15,606**	**21%**	**2.1%**
of which:					
Leicestershire	***18,171***	***21,092***	***2,921***	***16%***	**1.7%**
West Midlands	74,923	80,980	6,057	8%	0.9%
Total East and West Midlands	150,306	171,970	21,664	14%	*1.5%*

Origin	000s tonnes lifted 2012	2021	Growth 2012-2021	% growth 2012-2021	CAGR
East Midlands	**81,280**	**97,805**	**16,525**	**20%**	**2.1%**
of which:					
Leicestershire	***21,031***	***24,630***	***3,599***	***17%***	**1.8%**
West Midlands	72,589	78,317	5,728	8%	0.8%
Total East and West Midlands	153,869	176,122	22,253	14%	*1.5%*

APPENDIX 3

Warehouse Demand and Land Use Forecasts: Data Tables

Table A3.1: Current and 2021 Forecast Traffic to Large Scale Distribution Centres

Existing Traffic Flows to East Midlands

	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	74,287	33,429	45%
Rail	1,097	1,097	100%
Total	75,384	34,526	46%

Existing Traffic Flows to Leicestershire

	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	18,171	8,177	45%
Rail	0	0	100%
Total	18,171	8,177	45%

Forecast Traffic Flows to East Midlands 2021

	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	85,920	38,664	45%
Rail	5,069	5,069	100%
Total	90,989	43,733	48%

Forecast Traffic Flows to Leicestershire 2021

	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	20,564	9,254	45%
Rail	528	528	100%
Total	21,092	9,782	46%

Table A3.2: Current and 2026 Forecast Traffic to Large Scale Distribution Centres

Existing Traffic Flows to East Midlands

	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	74,287	33,429	45%
Rail	1,097	1,097	100%
Total	75,384	34,526	46%

Forecast Traffic Flows to East Midlands 2026

	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	92,334	41,550	45%
Rail	7,276	7,276	100%
Total	99,610	48,826	49%

Existing Traffic Flows to Leicestershire

	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	18,171	8,177	45%
Rail	0	0	100%
Total	18,171	8,177	45%

Forecast Traffic Flows to Leicestershire 2026

	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	21,894	9,852	45%
Rail	822	822	100%
Total	22,716	10,674	47%

Table A3.2: Current and 2031 Forecast Traffic to Large Scale Distribution Centres

Existing Traffic Flows to East Midlands			
	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	74,287	33,429	45%
Rail	1,097	1,097	100%
Total	75,384	34,526	46%

Existing Traffic Flows to Leicestershire			
	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	18,171	8,177	45%
Rail	0	0	100%
Total	18,171	8,177	45%

Forecast Traffic Flows to East Midlands 2031			
	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	98,847	44,481	45%
Rail	9,483	9,483	100%
Total	108,330	53,964	50%

Forecast Traffic Flows to Leicestershire 2031			
	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	23,223	10,450	45%
Rail	1,115	1,115	100%
Total	24,338	11,565	48%

Table A3.4: Current and 2036 Forecast Traffic to Large Scale Distribution Centres

Existing Traffic Flows to East Midlands

	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	74,287	33,429	45%
Rail	1,097	1,097	100%
Total	75,384	34,526	46%

Forecast Traffic Flows to East Midlands 2036

	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	105,129	47,308	45%
Rail	13,021	13,021	100%
Total	118,150	60,329	51%

Existing Traffic Flows to Leicestershire

	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	18,171	8,177	45%
Rail	0	0	100%
Total	18,171	8,177	45%

Forecast Traffic Flows to Leicestershire 2036

	000s tonnes lifted		
	Total	To distribution centre	% to distribution centre
Road	24,455	11,005	45%
Rail	1,652	1,652	100%
Total	26,107	12,657	48%

Table A3.5: Forecast Traffic Growth to 2021 and Additional Floor Space Required

East Midlands			**Leicestershire**		
Total traffic growth 2013-2026	9,207	000s tonnes	Total traffic growth 2013-2026	1,605	000s tonnes
Floor space required	501	000s sq m	Floor space required	87	000s sq m
Land Required	125	ha	Land Required	22	ha

Assumes:

