AECOM

Transportation

May 2010

Strategic Distribution Site Assessment Study for the Three Cities Sub-Area of the East Midlands

Final Report

Prepared by: .....
Owain Roberts
Graduate Consultant

Checked by: .....
Graham Fry
Associate Director

Approved by: .....
Geoff Clarke
Associate Director

Strategic Distribution Site Assessment Study

Rev No	Comments	Checked by	Approved by	Date
4		G Fry	G Clarke	10/5/10
3		G Fry	G Clarke	30/4/10
2		K Soane	G Clarke	26/3/10
1		D Fisher	G Clarke	1/3/10

Lynnfield House, Church Street , Altrincham, Cheshire, WA14 4DZ
Telephone: 0161 927 8200 Website: http://www.aecom.com

Job No 60145249 Reference 614 Date Created May 10th

Table of Contents

1 Introduction

1 Introduction

1.1 Introduction to the study

The East Midlands Strategic Distribution Study, commissioned in 2006, concluded that to meet the Regional Freight Strategy policy target of 30 additional freight trains originating or terminating in the region it will require new strategic rail linked logistics sites to cater for the forecast new build warehousing. This study recommended that around 300 hectares of additional land at appropriate rail connected sites will need to be brought forward across the region, over the life of the next Regional Spatial Strategy to 2026.

This report sets out details of the work conducted on this Strategic Distribution Site Assessment Study of the Three Cities Area of the East Midlands Region. It was commissioned by the East Midlands Development Agency (*emda*) on behalf of a partnership comprising local authorities, the Highways Agency and Network Rail. The project was jointly funded by emda, Derbyshire County Council, Leicester and Leicestershire, Nottinghamshire County Council, the Three Cities New Growth Point and the Highways Agency.

Policy 21 (Strategic Distribution) in the East Midlands Regional Plan (2009) emphasises the following:

> *Local Authorities, emda, Sub-Regional-Strategic Partnerships, the Highways Agency and Network Rail should work together with private sector partners to bring forward sites for strategic distribution use in the Region.*

Continuing, the policy outlines:-

> *In allocating sites in local development documents local authorities should give priority to sites which can be served by rail freight, and operate as inter-modal terminals.*

Consideration should be given to the following criteria:

- Good rail access with routes capable of accommodating large maritime containers, the ability;
- to handle full length trains, available capacity and full operational flexibility;
- good access to the highway network and to appropriate points on the trunk road network;
- A suitable configuration which allows large scale high bay warehousing, inter-modal terminal;
- facilities, appropriate railway wagon reception facilities and parking for all goods vehicles;
- A need for such facilities due to demand from the logistics industry;
- A location which allows 24 hour operations and which minimises environmental and community impact;
- Good access to labour; and
- The need to avoid locations near to sensitive nature conservation sites that have been designated as being of international importance, or that would directly increase traffic levels that would harm such sites.

1.2 Study Area

The Study Area is made of the Three Cities Sub-area as defined the East Midlands Regional Plan. It comprises the Housing Market Areas of Derby, Leicester and Nottingham. This area is broadly the central and northern part of the East Midlands but does not include parts of North West Derbyshire or North Nottinghamshire.

This area is at present poorly served by rail freight terminals.

The focus of the Study is on large sites which can be rail linked and serve as full Strategic Rail Freight Interchange (SRFI) terminals. The threshold of 50 hectares is the main focus for the work, but where appropriate, other large sites which fall below this threshold are also considered, particularly if they could fulfill the role of fully operational rail linked intermodal strategic distribution sites.

This report aims to provide:

- A picture of the range of key sites which would be suitable for the development of strategic distribution uses;
- A critical assessment of the relative merits of these sites;
- A preliminary assessment of their viability;
- An outline of any essential infrastructure that would be required to deliver these sites; and
- A consideration of any key environmental impacts and constraints.

This will provide more clarity of understanding which will enable local authorities and other partners to more effectively implement Policy 21 of the Regional Spatial Strategy.

Figure 1 Indicative Map of Study Area[1]

1.3 Aims of the Study

This report sets out details of the work conducted on this Strategic Distribution Site Assessment Study of the Three Cities Area of the East Midlands Region for number of partners with a direct interest in the Three Cities area. The Three Cities Area is geographically defined as a triangle of land with Derbyshire in the west, Nottinghamshire in the north and Leicestershire in the south. The above plan shows the Local Authority Districts which comprise the Three Cities Sub-area. The area is defined in the East Midlands Regional Plan (March 2009). Although this area has been the main focus of the study if consultees have suggested potentially useful sites outside but in close proximity to the Study Area then they have been included. It sets out our understanding of a range of issues relevant to the location of rail freight terminals in the Three Cities Area of East Midlands Region including:

- Strategic Distribution Sector;
- Sustainable Development;
- Key Strategic Planning; and
- Transport Consideration.

1.4 Background to the Strategic Distribution Sector

The strategic distribution sector is very important for the East Midlands in general, with the most significant intermodal site in the UK, Daventry International Railfreight Terminal (DIRFT), in Northamptonshire to the south of the Region. The Logistics Sector as a whole accounts for an estimated 9% of both jobs and output (GVA) of the region and contributed £13billion to the region's economy in 2003. There is an increasing interest and demand for rail freight accessible strategic distribution sites. Government policy particularly 'Low Carbon Transport: A Greener Future' and 'Strategic Freight Network (SFN): A Longer Term Vision' focus on the development of strategic rail freight interchanges and terminals. This is motivated in part by the potential to reduce congestion on the road network and the ability to achieve the decarbonisation benefits that rail freight provides. On average it is thought that rail freight transport emits 80% less carbon dioxide than transport by road and less than 10% of the air quality pollutants such as carbon monoxide, nitrogen oxide and particulates which can be harmful to human health.

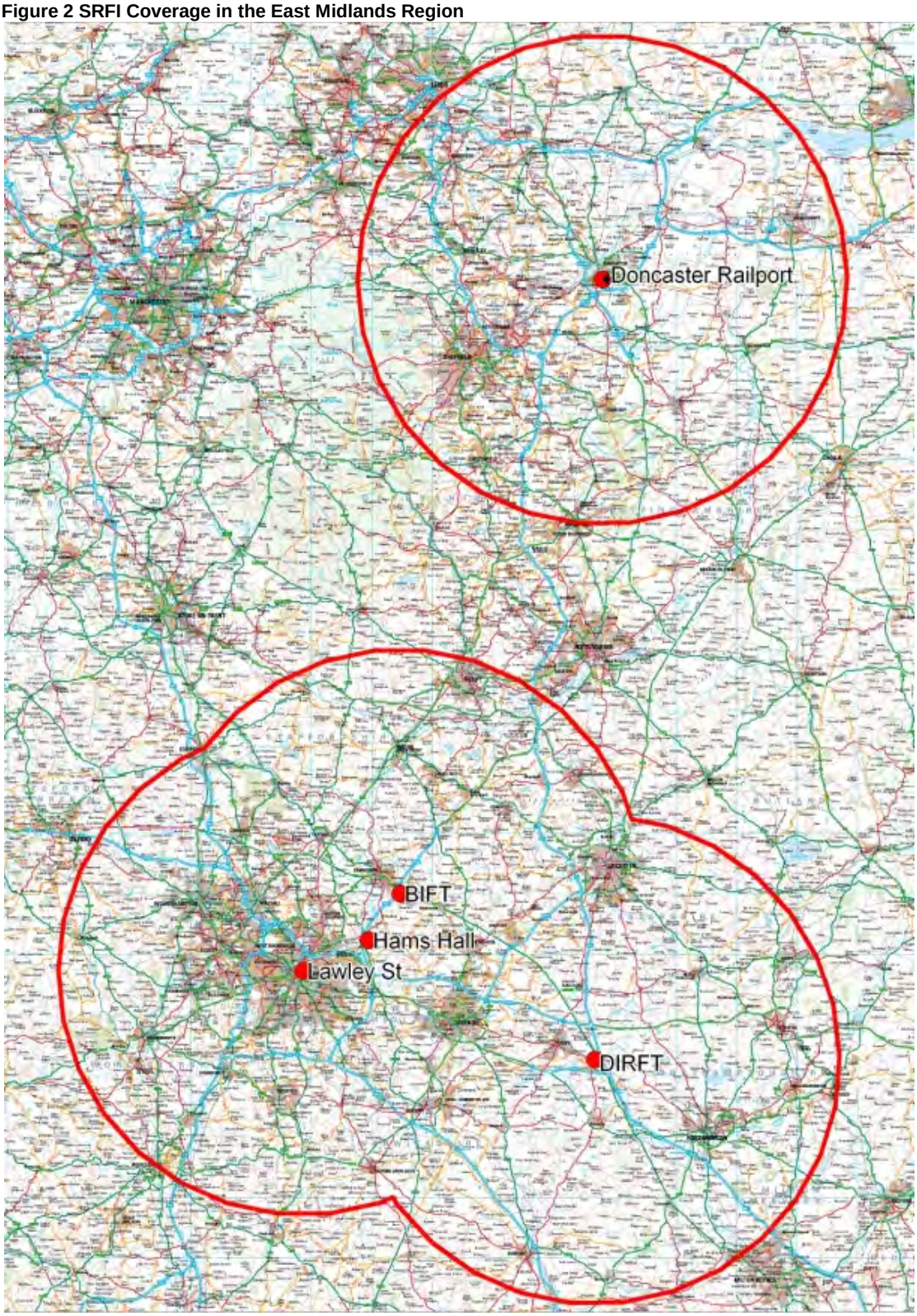
However, whilst the Three Cities Area are well served by motorways, it does not have good access to rail freight interchanges, so businesses and those considering moving to the area will not be able to take advantage of the benefits, reduced cost, improved journey time reliability and reduced transport carbon emissions which can be achieved through the use of rail freight.

There is a clear gap in provision of rail freight terminals around the Three Cities Area. This means that existing and potential new businesses in the area cannot take advantage of the benefits that rail freight can offer.

[1] Map Provided by 6Cs Growth Point

There is currently a gap in the market for SRFIs in the East Midlands, especially around the three cities as shown on the map below. The red circles represent 25 mile (40km) distances which are 1 hour driving time from the SRFIs indicated in red dots on the map.

Figure 2 SRFI Coverage in the East Midlands Region



1.5 Contents of this Report

Following the introduction this report has ten further chapters:

Chapter 2: An Introduction to Rail Freight Terminals

In this Chapter we provide some background on the rail freight market and the types of commodity it serves and some statistics. The definition of a strategic freight terminal is set out and other smaller types of rail freight facilities are also discussed. It is likely that several of the different sorts of terminal may be required to meet the needs of the region in the next two decades.

Chapter 3: Policy Review

This stage involved identifying and carrying out a review of current policy at local, regional and national level that is relevant to the study. Our policy team identified the specific policies relating to Strategic Distribution Sites and the strategic context and criteria for use within the evaluation. The Policy Review appears as Chapter 3 of this report, setting out the key background policy drivers which will impact on site allocation through the planning process.

Chapter 4: Demand

In this chapter we have examined the existing Rail Freight Terminals both in the East Midlands and the surrounding regions and assessed the type of methods in which Rail Freight is transported, as well as investigating the major entry points for traffic into the UK and likely destinations for freight following its arrival in the East Midlands region.

We have looked at the demand for Distribution Sites/Warehouses and the corresponding effect this will have in the future demand in growth for Rail Freight in the UK that this is likely to provide. We have continued to look at the different types of Rail Freight services which are offered in the UK and the type of markets which each is likely to serve. The chapter is then concluded by looking at specific issues in the region including transport infrastructure and improvements, availability of labour supply and the levels of employment which is likely from the construction of SRFIs.

Chapter 5: Methodology

All of the facets have been used to grade the individual sites are examined in detail here. This includes the five Stage 1 'Go or No Go' questions which were initially taken to grade the sites suitability for an SRFI. Each of the Stage 2 facets are then evaluated in detail with explanation given to why each is being investigated as part of the SRFI project. At the end of the chapter an explanation has been given to explain the procedure taken as part of the Stage 3 'Detailed Assessment' stage.

Chapter 6: Long List of Sites

A desk top survey has been carried out looking at prospective railfreight corridors and gathering relevant information from available data on the potential locations for Strategic Distribution Sites.

The individual sites identified in consultation with the Local Authorities and other key stakeholders have formed the basis of the long list of sites. It is believed that based on the land requirements determined within the East Midlands Strategic Distribution Study a number of rail linked sites of a mean size of 50 hectares will be required by the region up to 2026. We have therefore ensured that at the evaluation stage there is a reasonably long and comprehensive list of sites developed for consideration.

Chapter 7: Results of Go/No Go Stage

Sites which have been removed as part of the first (Go/No Go) stage are evaluated here with reasons given for their elimination.