0.8 tonnes per pallet

1.5 pallets per sq m of floor space

18 stock turns per annum

85% floor space utilisation

Land required - floor space is 40% of plot footprint

Table A3.6: Forecast Traffic Growth to 2026 and Additional Floor Space Required

East Midlands			**Leicestershire**		
Total traffic growth 2013-2026	14,300	000s tonnes	Total traffic growth 2013-2026	2,497	000s tonnes
Floor space required	779	000s sq m	Floor space required	136	000s sq m
Land Required	195	ha	Land Required	34	ha

Assumes:

0.8 tonnes per pallet

1.5 pallets per sq m of floor space

18 stock turns per annum

85% floor space utilisation

Land required - floor space is 40% of plot footprint

Table A3.7: Forecast Traffic Growth to 2031 and Additional Floor Space Required

East Midlands			**Leicestershire**		
Total traffic growth 2013-2031	19,438	000s tonnes	Total traffic growth 2013-2031	3,388	000s tonnes
Floor space required	1,059	000s sq m	Floor space required	185	000s sq m
Land Required	265	ha	Land Required	46	ha

Assumes:

0.8 tonnes per pallet

1.5 pallets per sq m of floor space

18 stock turns per annum

85% floor space utilisation

Land required - floor space is 40% of plot footprint

Table A3.8: Forecast Traffic Growth to 2036 and Additional Floor Space Required

East Midlands			**Leicestershire**		
Total traffic growth 2013-2036	25,803	000s tonnes	Total traffic growth 2013-2036	4,480	000s tonnes
Floor space required	1,405	000s sq m	Floor space required	244	000s sq m
Land Required	351	ha	Land Required	61	ha

Assumes:

0.8 tonnes per pallet

1.5 pallets per sq m of floor space

18 stock turns per annum

85% floor space utilisation

Land required - floor space is 40% of plot footprint

APPENDIX 4

Assessment of Sub-regional Areas

Table: Assessment of Sub-regional Market Areas as Competitive Logistics Locations

Market Area	Highway Connectivity	Railway Connectivity	Location Relative to Markets	Availability of Labour	Key Areas of Opportunity
Leicestershire					
1. Hinckley and Bosworth	South-eastern part of market area offers direct access to M69 and A5. North-eastern part of market area offers direct access to M1. Connectivity would be enhanced were it to be possible to provide improved direct access to the M69.	Good. South-eastern and southern part of the market area served by the Leicester-Nuneaton line – recently cleared to W10 loading gauge, provides direct routes to deep-sea ports, other key regions and Channel Tunnel. Capacity upgrade Syston-Leicester-Nuneaton planned for 2014-19.	Good. Central location in the 'golden triangle'.	Good. Close to main population centres of Leicester, Nuneaton and Coventry.	South-eastern and southern part of market area where Leicester-Nuneaton railway line passes close to the M69/A5/M1 (including potentially improved connectivity to the strategic road network).
2. Blaby	Good. Northern part of the market area offers direct access to M1 and M69. Connectivity for the central part of market area would be enhanced were it to be possible to provide improved direct access to M1 and M69.	Good. Central part of the market area (on east-west axis) served by the Leicester-Nuneaton line – recently cleared to W10 loading gauge, provides direct routes to deep-sea ports, other key regions and Channel Tunnel. Capacity upgrade Syston-Leicester-Nuneaton planned for 2014-19.	Good. Central location in the 'golden triangle'.	Good. Close to main population centres of Leicester, Nuneaton and Coventry.	Central part of market area (on east-west axis) where Leicester-Nuneaton railway line passes close to the M69/A5/M1 (including potentially improved connectivity to the strategic road network).