Chapter 8: Consultation Summary

As part of the project consultation was carried out with key stakeholders and interested parties to gain their interest and views on Rail Freight and in particular sites in the East Midlands region. Local Authorities were also spoken to at face to face meetings and in telephone conversations to gain an understanding into policy issues surrounding the development of Strategic Rail Freight Interchanges. As requested by *emda* we have also engaged with developers where appropriate to hear of their plans.

Chapter 9: This chapter includes a matrix showing Results of the Framework Analysis Section

In this chapter a matrix is given showing the respective scores given for all the sites listed in stage 2 of the study. The excluded sites at this stage are then discussed with a detailed description of each followed by a commentary of why the sites have been eliminated at this stage.

Chapter 10: Results of the 'Short-List' stage

The remaining sites in the study are investigated further in this section with a detailed analysis of sites which may not be suitable for a Strategic Rail Freight Interchange but may be suitable for other uses. Sites which are Potentially Deliverable for a Strategic Rail Freight Interchange are then examined closely with a detailed description of the site and accompanying environmental report discussed.

Capabilities on project:
Transportation

Chapter 11: Conclusions

Conclusions to the project are offered along with brief descriptions of the final potential sites and the differing roles they are able to play in creating a Strategic Rail Freight Interchange in the East Midlands

2 An Introduction to Rail Freight Terminals

2 An Introduction to Rail Freight Terminals

2.1 An introduction to Rail Freight Terminals

The first factor to understand is whether the rail freight market is likely to grow, and hence whether there is a need for terminals. Our understanding of the industry is that there definitely is a need. According to the Network Rail Freight Route Utilisation Strategy 2007, the market for rail freight is predicted to grow by 30% in tonnes lifted up to 2014/15.[2] Whilst growth is predicted in the volumes of most commodities carried, the greatest overall level of growth is expected in deep sea (intercontinental) intermodal traffic. Rail has gradually been making inroads into the market for transporting ambient and non-ambient products, such as supermarket goods. Further growth is expected in this market, for example, transporting goods between Scottish terminals, such as Grangemouth, and inter-modal terminals in the Midlands. Moreover, with the biggest inter-modal growth expected to come from the deep sea ports in the south east, there will be a need to move increasing amounts of goods northwards.

The importance of rail freight in terms of reducing the strain on roads is highlighted by the fact that in 2007-08 alone, the equivalent of 6.69 million lorry journeys of goods was instead transported by rail[3]. An average freight train can remove 50 HGV journeys from our roads, whilst an aggregates freight train can replace 120 such HGV journeys.[4]

Table 1 Rail Intermodal Growth 2006-2010

Rail intermodal growth has continued notwithstanding the recession:

06 - 07	**+ 6%**
07 – 08	**+ 10%**
08 – 09	**+ 4%**
09 - 10	**+ 1%**

2.2 Growth Factors Driving Increased Rail Freight Movements

Road haulage is still responsible for circa 75% of all freight movements of all container deliveries in the UK as it has been seen to be the most flexible, responsive and cost effective solution for container transport. It has been acknowledged that an average freight train can remove a large number of long distance HGVs from our roads with the largest freight trains each now removing up to 160 long distance HGVs. There are a number of factors which favour modal shift away from road freight and on to rail

- Improving environmental standards;
- Increasing road transportation costs;
- On rail competition and efficiency rail freight prices;
- Road congestion;
- Road freight driver CPC (Certificate of Professional Competence) and EU working time Directive Compliance; and
- Safety of goods transport.

2.2.1 Improving Environmental Standards

Companies are realising the negative effect of road freight on the environment and are actively looking at ways they can reduce their carbon footprint. Rail has a positive carbon performance compared to road and produces 70% less CO_2 emissions than the equivalent road journey (Source DfT Logistics Perspective, December 2008). Environmental taxation and the potential to market their green credentials to customers is further helping to encourage companies to look into moving away from road freight where possible.

2.2.2 Increasing Road Transportation Costs

Record oil prices witnessed in mid-2008 highlighted the unpredictability of long-term diesel costs. Whilst fuel costs are only one component of the overall cost of transportation, where margins are tight, rising fuel costs could make the difference between being profitable and not.

[2] Network Rail Freight Route Utilisation Strategy 2007 (http://www.networkrail.co.uk/browse%20documents/rus%20documents/route%20utilisation%20strategies/freight/freight%20rus.pdf)
[3] Source: Office of Rail Regulation, National Rail Trends (2008-09), page 43
[4] Source: http://www.freightonrail.org.uk/FactsFigures.htm (originally Network Rail, 2008)

2.2.3 Less Volatile Rail Freight Prices

Costs of rail freight have tended to be far less volatile, with the cost of using the rail network actually falling in real terms by about 75% since 1996. Rail is energy efficient which is important with fluctuating oil prices and predicted reductions in the availability of fossil fuel in the future.

2.2.4 Road Congestion

Congestion on roads causes unpredictability in delivery times and erodes the speed advantage that road freight may be perceived to have. Congestion additionally causes difficulties where drivers are unable to reach their destinations within the EU drivers hours rules limits. A measure of the impact of road congestion is journey time. The average journey time from Felixstowe to Manchester for an 8am booking is now nearly 6 hours. Ten years ago this was under 5 hours. Aligned to this rail has an excellent reputation now among 3rd Party Logistics (3PL) operators for right time delivery. This was brought out at the DIRFT (Daventry International Rail Freight Terminal) symposium run by ProLogis on 22.3.10. This academic conference was used to answer questions on the DIRFT facility in Northamptonshire which is the largest rail freight interchange facility in the UK.

Going forward as an industry, there is a need to encourage off peak journeys, where the trucks are not competing with rush hour traffic. Spreading deliveries over a 24-hour period will help to avoid congestion hotspots. The number of warehouses that can receive goods at night is still very limited. As an indication only 2% of the work of a 300 vehicle fleet container haulier is currently undertaken at night. The spreading of work over 24/7 would also help throughput at inland rail terminals too.

There is a long term shortage of lorry drivers in the industry, as more are reaching retirement age than are being attracted into the industry. Although it is recognised that at the time of writing this there is currently a downturn in trade and there are actually some unemployed drivers for the first time for many years, it is believed this is only a temporary situation and as the economy grows again there will be a need for additional staff.

2.2.5 Road Freight Driver CPC (Certificate of Professional Competence)

The CPC requires all drivers to undertake 5 days of training every 5 years. Although some components of the training are designed to improve drivers' awareness of efficient driving and so save costs, this programme will still be an extra cost for all companies using road freight and could reduce the number of drivers remaining in the industry.

As highlighted, there are many negative factors regarding transport of freight by road and a number of positive factors in favour of rail. However, there are a number of features of road based transport which make it difficult for rail to compete in some areas of the freight and logistics market. These include the diversity of routes available, easy access to vehicles, end to end journeys without the need for transhipment and lower staffing levels.

The cost structure of road based transport also varies to that of rail. Road transport doesn't directly pay for the external costs it imposes on society, whereas rail pays for some of these costs, predominantly wear and tear, damage and repairs to the infrastructure. This is being addressed in part by the Government's Sustainable Grants' process, where grants may be available to help the leveraging of the benefits from users switching from road to rail.

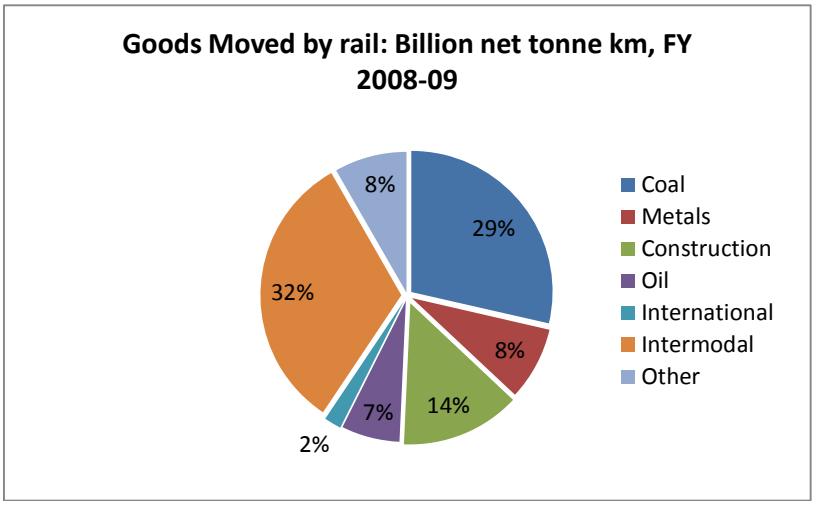
2.2.6 Safety of Goods Transport

Rail Freight is safer than long distance road freight using motorways and A-roads as HGV's are over three times more likely to be involved in fatal accidents than cars due to a combination of size, lack of proper enforcement of drivers hours, vehicle overloading and differing foreign operating standards (Source: Road Statistics 2008, Tables 3.2 and 3.6; Road Freight Statistics 2008 Section 5, DfT)

2.3 Rail Freight

The rail freight market is dominated by the movement of goods in large quantities, with trains of coal, containers of domestic goods (both single customer and consolidated loads), intermodal swap-bodies, construction materials and metals featuring most strongly. The mix of commodities transported by rail freight is reflected in the Figure below.

Figure 3 Different Types of Goods as a Percentage of all Goods Moved by Rail, 2008/09[5]



2.3.1 Current Rail Freight Market

In 2007 (the latest year for which comparison figures are available):

- Rail accounted for 11.6% of all freight moved by surface transport (8.3% once all other modes, such as aviation, water and pipeline, are included); and
- Rail accounted for 5.2% of all freight lifted by surface transport means (4.4% over all transport modes)[6] However, for certain goods', including coal and aggregates, rail freight plays a more significant role.

Rail freight tonnes per kilometre have grown by around 66% since 1994[7]. Since rail privatisation in 1994, over £1.5 billion has been invested in rail freight from the private sector, with the rail freight companies purchasing over 400 brand new diesel locomotives and over 3000 new wagons[8]

The total amount of freight lifted by rail in 2008-09 was 103.4 million tonnes, 1.0% higher than for 2007-08[9]. Total freight moved for 2008-09 was 20.63 billion net tonne kilometres, 2.6% lower than for 2007-08[10]

The transport of coal still represents the largest commodity moved by rail, e.g. coal lifted in 2008-09 was 46.6 million tonnes, a 7.7% increase compared to 2007-08 but this has dropped back in the last year. It is acknowledged however that the majority of coal currently carried is ESI coal and with the anticipated changes in energy production and de-commissioning of existing coal fired power stations it is anticipated that there will be a significant reduction in this traffic by 2020. Some of the other traditional rail freight sectors have also seen some decline with;

- Metals declining by 16.5% from 1.83 billion net tonne kilometres in 2007-08 to 1.53 in 2008-09;
- Oil and petroleum decreasing by 4.1% from 1.58 to 1.52 billion net tonne kilometres; and
- Construction goods transportation also decreasing significantly due to the effect of the recession on the building trade.

However the trend in movement of deep-sea containers and the emerging trade in domestic intermodal is much more positive and there is a need to have a good network of both port and inland terminals to facilitate this growth. It is also recognised that this commodity is currently increasing by 5% each year and the future forecast is for market growth and increased modal share.

2.4 Rail Freight Interchanges

The success and growth of rail freight is reliant on sufficient and strategically placed Rail Freight Interchanges that facilitate commercial rail operations. The table on the following page provides a description of the different types of rail freight interchanges currently operating in the UK.

[5] Source: Office of Rail Regulation, National Rail Trends (2008-09), page 39
[6] Source: Office of Rail Regulation, National Rail Trends (2008-09), page 44
[7] Source: Choosing and Developing a Multi-modal Transport Solution (figure courtesy of Rail Freight Group), page 3
[8] Source: Choosing and Developing a Multi-modal Transport Solution (figure courtesy of Rail Freight Group), page 3
[9] Source: Office of Rail Regulation, National Rail Trends (2008-09), page 5
[10] Source: Office of Rail Regulation, National Rail Trends (2008-09), page 5.

The following table defines the types of Rail Freight Interchange (RFI) which exist at present.

Table 2Types of Rail Freight Interchanges (RFI) in the UK

Type of RFI	Function	Likely size (indicative)	Transport requirements	Examples
Strategic	Major interchange with significant intermodal and warehousing, located at nationally strategic sites close to major conurbations.	60 – 400Ha	Requires high quality links to motorway and trunk road network. Rail links need high capacity and good loading gauge.	Hams Hall, Daventry (DIRFT), Mossend
Regional	Large interchange with significant intermodal and warehousing, located at important sites within regions.	20 – 250Ha	Requires high quality links to motorway and trunk road network. Rail links need sufficient capacity and good loading gauge.	Potter Group, Selby. Malcolm Group, Grangemouth
Inter-modal only (Rail heads)	Interchange handling intermodal traffic, often located at key points within urban areas, but without significant distribution development on site.	10 – 30Ha	Requires good links to urban roads and trunk road network. Rail links require sufficient loading gauge.	Freightliner terminals. Stobart Group, Widnes
Rail linked warehouse	Single warehouse unit provide rail services.	10 – 30Ha	Requires good links to urban roads and trunk road network.	Carlisle Warehousing
Bulk terminal	Bespoke terminal for single bulk product types such as aggregates and minerals often linked to a manufacturing or processing facility. Also includes car, automotive terminals and waste terminals.	2 – 10Ha	Road and rail links need to be appropriate to bulk commodity – often heavy loads. Aggregates and minerals terminals often require urban location to serve construction industries and road maintenance.	Numerous examples of aggregates and construction material facilities, power stations and steel terminals

Source: Strategic Rail Freight Interchange Policy, page 31, March 2004

(Revised and updated by Freight Best Practice in draft form only, December 2009)

2.4.1 Strategic Rail Freight Interchanges (SRFIs)[11]

SRFIs are important for serving major conurbations and can help to achieve modal shift to rail freight. These interchanges are long-term strategic infrastructure investments with an operational life of over 50 years. In the longer term these interchanges will make a major, essential, contribution to developing the national strategic rail freight network linking rail freight interchanges of all types, warehousing, ports and the Channel Tunnel, connected by a range of competitive rail operator services.

[11] Source: Strategic Rail Freight Interchange Policy, (Strategic Rail Authority, March 2004), page 29

2.4.2 Regional Freight Interchanges (RFIs)[12]

In addition to the network of SRFI there is an acknowledged need for other 'sub-regional' facilities. These will have similarities with the SRFI, providing a complementary and important role in rail freight provision within a region. They will have the ability to serve a smaller catchment area of industry and provide a useful contribution to rail freight growth. Such facilities will often be smaller in size but retain the ability to handle both inter-modal units and rail-linked warehousing.

2.4.3 Inter-Modal Only Rail Freight Interchanges/Rail Heads[13]

Some RFIs focus only on a single activity such as rail-linked warehousing or inter-modal handling. This limits their ability to handle the widest range of freight, but they perform an important role, often for a single customer or rail freight operator, within a region. A number of important inter-modal only RFIs specialise in the handling and storage of containerised freight traffic. They are usually operated by a rail freight haulier or logistics company, and will serve a wide range of customers in the area. Distribution to end customers will almost always be by road and, as such, these interchanges are often located close to areas of consumption in urban areas. Sizes range generally from 10-30 hectares. Increasingly, inter-modal facilities are being located on Multi-modal sites, recognising the synergies between modes. Nonetheless, there remains a need for well-located inter-modal only facilities.

2.4.4 Rail-Linked Warehousing[14]

Like the inter-modal only interchanges, there are a number of locations, which just include rail linked warehousing. These are generally small-scale facilities, and can be a single unit, sometimes serving a single customer, or logistics company. These facilities have similar locational requirements to the rail interchanges, although on a much smaller scale and often more specific to its operator's business. Sizes range from 10-30 hectares.

2.4.5 Bulk Terminals[15]

Bulk terminals have a wide range of sizes depending on the nature of the facility they serve, and the volume of freight they receive. For example, a rail terminal serving a large industrial facility such as a power station would cover a substantial site, whilst a small aggregates terminal supplying a ready mix concrete plant can feasibly be as compact as two hectares[16].

2.5 Environmental Issues

Within the past few years, businesses have become more and more aware of the benefits of cutting CO_2 emissions.

A shift to non-road based modes of transport can offer substantial benefits in an area where CO_2 emissions need to be reduced. The Department for Transport estimates that overall freight traffic between 1990 and 2005 grew by 20% and transport-related CO_2 emissions grew by 11% over the same period[17]. Rail freight produces approximately 20% of the emissions per tonne km, compared to that produced by road freight (HGVs greater than 3.5 tonnes).[18] Emissions reduction is a key aspect of the Government's proposal for 'Delivering a Sustainable Transport System' (DaSTS), alongside economic growth and carbon reduction. Increasing the use of rail for freight transport is an important element of achieving DaSTS aims and objectives.

2.6 Operational Issues

There are a number of operational issues to consider when using or developing a Rail Freight Interchange. Different RFIs will permit different types of freight operations to take place within them. Key things for those developing RFIs to consider include:

- The size of the local market: There has to be a sizeable and robust local market upon which to base the RFI on. This will help ensure the viability of the operation, particularly during times of recession;
- The size of the site: This has to be big enough to appeal to key potential clients but not so large that money is wasted on providing capacity that will never be used;
- Access to rail and road network: There must be easy access to both these modes direct from the RFI.

For anyone looking to move their existing freight operations to rail, it is important to consult Network Rail and Freight Operating Companies to ensure there is a cost-effective means for transporting such goods.

2.7 Rail Freight Policy

The Rail White Paper, published by the Department for Transport (DfT) in July 2007, signalled the Government's confidence that rail freight will continue to grow in the future. To accommodate this growth, the White Paper announced the most significant funding for rail freight for decades. £200m of Network Rail funding up to 2014 was committed for the development of a Strategic Freight Network (SFN). As part of the development of the SFN, a series of core and diversionary routes between ports, major

[12] Source: Strategic Rail Freight Interchange Policy, (Strategic Rail Authority, March 2004), page 29
[13] Source: Strategic Rail Freight Interchange Policy, (Strategic Rail Authority, March 2004), page 30
[14] Source: Strategic Rail Freight Interchange Policy, (Strategic Rail Authority, March 2004), page 30
[15] Source: Strategic Rail Freight Interchange Policy, (Strategic Rail Authority, March 2004), page 30
[16] Source: Network Rail (2009)
[17] Source: Choosing and Developing a Multi-Modal Transport Solution (August 2008), page 9
[18] Source: ATOC Energy and Emissions Statement 2006/07, page 4 (http://www.atoc-comms.org/admin/userfiles/Energy%20&%20Emissions%20Statement%20-%20web%20version.pdf

freight customers and urban areas have been assessed with money allocated towards improving their suitability. In addition to the funding discussed above there is a £225m Transport Innovation Fund (TIF) programme which is delivering both Southampton to West Coast Main Line W10 Gauge and Peterborough to Nuneaton. Both of these routes are important East Midlands links to deep sea ports. Beyond this there are other works in the CP4 High Level Output Specification (HLOS) programme that have freight benefits including the £233m Joint Line upgrade, £57m Shaftholme Junction grade separation scheme and Reading station re development which improves freight through flow on the Southampton to West Coast route at Reading west.

2.7.1 The Strategic Freight Network (SFN)

The 2007 Rail White Paper defined the Strategic Rail Freight Network (SFN) as "a core network of trunk freight routes, capable of accommodating more and longer freight trains, with a selective ability to handle wagons with higher axle loads and greater loading gauge, integrated with and complementing the UK's existing mixed traffic network."

2.7.2 Objectives of the SFN

The SFN is intended to provide a framework for targeting investment and network management better to meet the requirements for rail freight and to resolve conflicts (between passenger and freight requirements; different types of passenger services; erosion of network capacity and reliability). In practical terms this suggests the SFN should:

- Optimise the pattern of freight trunk routeing to minimise passenger/freight conflicts;
- Develop appropriate diversionary routes and implement a standard network-wide possessions regime with general use of single line working (SLW) to provide 24-hour/365 day network availability;
- Upgrade an optimised pattern of freight trunk routes to eliminate conflict/pinch points; and
- Upgrade trunk freight routes to meet requirements of traffic which may include measures such as: increasing the number of freight train paths; provision for increased train length; increased gauge; increased axle-load; and, infill electrification.

2.7.3 Key Outcomes of SFN

The SFN is a key element in making best use of existing and future rail resources by ensuring:

- **Longer and Heavier Trains:** To optimise path utilisation, the future 'standard' inter-modal train length should be 775 metres (118 Standard Length Unit / 755m plus locomotive);
- **Freight and Network-Efficient Operating Characteristics:** Freight should be regarded as the leading rail sector for locomotive early fitment programmes for the roll-out of GSM-R (Global System for Mobile Communications for Railways) and ERTMS (European Railways Traffic Management System);
- **7 Day/24 Hour Capability:** Recognising that many freight routes are long-distance cross-country routes incorporating more than one strategic route. 7 day / 24 hour capability for freight also requires coordinated national engineering possessions planning;
- **W12 Gauge:** W12 should be implemented as the standard loading gauge for all strategic container routes including diversionary routes (except for specific routes where this is not viable) because it caters for both standard short sea and deep sea containers;
- **European Freight Link (UIC GB+ Gauge):** Wherever practicable, the network should be 'future-proofed' by ensuring that on enhancement work, at least passive provision for UIC GB+ gauge;
- **New Freight Capacity:** New SFN capacity, particularly on key intermodal routes, will be required to meet industry growth forecasts, if this additional traffic is not to be forced onto the congested road network;
- **Electrification of Freight Routes:** To secure early diversionary and resilience benefits and provide incentives for the use of electric freight traction, the SFN should consider selective strategic and infill electrification;
- **Strategic Rail Freight Interchanges and Terminals:** The development of Strategic Rail Freight Interchanges will be supported by the National Network Policy Statement, the Ports Policy Statement and the forecasts included. It is understood however that this is not likely to be issued until Autumn 2010 although the Infrastructure Planning Commission (IPC) is now receiving applications;
- **Freight Paths - the Strategic Freight Capacity Scheme:** The Department strongly supports the Industry Steering Group work stream to develop a Strategic Freight Capacity (SFC) Scheme to protect existing, released and newly created long distance strategic through freight paths; and
- **Freight Routeing Studies:** As a key element in developing the SFN, the DfT has asked Network Rail to undertake two freight routeing studies to make recommendations on the preferred route(s) between London / the South and East, and the Midlands & North of England, and the enhancements necessary to accommodate rail freight activity forecast for 2030 (the 'Routes to the North' (RTN) study; and an optimal cross-London freight strategy (CLFS)[19].

[19] Source: British Transport Infrastructure – Strategic Rail Freight Network: The Longer Term Vision, DfT 2009

2.8 East Midlands Specific Rail Freight Terminal Policy

Policy 21 of the East Midlands Regional Plan (RSS) (March 2009) identifies the preferred broad locations where land should be brought forward for Strategic Distribution Sites, with preference given to sites which are served by rail. Preference will be given to sites in the following locations:-

- West Northamptonshire housing market area;
- Derby housing market area;
- Nottingham Core housing market area;
- North Northamptonshire housing market area; and
- Leicester and Leicestershire housing market area.

In allocating sites in local development documents authorities should give priority to sites which can be served by rail freight and operate as inter-modal terminals. According to the East Midlands Strategic Distribution Study (EMSDS) rail served sites should be large and have sufficient critical mass in terms of site size to generate sufficient demand for freight train services to/from a number of locations. In allocating sites local authorities should give consideration to the following:-

- Good rail access with routes capable of handling large containers;
- Good access to the highway network;
- Suitable site configuration allowing for warehouses and inter-modal transfer facilities;
- A need for facilities in a particular location from the logistics industry;
- A location suitable for 24 hour operations which minimises environmental and community impact;
- Good access to the labour market; and
- Environmental considerations.

3 Policy Review

3 Policy Review

3.1 Introduction

This section provides a review of national, regional and local spatial and transport policy which will be used to inform the East Midlands Strategic Distribution Site Assessment Study. The following review is intended to highlight the key policy drivers which will impact on site allocation in the East Midlands through the spatial planning process.

Planning policy in England is embedded within the statutory development plan. This incorporates local and regional spatial policy jointly reflecting the policy guidance provided by Government through the Department for Communities and Local Government (CLG). This chapter describes each level of planning policy with specific reference to multi-modal freight transportation.

Planning can influence many of the key factors related to the development and operation of multi-modal freight facilities including:

- Protection of existing, rail sidings and alignments and freight traffic facilities;
- Protection of disused rail corridors with the potential for future reactivation.
- Facilitation of new rail freight facilities;
- Encouragement for new land uses requiring planning permission to make use of rail transport;
- Ensuring that only appropriate land use occurs on rail side sites with real potential for rail freight i.e. are not used by businesses or land uses that do not benefit from access to rail transport; and
- The availability of multi-modal interchange facilities.

3.1 The Role of the Planning System

Planning policy plays an influential role in the provision of multi-modal transport facilities. The Transport and Works Act (1992) and Procedures (2006) need to be considered when making capacity enhancements to road and rail networks that involve land take. More significantly in terms of multi-modal freight transport, planning policy dictates land uses for developable land allocations. This can significantly influence the location, size and operation of multi-modal facilities.

Following the Planning and Compulsory Purchase Act 2004 and the Planning Act 2008 a number of changes to planning policy have occurred and are currently taking place that are of direct relevance to the provision of multi-modal facilities.

The Planning Act 2008 makes two very important changes in England & Wales. Firstly it provides for a new consenting system for major infrastructure projects with a new Infrastructure Planning Commission (IPC) established. It also paves the way for a levy payable upon the carrying out of development, through the Community Infrastructure Levy.

The IPC is the new authority which will grant development consent for nationally significant infrastructure projects including ports and strategic rail terminals. The IPC opened for business on 1 October 2009 and will act as an advisor to developers until March 2010 when it began considering applications.