Market Area	Highway Connectivity	Railway Connectivity	Location Relative to Markets	Availability of Labour	Key Areas of Opportunity
3. Oadby and Wigston	Poor. No direct access to the strategic highway/motorway network. Access to M1/M69 is via A6 and Leicester ring-road A563.	Good. Southern/western part of the market area served by the Midland Main Line – planned loading gauge enhancement as part of electric spine, provides direct routes to deep-sea ports, other key regions and Channel Tunnel. recently cleared to W10 loading gauge, provides direct routes to deep-sea ports, other key regions and Channel Tunnel. Capacity upgrade Syston-Leicester-Nuneaton planned for 2014-19.	Good. Central location in the 'golden triangle'.	Good. Close to main population centre of Leicester.	None. There are no suitable areas offering both good quality highway and railway connectivity.
4. Harborough	Good. Western part of the market area offers direct access to M1, M6, A14 and A5. Enhanced direct accessibility to the M1 and M69 would improve the connectivity of the north western part of the market area.	Good. Central part of the market area (on north-south) axis) served by the Midland Main Line – planned loading gauge enhancement as part of electric spine, provides direct routes to deep-sea ports, other key regions and Channel Tunnel. Capacity upgrade Syston-Leicester-Nuneaton planned for 2014-19.	Good. Central location in the 'golden triangle'.	Good. Close to main population centre of Leicester.	Rail-served - none. There are no suitable areas offering both good quality highway and railway connectivity. Road only - western and north-western parts of the market area with direct access to M1, M6, A14 and A5 (including potentially improved connectivity to the strategic road network).

Market Area	Highway Connectivity	Railway Connectivity	Location Relative to Markets	Availability of Labour	Key Areas of Opportunity
5. Leicester	Good. North-western part of the market area offers direct access to A46. Western part of the market area offers direct access to M1 (albeit that junctions are in Blaby and Hinckley/Bosworth market areas).	Good. Midland Main Line passes through centre of market area on a north-south axis – planned loading gauge enhancement as part of electric spine, provides direct routes to deep-sea ports, other key regions and Channel Tunnel. Capacity upgrade Syston-Leicester-Nuneaton planned for 2014-19.	Good. Central location in the 'golden triangle'.	Good. Population centre of Leicester.	None. Unlikely to be suitable areas offering both good quality highway and railway connectivity.
6. Melton	Poor. No direct access to the strategic highway/motorway network. Access to M1/A46 is via the A607	Good. Central part of the market area served by the Peterborough-Leicester line – recently cleared to W10, provides direct routes to deep-sea ports, other key regions and Channel Tunnel.	Poor. Rural location to the east of the 'golden triangle'.	Poor. Rural location away from major centres of population.	None.

Market Area	Highway Connectivity	Railway Connectivity	Location Relative to Markets	Availability of Labour	Key Areas of Opportunity
7. Charnwood	Good. Western part of the market area offers direct access to M1. Southern part of market area offers direct access to the A46 (and connections to M1). A6 passes through centre of market area on north-south axis – connections to M1 and A46.	Good. Central part of the market area served by the Midland Main Line (on north-south axis) – planned loading gauge enhancement as part of electric spine, provides direct routes to deep-sea ports, other key regions and Channel Tunnel. Capacity upgrade Syston-Leicester-Nuneaton planned for 2014-19. Eastern part of the market area served by the Peterborough-Leicester line – recently cleared to W10, provides direct routes to deep-sea ports, other key regions and Channel Tunnel.	Good. Central location in the 'golden triangle'.	Good. Close to main population centres of Leicester, Loughborough and Nottingham.	Central part of the market area (on north-south axis) where the Midland Main Line passes alongside the A6 and A46. Eastern part of the market area where the Peterborough-Leicester line passes alongside the A46. Road only - western part of the market area with direct access to M1

Market Area	Highway Connectivity	Railway Connectivity	Location Relative to Markets	Availability of Labour	Key Areas of Opportunity
8. North West Leicestershire	Good. Eastern part of the market area offers direct access to M1 Western part of market area offers direct access to the M42/A42. Northern part of the market area offers direct access to the A50.	Good. Northern part of the market area served by the freight only line connecting the Midland Main Line (at Trent Junctions) to the Derby-Birmingham line (Stenson Junction). Recently cleared to W10 loading gauge, provides direct routes to deep-sea ports, other key regions and Channel Tunnel.	Good. Central location in the 'golden triangle'.	Good. Close to main population centres of Leicester, Loughborough and Nottingham.	Northern part of market area where M1, A42, A50 passes close to the freight only line connecting the Midland Main Line (at Trent Junctions) to the Derby-Birmingham line. Road only - western part of the market area along the A42 corridor.
Rest of East Midlands					
9. SW Northants	Good. Direct access to the M1, which passes through the centre of the market area on a broad north-south axis. Southern part of the market area also served by the A43.	Good. Market area served by the West Coast Main Line (including Northampton Loop), which passes through the centre of the market area (broad north-south axis) – W10 loading gauge, provides direct routes to deep-sea ports, other key regions and Channel Tunnel.	Good. Central location in the 'golden triangle'.	Good. Close to main population centre of Northampton.	Broad north-south axis through the centre of the market area where the West Coast Main Line passes close to the M1 and A43.