The Act requires that National Policy Statements will be made giving clear policy direction on energy, water, waste, and transport by which new planning applications can be appraised. Three statements are planned for transport, ports, national infrastructure covering roads and rail, and thirdly aviation. The thresholds for deciding if these developments will need to go to the IPC are;

- Motorways, trunk roads and other Department for Transport road projects requiring Environmental Impact Assessment;
- Construction of airport capable of providing air passenger transport for at least 10 million passengers per year or an extension increasing capacity by that amount;
- Construction of harbour facilities capable of handling:
    - For container ships, 500,000 TEU;
    - For ro-ro ships, 250,000 units;
    - For others, 5 million tonnes.
- Construction of a railway as part of the railway network; and
- Construction of a rail freight interchange of at least 60 hectares.

The first transport National Policy Statement (NPS) for Ports was issued in late 2009 setting out a new clear framework for both port developers and the new IPC and will play an important part in any decisions taken by the Commission when considering applications for new development in England and Wales. The new NPS sets out the broad need for additional ports capacity up to 2030 and beyond, taking such things as freight demand forecasts and the economic benefits of ports into account. The document builds on existing Government policy, which is that the need for ports capacity can best be met with an efficient and competitive industry working in a free-market environment. This new document also includes wider Government objectives for sustainable development, covering issues such as climate change considerations and the wider environmental impact of port development. A sustainability appraisal must be carried out and consultation and publicity requirements complied with. In drawing up an NPS, the Secretary of State will need to "have regard to the desirability of mitigating and adapting to climate change"

The Planning Act will potentially speed up the planning process and sets out a set of sustainability criteria in order to assess developments. The need to adapt to climate change and the wider environmental impact of transport development will be taking into account. As such it is relevant to Delivering a Sustainable Transport System (DaSTS) goals and this study especially as it includes rail freight interchanges. DaSTS are a series of five goals outlined by the Department for Transport which will underline long term transport planning and spending in the period 2014-2019. The goals are outlined in paragraph 3.2.2. Importantly The Planning Act 2008[20], in Section 26, sets out the criteria to be met in order for a rail freight interchange to fall within the definition of a nationally significant infrastructure project and assists in understanding the definition of a Strategic Rail Freight Terminal in Section 26 (edited highlights are in the box below).

Section 26 - Rail freight interchanges

(3) The land on which the rail freight interchange is situated must—

(a) Be in England, and

(b) Be at least 60 hectares in area.

(4) The rail freight interchange must be capable of handling—

(a) Consignments of goods from more than one consignor and to more than one consignee, and

(b) At least 4 goods trains per day.

(5) The rail freight interchange must be part of the railway network in England.

(6) The rail freight interchange must include warehouses to which goods can be delivered from the railway network in England either directly or by means of another form of transport.

3.2 National Policy Context

The Government's transport policy has been re-shaped in the light of both the Stern Review on Climate Change (2007) and the Eddington report (2007). The Stern review concluded that the costs to the economy of addressing climate change now would be much less that it would be if it were left to future generations to resolve. Therefore, reducing the contribution transport makes to national carbon emissions is essential, and will be achieved through a range of approaches at national, regional and local levels. This will need to be supplemented with an appreciation of the local transport conditions which will provide the context

The Eddington report concluded that a comprehensive and high-performing transport system is an important enabler of sustained economic prosperity. It identified the main challenge as being to improve the performance of the existing networks. As a result, transport policies should concentrate on providing solutions to problems and delivering wider objectives, rather than assuming that improving transport is an end in itself.

The national transport policy context is therefore focused on the twin challenges of ensuring that transport networks support further economic growth and development, but also reduce their impact on the environment as part of the transition towards a low-carbon future. This refocusing has taken place through the following government policy reports:

3.2.1 Towards a Sustainable Transport System (TaSTS)

TaSTS was published in 2007 and included the means to implement the recommendations of the Eddington Study and reflect the findings of the Stern Review. It sets out the Department for Transport's ambitious policy and investment plans for the period to 2013-14 as well as proposing a new approach to longer term transport strategy,

3.2.2 Delivering a Sustainable Transport System (DaSTS)

The conclusions of both Stern and Eddington are being addressed through the policy of 'Delivering a Sustainable Transport System' (DaSTS) which was published in 2008**.** A series of national goals and challenges have been identified which further refine those contained in TaSTS and form the basis against which all future transport policies and investments must be judged:

- To support national economic competitiveness and growth, by delivering reliable and efficient transport networks;
- To reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change;
- To contribute to better safety, security and health and longer life expectancy by reducing the risk of death, injury or illness arising from transport and by promoting travel modes that are beneficial to health;
- To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society; and
- To improve quality of life for transport users and non-transport users and to promote a healthy natural environment.

[20] Planning Act 2008 Chap 29 http://www.opsi.gov.uk/acts/acts2008/ukpga_20080029_en_3#pt3-pb3-l1g25

3.2.3 Climate Change Act (2008)

The Climate Change Act of September 2008 sets legally binding reductions in CO_2 emissions for 2020 to 2050. Moves to address this are likely to mean that use of low-carbon modes of transport will be encouraged. Rail freight produces 70% less CO2 than the equivalent road journey. (Source DfT Dec 2008 Logistics Perspective P8 section 10)

The DaSTS approach requires that investment priorities should be determined through a process of:

- Establishing goals and outcomes;
- Specifying the challenges to be addressed;
- Generating cross-modal options; and
- Appraising the options.

DaSTS also divides the existing transport system into two main elements:

- National & International Networks; and
- City & Regional Networks.

As part of DaSTS, key national and strategic road and rail routes which link international gateways have been identified into a series of corridors. Three of these corridors are located within the East Midlands Region, they have been summarised in the table below:-

Table 3 Key Corridors Located in the East Midlands

DASTS Corridor Number	Description	Summary
7	Bristol to the Midlands	This corridor links the south East and Bristol to the Midlands. The corridor includes sections of the M42/A42 and the A38. The corridor also includes a rail link between Nottingham/Derby and Birmingham.
10	London to the East Midlands, North Wales, North East and Scotland	Providing a strategic link between London the Midlands, North East and Scotland this corridor is of strategic importance. Key rail links are an integral part of this corridor most predominantly the East Coast Mainline, but also the Midland Mainline which may be further enhanced over time by electrification and the increased gauge clearance and further capacity enhancement works this will bring.
11	Haven Ports to the Midlands	The corridor provides access for freight traffic to the M1/A1 and M6 as well as both the East Coast Mainline and West Coast Mainline.

3.2.4 Low Carbon Transport: A Greener Future

In 2009 the Government published the Low Carbon Transition Plan together with 'Low Carbon Transport – A Greener Future', its carbon reduction plan for transport. This sets out a route map for how the UK will achieve a 34% reduction in carbon emissions by 2020 and 80% by 2050. Key to this is the allocation of carbon reduction budgets which will be cascaded to local authorities.

3.3 Regional Policy Context

The framework of regional strategies for the East Midlands comprises;

- The East Midlands Regional Plan (RSS), adopted in March 2009;
- The East Midlands Regional Transport Strategy (RTS), incorporated within the RSS; and
- The East Midlands Regional Economic Strategy (RES), 2006

These are well aligned with each other and set the appropriate strategic framework for planning, transport and economic development in the East Midlands

3.3.1 Regional Spatial Strategy (RSS)

The Regional Spatial Strategy for the East Midlands (also known as the Regional Plan) was adopted in March 2009 and is currently subject to a Partial Review. The Regional Plan provides a long term land use and planning framework for the region through to 2026 and determines, amongst other things, the scale and distribution of housing across the region, priorities for economic investment and for enhanced accessibility and also objectives for environmental protection and enhancement.

Policy 21 of the RSS provides the policy guidance on dealing with Strategic Distribution issues from the land-use perspective. It emphasises the fact that Local Authorities, emda, the Highways Agency and Network Rail should foster closer working ties with private sector partners to bring forward strategic distribution sites in the region, with priority given to sites which can be served by rail freight. In terms of the locations of these sites, Policy 21 gives preference to the following broad locations;

- West Northamptonshire Housing Market Area (HMA);
- Derby HMA;
- Nottingham Core HMA;
- North Northamptonshire HMA; and
- Leicester and Leicestershire HMA.

Policy 21 is not prescriptive in relation to the potential size of strategic distribution sites and states that smaller sites may generate sufficient demand for freight train services and should not therefore be ruled out.

From the transport perspective, the key issues relate to the movement of freight in and out of the region, as well as movements within the region. When allocating sites in local development documents the policy notes that priority should be given to sites which can be served by rail freight and operate as inter-modal terminals. A major policy emphasis is therefore on enabling a shift of freight from road to rail, so as to reflect the DaSTS agenda, and in seeking to balance the economic and productivity objectives with those relating to climate change and carbon reduction.

Policy 21 states that consideration should be given to the following criteria:

- Good rail access with routes capable of accommodating large maritime containers, the ability to handle full length intermodal trains of a 775m length, available capacity and full operational flexibility;
- Good access to the highway network and to appropriate points on the trunk road network;
- A suitable configuration which allows large scale high bay warehousing, inter-modal terminal facilities, appropriate railway wagon reception facilities and parking for all goods vehicles;
- A location which allows 24 hour operations and which minimises environmental and community impact;
- A need for such facilities due to demand from the logistics industry;
- Good access to labour; and
- The need to avoid locations near to sensitive nature conservation sites that have been designated as being of international importance or that would directly increase traffic levels that would harm such sites.

3.3.2 Regional Transport Strategy (RTS)

The East Midlands Regional Transport Strategy (RTS) forms part of the East Midlands Regional Plan (RSS). It builds on national transport policy and guidance, and provides the regional framework for regional and Local Transport Planning within the region. The objectives set out in the RTS support the wider requirements of both the RSS and East Midlands Regional Economic Strategy.

The RTS sets out objectives for transport in Policy 43. It states that the Development of transport infrastructure and services across the Region should be consistent with the following objectives:

- Improve air quality and reduce carbon emissions from transport by reducing the need to travel and promoting modal shift away from the private car (particularly towards walking, cycling and public transport and away from other road based transport) and encouraging and supporting innovative transport technologies;
- Support sustainable development in the region's Principal Urban Areas and Sub-Regional Centres as described in Policy 3;
- Promote accessibility and overcome peripherality in the region's rural areas;
- Support the region's regeneration priorities outlined in Policy 19;
- Promote improvements to inter-regional and international linkages that will support sustainable development within the region;
- Improve safety across the region and reduce congestion, particularly within the region's Principal Urban Areas and on major inter-urban corridors; and
- Reduce traffic growth across the Region.

The RTS includes a policy for freight (Policy 55) as follows:

The Regional Planning Body should work with emda, Local Transport Authorities, other public bodies and representatives of the freight industry and its customers to implement the Regional Freight Strategy. Key priorities include:

- Reducing the environmental impact of freight;
- Improving the efficiency of the road haulage industry in ways that will also reduce the impact on the environment:
- Expanding the usage of inland waterways and coastal navigation;
- Achieving a significant mode shift from road to rail;
- Identifying new strategic distribution sites, where these can be justified, in line with Policy 21 (Strategic Distribution);
- Supporting the sustainable growth of airfreight at EMA by improving rail freight connectivity and identifying opportunities for modal shift from air to rail:
- Promoting greater use of pipelines; and
- Ensuring integration with land use planning, environmental and economic strategies.

3.3.3 Partial Review of the Regional Plan

The revised draft East Midlands Regional Plan (partial review) was submitted to the Secretary of State on 26th March 2010. One of the key issues for the review is to ensure that transport infrastructure and services can meet the needs of a growing population in a sustainable manner. This issue is being considered within the context of the government's new approach to transport as set out through DaSTS and the studies that have been established through the DaSTS approach.

Whilst the Government is leading the work on national and international networks, Regions are leading on city and regional networks focusing on strategic issues. Local authorities will be able to make use of the strategic regional work as they develop the third round of local transport plans (LTP3). Regional and national/international work will run in parallel, enabling close working across networks and scope for joint working in areas where strategic priorities for the region align with those on the national road or rail network.

In the East Midlands, work commenced in late 2009 on five DaSTS studies with the aim of developing investment programmes from 2014 onwards that best support the economic and social development of the region, whilst taking account of the need to reduce carbon dioxide emissions. The work is intended to reassess where priorities lie, and to examine the extent to which the Government should address nationally important transport goals and challenges at a regional level. The DaSTS studies being undertaken that have relevance to the East Midlands are:

- State of Freight in the East Midlands;
- PTOLEMY LUTI Model Development and Application;
- Three Cities: Agglomeration and Accessibility;
- Northamptonshire Towns: Growth and Connectivity; and
- Eastern Growth Points Study.

In addition to East Midlands specific studies there are other DaSTS studies that have a bearing on the region and with which the region is engaged. These include:

- Transmodal movements between London and the West Midlands and within MKSM;
- Corridor 10 Study (London - Yorkshire);
- Freight Modal Choice Study – This study looks at the behavioural decision making process, interventions and addressable markets for rail and water freight;
- Sheffield City Region Connectivity; and
- Coventry-Hinckley.

Based on the current evidence and emerging analysis through DaSTS the RTS will be underpinned by the following regional priorities:

- Reducing the need to travel;
- Making better use of existing transport infrastructure and managing traffic demand;
- Reducing car dependency and promoting travel choice;
- Improving connectivity to national networks and supporting economic growth and development;
- Regional priorities for freight and distribution; and
- Regional priorities for air transport

The approach to delivering these priorities and the preferred mix of transport interventions in response to the particular circumstances in each HMA in the post 2014 period will depend on the outcome of the current DaSTS studies and parallel regional level investigations. Delivery will also be supported by further partnership working between planning and transport authorities in preparing the transport evidence base for core strategies and LTP3.

In terms of freight policy, it is expected that the RTS will reaffirm the need for regional bodies and Local Authorities to work together with Highways Agency, Network Rail, and the haulage industry to:

- Ensure regional and local interventions and policies are based on a robust and up to date strategic picture of freight flows and volumes, market characteristics, and future demand;
- That transport and land-use policies are aligned to enable distribution activity to take place in the most sustainable locations, with an emphasis on enabling a continued shift from road to rail freight;
- Secure improvements to the road and rail networks to reduce the negative environmental, social, and transport impacts of freight activity; and
- Encourage continued innovation and efficiency in the operation of the Distribution sector.

3.3.4 Regional Economic Strategy (RES)

The Regional Economic Strategy for the East Midlands titled *'a flourishing region'* sets out the agenda for economic development in the region.

The document identifies 10 strategic priorities, the most relevant of which are listed below:

- *Employment, learning and skills*: to move more people into better jobs in growing businesses;
- *Enterprise and business support*: to become a region of highly productive, globally competitive businesses;
- *Innovation:* to develop a dynamic region founded upon innovative and knowledge focused business;
- *Transport and logistics*: to improve the quality of regional infrastructure to enable better connectivity within and outside the region;
- *Energy and resources*: to transform the way we use resources and use and generate energy;
- *Environmental protection*: to protect and enhance the region's environment through sustainable economic growth; and
- *Land and development*: to ensure that the quality and supply of development land and the balance between competing land uses, contributes towards sustainable growth of the regional economy.

Improving the region's rail connections is expected to be a major element of the region's response to the DaSTS agenda. Rail investment will also support regional economic competitiveness and growth, while reducing the carbon emissions. Investment in improving the capacity of rail freight including links to the main ports is also important and will help reduce the volume of freight on the motorway network.

3.3.5 East Midlands Regional Freight Strategy

In 2005 the East Midlands Regional Assembly published the East Midlands Regional Freight Strategy. The overall vision for this strategy is 'to create a framework within the East Midlands Regional Spatial Strategy which helps industry and society to develop more efficient and sustainable use of distribution by 2021'.

The Regional Freight Strategy stated that regional and local partners should work together to identify and promote opportunities to achieve a significant movement from road to rail; and that By 2015 the tonnage per annum carried by freight trains originating or terminating in the region should increase by 4.5 million tonnes over 2005 levels, represented by an extra 30 trains per day.

Whilst facilities such as DIRFT and Eurohub provide good access to the rail network in the south of the Region, the 'State of Freight in the East Midlands' document noted particularly the lack of, and opportunities for, an inter-modal terminal for the Three Cities Sub Area. In the opinion of this report's authors, it is likely that new rail terminals will be needed if the region is to achieve this target.

3.4 Development Control Policies

Planning Policy Guidance Note 13 (PPG13) provides guidance on transport provision for new developments and contains the key objectives to promote the use of sustainable modes of transport and reduce the need to travel by car. The guidance therefore informs much of the subsequent policy context.

Strategic distribution sites have the potential to significantly impact on the Strategic Road Network (SRN). Circular 02/2007: *Planning and the Strategic Road Network* sets out how the Highways Agency takes part in the development of Regional Spatial Strategies (RSSs) and Local Development Frameworks (LDFs) in relation to how development impacts upon the Strategic Road Network. This document provides the context for development control policies which broadly seek to;

- Promote development in sustainable locations;
- Mitigate the impact of new development on the environment;
- Include ways to reduce the traffic impact of new development;
- Improve road performance through better network management and making smarter journey choices easier; and
- Tailor the provision of public transport, car sharing/pooling, parking control, and encourage cycling and walking.

PPG 13 also mentions the need to safeguard rail sites and routes which could be critical in developing infrastructure to widen transport choices for both passenger and freight movements. This can be even where there is no immediate evidence of future possible use, as long as the sites are identified in the Local Development Frameworks (LDF).

Where developments will have a significant impact on the Strategic Road Network (SRN) Transport Assessments should be produced in line with the requirements contained within the Department for Transport *Guidance on Transport Assessment* [21](March 2007) as well as guidance from The Department for Transport's *Delivering Travel Plans through the Planning System*[22] *(April 2009).*

[21] Department for Transport -Guidance on Transport Assessment
http://www.dft.gov.uk/pgr/regional/transportassessments/guidanceonta

In addition, Local Planning Authorities and Local Highway Authorities in the East Midlands have development control policies of their own which reflect national and regional guidance including RSS policies and Circular 02/2007 as outlined above.

3.5 Local Context

At a local level, Local Development Frameworks (LDF) for each local authority area forms the 'Development Plan' alongside the RSS. Each LDF comprises a portfolio of development plan documents, the most significant of which are the Core Strategy and the Allocations documents.

In the East Midlands region there are currently only two adopted Core Strategy and these apply to:

- North Northamptonshire and covers the joint authority areas of Corby, Kettering, Wellingborough and East Northamptonshire; and
- Hinckley & Bosworth, in western Leicestershire.

The North Northamptonshire Core Strategy makes reference to the fact that strategic distribution will remain important to the economy of North Northants and that there is need to achieve a modal switch away from road based freight transport (maximising opportunities for rail and water based distribution). Core Strategies for the remaining authorities across the region are currently being prepared and going through the various stages of statutory consultation. The latest stage of the Greater Nottingham Aligned Core Strategies is the Option for Consultation (February 2010).

Local Transport Plans (LTP's) are currently in production by Local Authorities. Nottinghamshire currently has two Local Transport Plans, one for the Greater Nottingham area (produced jointly with Nottingham City Council) and one for North Nottinghamshire. Nottinghamshire's third Local Transport Plan (LTP3), effective from 1 April 2011, will be a single countywide Plan (not including Nottingham City). Whilst it is no longer intended to prepare a Joint Plan with Nottingham City, successful joint working on transport issues will be achieved among the three local transport authorities that comprise the Nottingham Core Housing Market Area through a joint memorandum of understanding. Consultation on the draft LTP3 will be undertaken in Autumn 2010.

Local Transport Plans (LTP's) produced in the East Midlands are generally supportive of the transfer of freight from road to rail and acknowledge the importance of planning for effective freight distribution.

Within the East Midlands the main site allowing for the transfer of freight between road and rail and vice versa is at the Daventry International Rail Freight Terminal (DIRFT) at Crick. It forms the largest non-coastal rail freight terminal in the country and provides direct rail links from the East Midlands to Scotland and various ports including Southampton and Felixstowe. This location serves the south of the East Midlands well but there is a gap in provision in the other parts of the region, as will be discussed in the next chapter.

[22]Department for Transport - *Delivering Travel Plans through the Planning System*
http://www.dft.gov.uk/pgr/sustainable/travelplans/tpp/

4 Demand

4 Demand

4.1 Introduction

This chapter examines the existing rail freight terminals both within the East Midlands and in surrounding regions. It discusses existing demand and considers the potential demand featuring future forecasts. It also reflects industry research into multimodal services.

4.2 Effects of Globalisation on the UK's Supply Chain

For the UK, globalisation, increasing world trade and supply chain links across countries are likely to reinforce the trends of growth in services, a smaller domestic manufacturing sector and increasing importation of goods. The UK is likely to specialise further in knowledge-intensive services and high-tech manufacturing. Sustainable, reliable, efficient and resilient international end-to-end journeys are critical to supporting the competitiveness and productivity of the UK and attracting inward investment into the UK. Improving the movement of freight across its end-to-end journey and understanding where pinch points exist is essential to maintaining and improving the UK's competitive position.

There are four key methods of freight transportation by which goods enter and leave the UK. These are:

- **Container** or 'lift-on lift-off' (lo-lo) services: the transport of containerised freight, which is loaded and unloaded at gateway terminals by cranes onto container ships and transported by sea. Container freight is carried by either deep-sea services calling directly at the UK from the port of origin, on short-sea[6] feeder services carrying goods from mainland Europe, or on freight trains through the Channel Tunnel.
- **Roll-on roll-off** (ro-ro) services: freight units are driven on/off sea ferries, or on/off specialised truck shuttle rail services through the Channel Tunnel.
- **Bulk goods:** the movement of either liquid commodities (predominantly oil and fuel) or dry solids (such as coal).
- **Air freight:** the transportation of goods in the hold of passenger services or on dedicated air freight services.

In 1996 332 million tonnes of goods were transported in 42 million Twenty foot Equivalent Units of containers worldwide. In 2007 these figures had increased significantly to 828 million tonnes of goods transported in 118 million TEU, representing a year-on-year growth of circa 9% between 1996 and 2007. A wide range of factors is responsible for this growth in the containerisation market. Increase in world trade and GDP have augmented the requirement for import and export of goods.

Container traffic in the UK is forecast to increase, on average, by around 4-5% per annum between 2005 and 2030. It is acknowledged however, that this figure was being exceeded before the advent of the recession. This is less than the 6% growth forecast globally, predominantly as a result of higher growth rates in Asia. An increase in transport of goods by container that were not historically containerised and the trend towards increased numbers of 40' long, 9'6 high containers (from 20' length) contribute to this growth. Trade with East Asia dominates, with an increase in TEU from 2.7 million in 2004 to 8.8 million in 2030, accounting for 44% of total UK container trade.

Felixstowe and Southampton account for 59% of container trade in the UK. The top five UK ports account for 83% of all and 99% of deep-sea UK container traffic. The movement of containers through the ports is illustrated in the diagram compiled from the DfT's maritime statistics.

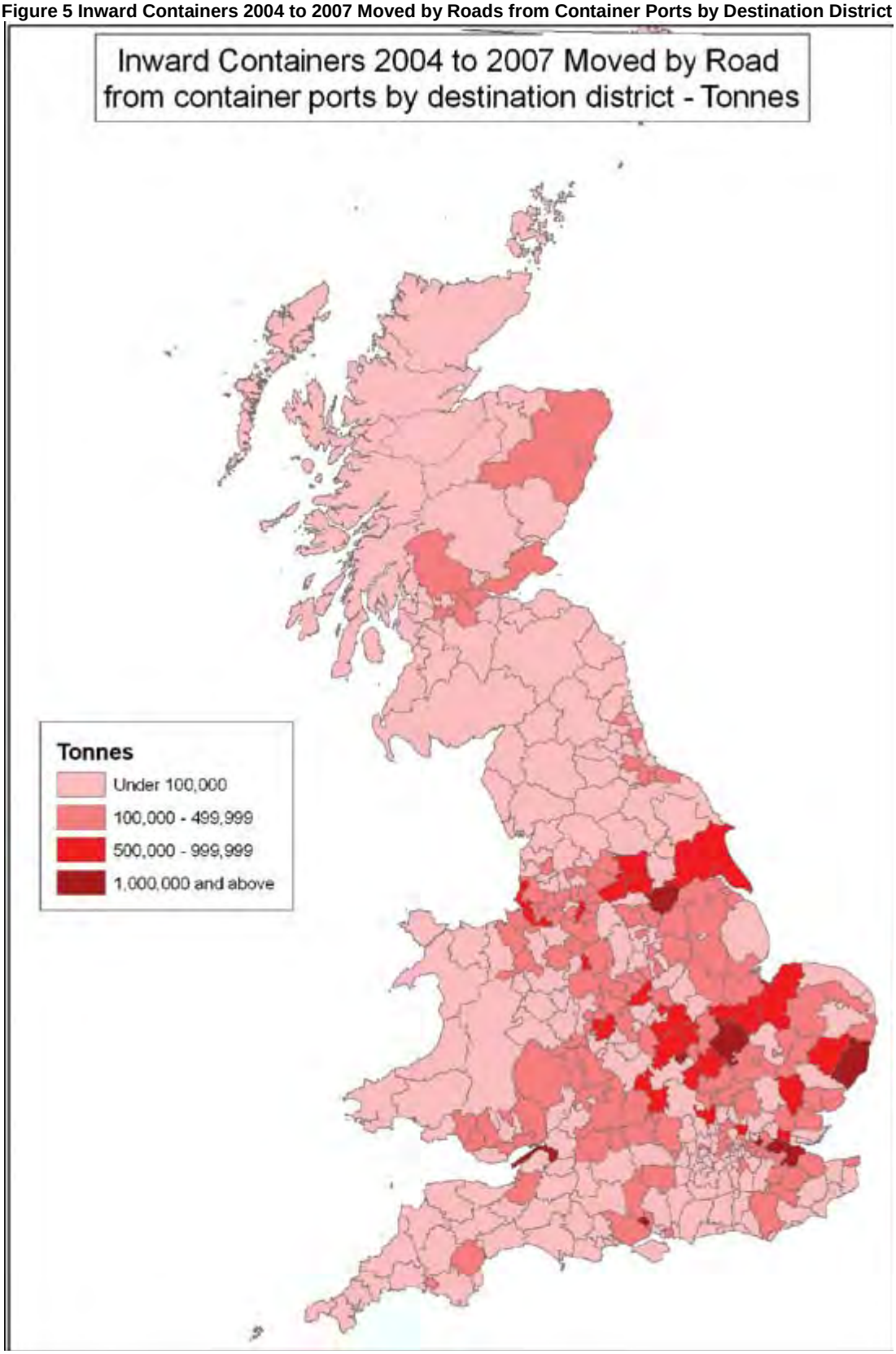
Figure 4 Container Movements Through Major Container Ports 2007

Source: DfT Maritime Statistics, 2007

The majority of imported container traffic is distributed to regional and national distribution centres (RDC/NDCs). A high proportion of distribution centres are located in the Midlands area which is well placed for distribution by road as it is served by the M1 and M6 to the north, and the M40, M5 and M1 to the south. The East Midlands has a 13% share of the market; of which 42% comes from Felixstowe, 17% from Tilbury, and 41% from other ports.