Market Area	Highway Connectivity	Railway Connectivity	Location Relative to Markets	Availability of Labour	Key Areas of Opportunity
10. NE Northants	Good. Direct access to the A14, which passes through the centre of the market area on a broad east-west axis.	Good. Central part of the market area served by the Midland Main Line (on north-south axis) – planned loading gauge enhancement as part of electric spine, provides direct routes to deep-sea ports, other key regions and Channel Tunnel. Capacity upgrade Syston-Leicester-Nuneaton planned for 2014-19.	Good. Central location in the 'golden triangle'.	Good. Close to main population centres of Northampton, Corby, Wellingborough and Kettering.	Broad east-west axis through the centre of the market area where the Midland Main Line passes close to the A14.
11. S Derbyshire	Good. A50 passes through the centre of the market area on a broad east-west axis. A38 passes through the centre of the market area on a broad north-south axis.	Good Southern part of the market area served by the freight only line connecting the Midland Main Line (at Trent Junctions) to the Derby-Birmingham line (Stenson Junction) and by the Derby-Birmingham line. Recently cleared to W10 loading gauge, provides direct routes to deep-sea ports, other key regions and Channel Tunnel.	Good. Central location in the 'golden triangle'.	Good. Close to main population centres of Derby and Nottingham.	Broad east-west axis through the southern part of the market area where the freight only line connecting the Midland Main Line to the Derby-Birmingham line (and by the Derby-Birmingham line passes close to the A50 and A38.

Market Area	Highway Connectivity	Railway Connectivity	Location Relative to Markets	Availability of Labour	Key Areas of Opportunity
12. Amber Valley and West Notts	Good. Western part of the market area served by the M1 on a broad north-south axis. A38 passes through the centre of the market area on a broad north-south axis.	Good The market area served by the Midland Main Line (Erewash Valley line), which passes along the eastern edge of the market area on a north-south axis. Recently cleared to W10 loading gauge, provides direct routes to deep-sea ports, other key regions and Channel Tunnel.	Moderate. Location marginally to the north of the 'golden triangle'.	Good. Close to main population centres of Derby and Nottingham.	Broad north-south axis along the eastern edge of the market area where the Midland Main Line (Erewash valley Line) passes close to the M1 and A38.
13. Central and S Notts	Good. Eastern part of the market area served by the M1 on a broad north-south axis.	Moderate-Poor. Located on the Nottingham to Grantham/Newark railway lines – reduced loading gauge.	Good. Central location in the 'golden triangle'.	Good. Close to main population centres of Derby and Nottingham.	None
14. High Peak and Dales	Poor. No direct access to the strategic highway/motorway network.	Poor.	Poor. Rural location to the north of the 'golden triangle'.	Poor. No major centres of population.	None

Market Area	Highway Connectivity	Railway Connectivity	Location Relative to Markets	Availability of Labour	Key Areas of Opportunity
15. N Derbyshire	Good. Market area served by the M1, which passes through the centre of the market area on a broad north-south axis.	Good The market area served by the Midland Main Line, which passes through on a broad north-south axis. Recently cleared to W10 loading gauge, provides direct routes to deep-sea ports, other key regions and Channel Tunnel.	Poor. Located to the north of the 'golden triangle'.	Good. Close to main population centres of Derby, Chesterfield and Mansfield.	None. Located to the north of the 'golden triangle'.
16. N Notts	Good. Northern and north-western parts of market area served offer direct access to the A1.	Good. Eastern and central parts of the market area served by the East Coast Main Line – W9 loading gauge, provides direct routes to deep-sea ports, other key regions and Channel Tunnel	Poor. Located to the north of the 'golden triangle'.	Poor. No major centres of population.	None.
17. Lincs	Poor. No direct access to the strategic highway/motorway network.	Poor.	Poor. Rural location to the east of the 'golden triangle'.	Poor. No major centres of population.	None