The following diagram of inward containers from ports shows that many of the districts of the East Midlands attract substantial flows of tonnage particularly in the 100k to 500k tonnes category.

Figure 5 Inward Containers 2004 to 2007 Moved by Roads from Container Ports by Destination District



4.3 Changes in UK Logistics Networks

The reorganisation of supply chains and the restructuring in location of production and distribution will continue to influence the demand for freight services in general. Many companies based in the UK chose to use a hub and spoke distribution system in the 1990s, that saw much of the imported product being taken to Midlands located National Distribution Centres, in the so called “golden triangle” spreading north from Northamptonshire up as far as Staffordshire, for onward distribution to the end consumer.

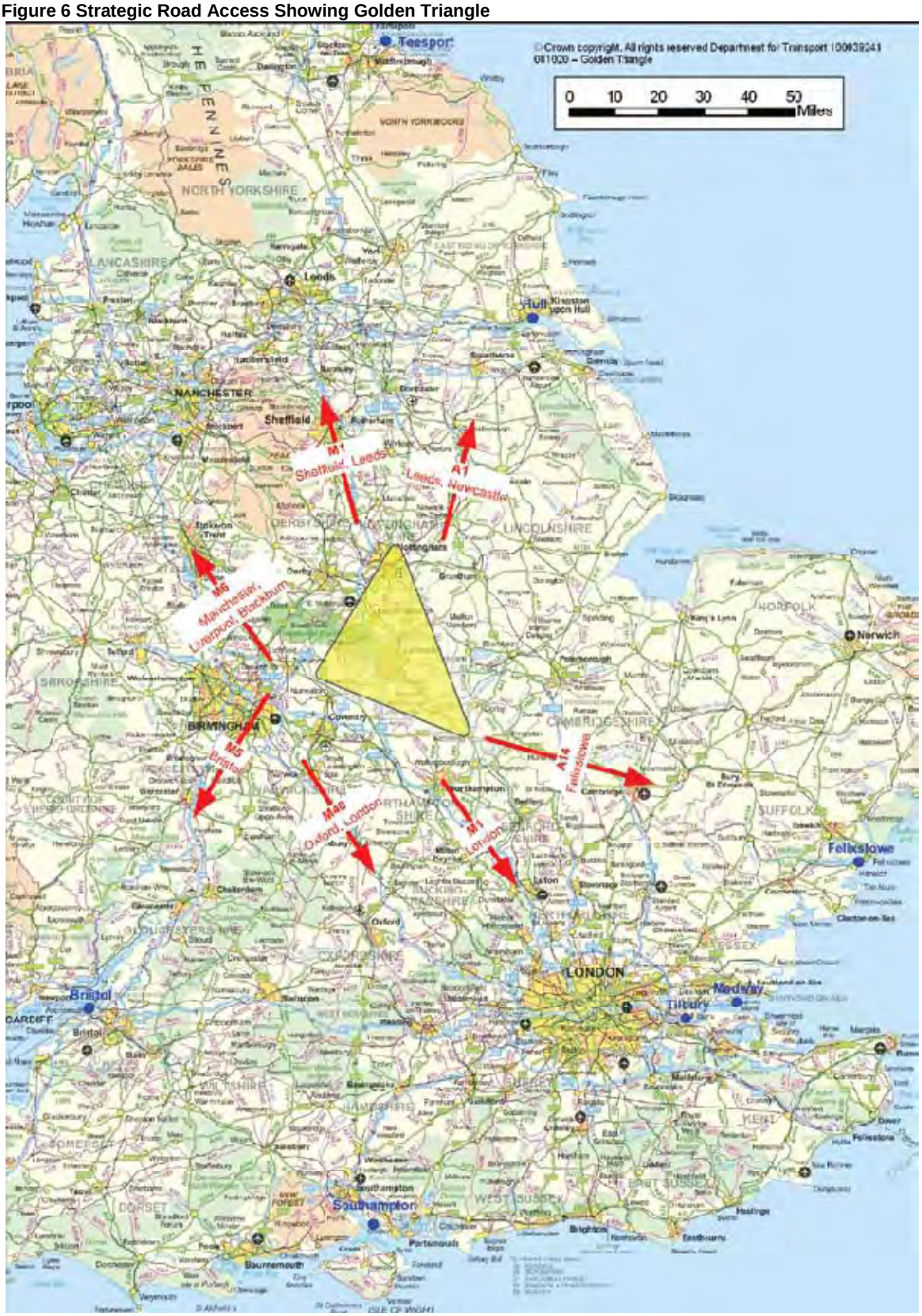
Our road network is the most congested in Europe causing 1 in 9 freight deliveries to arrive late at their destinations. Receivers are increasingly demanding tighter delivery windows which road hauliers are desperately trying to meet. It is estimated by the FTA that congestion costs the economy over 1.6 billion lost hours a year and something in the order of £20billion. And this is forecast to get worse. The study commissioned for EMDA by Atkins on the economic costs of congestion (Economic Costs of Congestion on the East Midlands, May 2007) has calculated costs of around £935 million per annum for the region.

However, reliance on the road network is causing severe environmental and operational problems. There are inevitably limits to the road network capacity and the major players in the industry are looking to minimise future transport risks, when relocating premises for instance the possibility of using rail freight would be of considerable value. Road congestion is constraining the freight industry and this impacts directly on economic development. The effect of prohibitively long and unreliable journey times could have severe implications for the local economy of affected regions. For these reasons, the Government, regional and local authorities are actively promoting the use of rail freight. However, to link the majority of businesses to rail will require road/rail interchanges.

As mentioned above the centre of the Midlands region is commonly termed the ‘Golden Triangle’ for freight due to it being a preferred location for many distribution centres and accessibility to the rest of the UK. The centre of this triangle is shown to be Leicester. Around three quarters of the country’s population can be served by road in a one day return trip from locations within the Golden Triangle, and around 90% can be accessed within a four-hour drive.

Capabilities on project:
Transportation

Figure 6 Strategic Road Access Showing Golden Triangle



Source: Department for Transport, 2008

4.4 Demand for Distribution Sites/Warehouses

Gerald Eve, the firm of chartered surveyors and property consultants conducts reviews of the property industry. In 2006 they considered 24 regions of the country, and scored them in weighted measures (according to relative importance) in the categories of national accessibility, labour market and planning environment. After scoring both sub-regions of the East Midlands were included in the top 10.

- Northern East Midlands - 3rd highest ranked region; and
- Southern East Midlands - 9th highest ranked region.

The rankings showed the likelihood of the regions improving their position as a distribution location between 2007 and 2010. The index takes into account factors such as transport infrastructure, developer activity and rental growth prospects and again both sub-regions were positive:

- Northern East Midlands = Very Good; and
- Southern East Midlands = Good.

4.5 Demand for Rail Freight in the UK

4.5.1 Existing Container Train Services

The Midlands, North West and Yorkshire are the dominant destinations for container freight trains arriving from UK deep-sea ports. The total number of inland bound trains (only collected in the month of January each year) has increased from 176 in 1997 to 307 in 2006, an increase of 170%. The Midlands has seen the largest gain, at 420%, from 15 trains in 1997 to 78 trains in 2006.

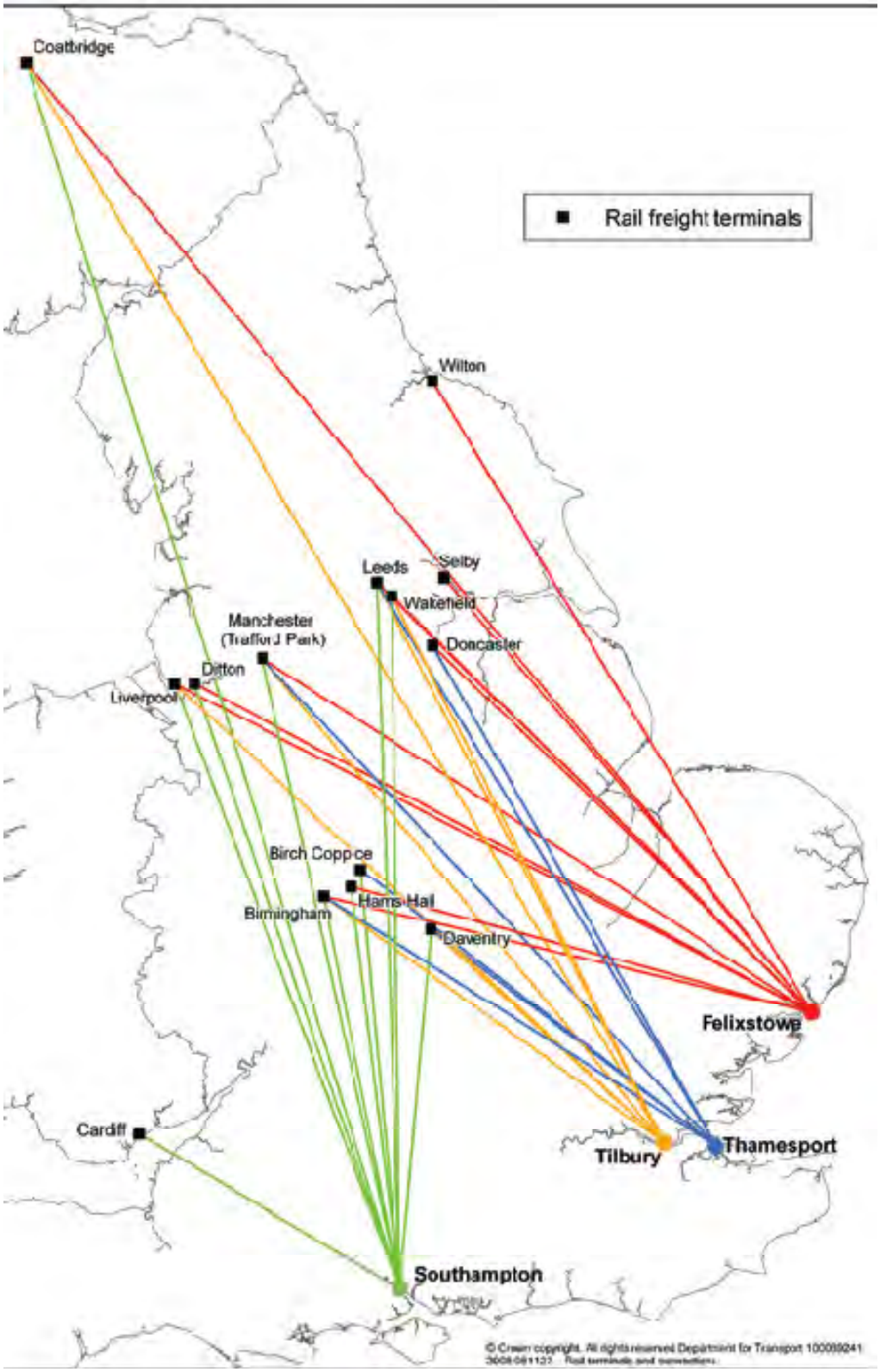
Reliability is generally higher for containers transported by rail as road hauled containers can be susceptible to congestion on the road network. Furthermore, increased fuel prices have inflated the cost of transporting containers by road, making rail haulage more attractive. As has been mentioned earlier in the report this is now starting to influence decision making within the 3rd party logistics providers on a shift to rail based on the symposium at DIRFT on 22.3.10.

The number of container train arrivals per week at inland terminals** in 1998/9 was198 and this grew to 285 by 2004/5 which was a 44% increase. The University of Westminster has conducted several pieces of research into container services and the following diagram illustrates the network of rail services from the four largest container ports in the UK and the lack of terminals in the East Midlands is notable.

Whilst ports are the dominant generators of intermodal traffic the terminal to terminal business has become strongly established and is tapping into the retail market. Examples of this include the services for major supermarket chains from DIRFT to locations in Scotland.

The DfT's July 2007 White Paper 'Delivering a sustainable railway' proposed the development of a Strategic Freight Network (SFN) in England and Wales as part of its high level strategy to address the growing demands on the network for moving passengers and freight. The Statement of Funds Available (SOFA) to the rail industry for CP4 allocated a maximum of £200m towards the development of the SFN to be spent in the last four years of the control period. Some of this will be spent on upgrading the gauge of existing lines in the UK with the goal of creating more routes which are able to accommodate 9' 6' High Cube containers. This type of container is already widely used for rail freight transport in Europe.

Figure 7Source: Based on Research for Woodburn, Allan (2008) 'Intermodal Rail Freight in Britain – A Terminal Problem?' March 2007



4.5.2 Future Growth

Container freight is, however, growing rapidly as is container freight by rail albeit with a drop back due to the recession.

Research done before the recession by FTA / Rail Freight Group showed expected growth in deep sea containers by rail:

- 2015: 68% over 2005 levels; and
- 2030: 181% over 2005 levels.

FTA / Rail Freight Group also expect large growth in domestic container transport by rail. Although the timescale of the growth may be lengthened due to the recession the trend is still likely.

Prologis stated in their National Rail Freight Strategy that they are seeking to not only develop more rail-linked sites, but to help establish and promote connecting rail services, towards the creation of a new national sustainable distribution network for major companies. They also state that they are looking at creating new rail freight terminals at Glasgow, Cardiff and Wolverhampton. In their rail strategy Prologis state that a network of 10 sites similar to DIRFT could help create up to 100 freight trains per day. DIRFT was operating 12 trains per day, 11 years after its construction. It should be acknowledged however that should plans for DIRFT 2 and 3 gain approval then traffic would increase significantly further. It is also worth remembering that DIRFT by its location serves both the South and West Midlands although situated in the East Midlands. This is because Markets do not recognise regional boundaries! It is reasonable to assume that 10 trains per day would be a rough average for an intermodal site with DIRFTs good connections under current market conditions once the site has become fully established. This is factored into the methodology of site scoring later in this report.

Sites containing Regional Distribution Centre floor space (not National Distribution Centre) will generate additional road traffic movements due to the faster turnover of stock at such facilities. The FTA state that the average is 13 - 14% rail modal share for a rail linked distribution site.

4.6 FTA/ Rail Freight Group Forecast

The diagrams below show the predictions for the different rail routes in 2015 and 2030 compared to the timetabled capacity in 2007 which was the year of the industry analysis. It can clearly be seen that from 2015 onwards capacity is likely to be an issue along the West Coast Main Line without further infrastructure improvements.

Figure 8 Rail Freight Group Predictions – 2015Current Timetable Capacity 2007

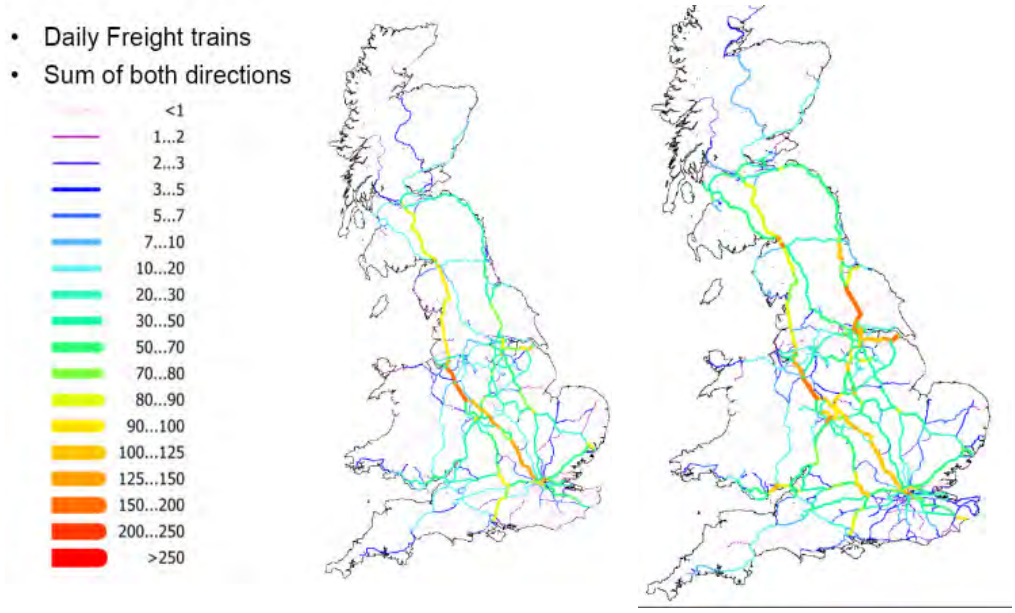
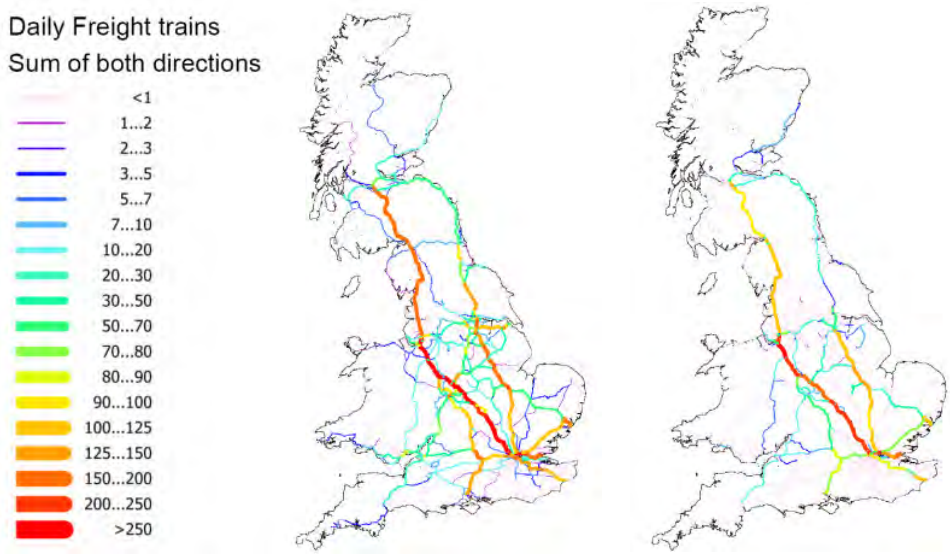


Figure 9 Rail Freight Group Predictions – 2030 Excess Demand in 2030 Based on Current Timetable



The Study also identified South Derbyshire as one of the areas best positioned to meet the required criteria to provide rail linked distribution facilities

4.7 Rail Freight Terminals

There are a number of schemes in the Midlands that essentially will be competing for some of the same business and in our view this has not been fully tested. The positive side of having several sites is that it allows freight forwarders choice because of competition but the downside is that it can dilute rail traffic to less than viable trainloads. In this section we briefly review some of the existing rail freight terminals in neighbouring regions and sub-regions.

4.7.1 Daventry International Rail Freight Terminal (DIRFT)

This has been the premier freight terminal in Northamptonshire and now generates over twelve rail freight trains a day to several ports, Scotland and the South East. The site is attractive because it is on the major national north south freight artery, the WCML. Three logistics companies sponsor the Scottish freight services, WH Malcolm, Stobarts and the Russell Group and clients include retailers like ASDA and Tesco.

4.7.2 Hams Hall, Coleshill

This site operated by ABP Ports group is currently their only inland terminal in the UK. It is a useful location just off the M6, M6 Toll and M42. It has around 6 services a day providing connections to Felixstowe, Southampton, Scotland and has two Channel Tunnel Services. Hams Hall has plans for service expansion later this year.

4.7.3 Freightliner, Lawley Street, Birmingham

Freightliner moves the vast majority of rail borne deep-sea containers in the UK. It has a busy terminal near the centre of Birmingham providing links to several container ports.

4.7.4 Burton on Trent

There is a small terminal in Burton that has two daily services, one from Southampton and one from Felixstowe. The physical size of the site limits growth to become a SRFI. It has been acknowledged that if the site at Etwall Common were developed some of the traffic at Burton could migrate although at present Intermodality are working hard to safeguard services in/out of Burton.

4.7.5 BIFT (Birmingham Inter-modal Freight Terminal)

Roadways Container Logistics are the biggest container transport company in UK and the biggest operator of terminals. They have a terminal by the A5 near Tamworth with a capacity of up to 8 trains a day in and out. Roadways use a “hub and spoke” distribution system because they can use the cheapest and most environmentally friendly mode for the long haul (rail) and the most flexible for the “time sensitive” local haul (road).

4.7.6 Doncaster Railport

The Doncaster Railport serves commerce and industry across Yorkshire, Humberside and the North Midlands. It also offers direct access to the East Coast Main Line and Channel Tunnel.

4.8 Review of Neighbouring Sites and Proposed Sites for Comparison

Table 4 provides a comparison of facilities available at both existing and proposed intermodal terminals in neighbouring areas.

Table 4 Current and Proposed UK Intermodal Freight Terminals

Site Name	Rail Facilities	Size and Description	Current Status
Daventry International Rail Freight Terminal, (DIRFT)	5x750m reception sidings, 4x375m handling sidings 3 mobile cranes Currently over 10 trains per day serving the site	A 174ha site with an intermodal terminal run by WH Malcolms, has some rail connected sheds. Plans exist for DIRFT 2 & 3	**Operational with expansion planned**
Hams Hall, Coleshill	2x750m reception sidings and 4x450m handling sidings. 7 reachstackers plus a gantry crane for block stack. Currently 6 trains per day serving the site	170 hectare site run by ABP. Distribution and manufacturing facilities on adjacent site, Sainsburys are a large warehouse occupier (65,000m²).	**Operational**
Burton on Trent	Single track operation Currently served by 2 trains a day	Small intermodal terminal with no warehouses	**Operational**
Birmingham International Rail Freight Terminal, Tamworth (BIFT)	Currently 120 acres (48 ha) the site will eventually expand to 400 acres (162ha). The site is currently served by 2 trains a day – this will in future be expanded to a maximum of 8	No warehouses on the actual site but there is a large distribution park adjacent. Plans have been released for expansion.	**Operational**
Landor Street, Birmingham (Freightliner)	Terminal operated by Freightliner solely for their deep-sea customers. Served by 7 trains a day	No warehouses on site but very close to Birmingham City Centre	**Operational**
Rugby	3 trains and 50,000 containers per day by end of 2010	New site just opened in 2009 with 1 train	**Operational**
Doncaster Railport	At least 3 trains a day currently serving the site with 37,000 deep sea containers	Terminal next to Wincanton warehouse	**Operational**
Sheffield International Rail Freight Terminal (SIRFT)	2 dedicated secure, 420 metre rail sidings.	2 High bay distribution facilities offering 26,894 and 30,889 m2 of accommodation	**Built**
East Midlands Distribution Centre Castle Donington	It is understood that rail connectivity will be provided by the end of the year.	Planning consent for 186,000m2 of warehouse space	**Under Construction**
Eurohub Corby	Sheds 1, 2 and 4 to be directly linked but no intermodal facilities planned for site – effectively a road transport based site with some rail connectivity N.B The STVA car terminal at Corby may be adapted for intermodal traffic in the future	88 hectares Total: 320,000m 2 Shed 1: 75,300 m2 Shed 2: 91,000 m2 Shed 3: 41,800 m2 Shed 4: 77,600 m2 Shed 5: 34,000 m2	**Consent**
Peterborough	Rail sidings and a container yard will be provided as part of the development	The site will include 7 warehouses	**Proposed**
Doncaster (Rossington) (New site)	4 tracks with 2 reception lanes – There are 2 daily services to Felixstowe Port and 1 service twice a week to Thames Port	Site plan for 142 hectares serving 3 warehouses – total: 904,845 sq ft Shed 1 – 238,023 sq ft Shed 2 – 266,964 sq ft Shed 3 – 399,858 sq ft	**Proposed**

It is clear that other terminals that have been developed have paid close attention to the SRA Strategic Freight Interchange Policy document. The main requirements for planning Intermodal facilities are summarised in the document as the following:

- At least 40 hectares in size with scope for future expansion if required;
- Large enough to handle full length 775 metre trains;
- Located appropriately in relation to the markets they serve and a suitable workforce;
- Away from areas sensitive to noise due to likely 24 hour operation;
- Good access to the primary road network;
- Loading gauge suitable to accommodate intermodal units on standard platform wagons; and
- Closely located warehousing to the rail facilities (to avoid unnecessary additional costs in the supply chain).

As can be seen from Table 4.1 these recently planned or built facilities have tried to follow the SRA guidelines. Certain requirements such as the ability to accommodate full, Channel Tunnel length, 775 metre trains are not always possible within the space available on the site. However, providing the sidings have been designed to allow for shunting this should be less of a problem. Of those terminals that are currently operating successfully (e.g: Daventry and Hams Hall), they have achieved this by being well located with good rail and road access, as well as having sufficient freight paths available each day to attract customers to use the site.

The following is a list of terminals that are either under construction, have planning consent or are proposed that might have an impact on likely demand for proposed terminals in the study area.

4.8.1 Sheffield International Rail Freight Terminal (SIRFT)

The importance of rail freight has been identified with the re-building of the Sheffield International Rail Freight Terminal (SIRFT).

4.8.2 Inland Port Doncaster

This large facility would increase the capacity in the Doncaster area. The current Doncaster Railport site is already fairly full.

4.8.3 Alconbury

There are plans for a large strategic freight terminal at Alconbury near Huntingdon but if it develops it would be more likely to compete with Northamptonshire sites rather than those in the study area. It benefits from being very near the A1 and A14 roads. It is acknowledged that there are currently uncertainties surrounding whether this site will actually be developed as a rail freight terminal.

4.8.4 Peterborough

There is a proposed intermodal site at Peterborough which would have rail sidings and a container yard provided as part of the development. It benefits from being near the East Coast mainline and near the A1 and A14 roads.

4.8.5 DIRFT 2 and 3

DIRFT 2 has received planning consent and will extend the existing site significantly. DIRFT 3 is at the proposal stage. These sites in Northamptonshire cater for much of that county, Warwickshire and parts of Leicestershire.

4.8.6 Corby

Corby already has a concentration of distribution business in its immediate locality. There is the car terminal which until recently has been operated by French owned companies GEFCO and STVA(UK) to import Peugeot/Citroen cars from various factories in France. There are three distribution centres at Corby Eurohub. Prologis have interests in this site that has 3.3 m ft sq and are looking to run 4 or 5 trains a day.

4.8.7 East Midlands Distribution Centre

This site at Castle Donington has already received consent and the first phase is built out and waiting for occupation. It is understood that there is serious interest in this site. This site will be in competition for customers with any sites that this study recommends. This site is discussed in more detail later in this report.

4.9 Criteria for Choosing Sites for Development

Several criteria have been suggested that all parties will consider when choosing to develop a site or warehouse.

Apart from the differing needs of the major industries when companies, logistics firms or property developers' look for an Industrial/Distribution or Business park to occupy or for new development land, a number of key elements are generally considered:

- Type of rail freight service;
- Location;
- Transport infrastructure;
- Customer needs;
- Labour supply;
- Level of employment created from warehouse development;

- Grants and funding available;
- Cost;
- Size;
- Availability/timescale for development; and
- Deliverability and end user interest;

4.10 Rail Freight Services

Services can be configured to meet the needs of any customer but they are broadly split into a number of types that may be attracted to use a SRFI;

- **Single** customer dedicated services: This one to one relationship between customer and service provider allows for flexibility in service and optimisation of routing, pathing and timings. The full train nature of hauling similar products on single routes allows for development of more suitable wagon equipment to better facilitate loading and unloading requirements.
- **Scheduled** deep-sea intermodal services: These have the advantage of scheduled routes, timings and pathways leading to good reliability and predictability. They generally serve the major intermodal container hubs from the ports, with trainloads being consolidated by the freight operating company. Recent developments have seen major shipping lines take a greater interest in rail, procuring their own services on a haulage only basis and taking the risk on filling capacity with their own volumes and marketing spare capacity to others.
- **Domestic** Intermodal services: This is a growing market of container or swapbodies moving between inland terminals within the UK. The trains often contain goods for several different customers that are aggregated together to make a viable train load by a logistics company. The consolidators tend to contract rail services on a 'hook and haul' basis and market the train capacity. The railway has gradually been making inroads into the market for transporting ambient products, such as supermarket goods, particularly over the long distances to Scotland, where rail has a competitive advantage. This has been made possible by the proximity of the Daventry International Rail Freight Terminal (DIRFT) which was built next to the WCML several years ago when rail freight was just emerging from privatisation. It did not attract much interest in rail served warehousing at the time but more recently things have started to change. There are now over ten daily services to Daventry of which at least three are dedicated freight trains from Daventry to Scotland being run by three separate logistics companies that have been better known for their road haulage, Ken Russell, W.H. Malcolm and more recently Eddie Stobart. These services include consignments for major retailers like Asda, Marks & Spencer and Tesco. Further growth is expected between Scottish terminals and Midlands intermodal terminals. It is possible that new East Midlands terminals could fit into these emerging services and help to make a network of trunking by rail.
- **Channel Tunnel** movements: The rail service between UK terminals and the Channel Tunnel is provided by UK operators while onward European services can be provided by a single, or combination of European rail companies depending on how the service is configured. Connectivity into Europe is possible with an extensive network of rail lines, including much of Eastern Europe. The volumes through the Channel Tunnel are below what was anticipated when it opened but there are signs that growth is more likely in the future.

The Distribution Sector has several criteria that are essential when considering new sites including:

- A need for facilities as a result of demand from the logistics market which cannot be met by existing capacity, and is well located in relation to the origins and destinations of cargo;
- High quality access to the railway network. This quality access is defined in terms of a large loading gauge which is capable of accommodating intermodal units on standard platform wagons and available capacity to run freight train services;
- Good quality access to the highway network. Good access is defined as being served by the national motorway network or major non-motorway routes; and
- Availability of suitable cost effective labour.

4.11 Location - Rail Infrastructure Improvements

There are several major improvements in connection with establishing the Strategic Rail Freight Network which will improve access to the East Midlands.

One of the key developments is the implementation of W12 on the route from Water Orton to Doncaster from March 2014. In addition the whole route from Felixstowe to Nuneaton is due to be upgraded to W10 gauge. The Felixstowe to Peterborough section of this route is already cleared and the remainder to Nuneaton is expected to be completed by March 2011. Part of these plans includes redevelopment of the Nuneaton North Chord giving grade separated access from the Cross Country route northbound onto the WCML. This will be completed in March 2012. Capacity enhancements on the Cross Country route between Water Orton in Birmingham and Doncaster (up to W10 gauge) are being progressed in CP4 with further works anticipated in 2015/16 that, on completion, will enable the Cross Country route to handle up to 49 trains per day in each direction. These plans include the capacity enhancement to the Felixstowe branch line which will allow up to 40 freight trains per day to run in each direction by the year 2020. In parallel with these local rail improvements, HPUK is working closely with Network Rail to

fund gauge and capacity improvements to the route between Ipswich and Peterborough and the East Coast Main Line, and its diversionary routes to South Yorkshire. The first phase of work to increase the gauge of the rail-link from Haven Ports to the Midlands (so that it can handle 9'6" containers) has been completed, and the second phase (gauge and capacity enhancements facilitating rail freight movement from Ipswich via Peterborough through Nuneaton) is funded by the Government and is in Network Rail's investment programme for 2009–14.

To further promote modal shift to rail, access is being improved between Southampton and the West Coast Mainline. The W10 gauge clearance works on Southampton West Coast started in January 2009 and are due completion in March 2011. Works to gauge enhance the diversionary route between Southampton and Basingstoke via Andover are due to be completed in 2013 and proposals are being developed to accommodate longer trains on the route between now and 2014. As part of the plans the Great Western Mainline at Reading will receive increased gauge and grade separation. This route is due to be gauge enhanced from W8 to W10 from the West Midlands to Doncaster through the study region.

4.12 Transport Infrastructure

This is a brief summary of the transport infrastructure that might attract inward investors to the area thus potentially bringing extra demand as a result.

4.12.1 Leicestershire

Roads: The A1 and M1 provide the north-south routes while the M69 motorway connects Leicester to the West Midlands. Leicestershire is slightly closer to London and the South East and these centres of population than either Derby or Nottingham.

Rail: The Midland Mainline provides a regular, fast direct rail route to London. In addition the Felixstowe to Nuneaton Cross Country route brings W10 gauge to Leicester from Felixstowe by March 2011 and enhanced freight capacity progressively over the period 2011 – 2016

Air: Leicestershire is well placed for East Midlands Airport. Parts of the county are within one hour's drive from Birmingham Airport to the south.

4.12.2 Derbyshire

Roads: Derby City centre is a short distance from the M1 motorway. The main roads through the county are the A50, A38 and M1 which provide good access to the North, South and West.

Rail: The Midland Mainline connects Derby with the UK's major cities and provides fast links to London. Derby is also served by the North East to South west Cross Country route. Critically this route (including the Castle Donington branch) will be gauge cleared to W12 as part of Water Orton – Doncaster by March 2014.

Air: Derby is within 25 minutes drive from East Midlands Airport and less than an hour's drive from Birmingham Airport.

4.12.3 Nottinghamshire

Roads: Nottingham has access to three M1 junctions to the west of the city and certain parts of the county are within easy reach of the A1. The A52 is the principle route through the city of Nottingham and the A50 also provides good access to the west. Due to the good level of connectivity the area has been popular for new distribution developments.

Rail: The Midland Mainline links the city of Nottingham with all the major towns and cities in the East Midlands and provides high speed links to London. Nottinghamshire has access to the East Coast Mainline passenger service at Newark and Retford.

Air: Nottingham is only 20 minutes drive from East Midlands Airport which has one of the largest dedicated air freight terminals in the UK and a major international passenger service, while Doncaster Robin Hood Airport serves the north of the region.

4.13 The Needs of Customers

Customers are becoming ever more demanding. Customer expectations are high leading to increased usage of 3rd party logistics specialists for a competitive supply chain and the result is a year on year 'squeeze' on the tiny margins achieved within the competitive logistics industry.

Customers expect to always be able to get what they want, when they want it and at reasonable prices. This means that warehouses need to be located correctly to provide a fast, efficient and cost effective service to the end. Customer service has become a focal point for companies to measure performance on and is now one of the most important aspects of a successful business. This has led many companies to consolidate a number of smaller warehouses (to reduce cost) into an National Distribution Centre (NDC) and to locate centrally in the UK to maximise reach from this centralised NDC which is then able to target the whole of the country from one major hub (Super Warehouses). This begins to explain the reason why there is a shortage of available distribution units and development land around the Midlands region.

At certain times of year it is important for companies to have the potential to expand their storage facilities quickly if demand exceeds expectations so overflow warehouses are an important consideration for distribution companies.

Looking to reduce costs further and stay competitive, UK manufacturing companies have moved to locate themselves in Eastern Europe to enjoy cheaper labour and material costs. This has meant that companies have needed to make sure logistics infrastructure is in place and has thus in turn provided massive opportunities for the logistics industry, many of which through acquisition now have pan-European fleets to ensure that goods can get to the customers on time and at a reasonable price.

With the explosion of home shopping services available from the internet more and more customers demand home delivery services.

4.14 Labour Supply

Staff availability is of importance to any company and this aspect will more than likely be considered alongside choice of location. In warehouses labour typically accounts for around 50% of operational costs so attempts to keep this are check is important. Flexible labour force and more accuracy in picking accuracy, picking priority and inventory management are the top three priorities for distribution managers.

The tables below show the available demographics/workforce of the areas. If there are not enough skilled/semi-skilled/unskilled workers in the area then the company will think twice before re-locating in the area. Not only does this affect initial intake of staff but will affect any possible expansion.

Table 5 below shows the potential available workforce and the recent unemployment figures. It indicates that indeed there is a readily available workforce in all areas. However there is still lack of skilled workers in the Three Cities and the East Midlands region.

Table 5 Demographics of Three Cities and East Midlands

	Derby City	Leicester City	Nottingham City	East Midlands
Population	239,200	294,700	292,400	**4,433,000**
No. Employed	108,200	124,900	124,600	**2,136,596***
No. wanting a job (Note: Is this the correct term?)	6,100	12,900	11,700	**-**
Unemployment (%)	8.1	11.5	11.8	**6.8**
Avg. Wage Earnings by residence (Hourly) [23]	**£12.47**	**£9.92**	**£10.89**	**£11.54**

4.15 Warehousing Employment Creation

There are several methodologies of ascertaining how much employment, warehousing is going to create. Two methodologies from the private sector are highlighted, and AECOM's methodology is described.

4.15.1 Railfreight Interchange Investment Group (RIIG) Job Creation Calculator

In a Presentation during the Rail Freight Group 2007open meeting at Doncaster, Nick Gallup (RIIG and Intermodality) said, *'Strategic Terminals tend to be larger with > 40 ha of land and need good road, rail and a decent catchment area from where to draw labour.'*

Using RIIG's data it implies 1,100 people per 1 million sq feet or 11,840 people per 1 million sq metres

[23] **Unemployment:** Refers to people without a job who were available to start work in the two weeks following their interview and who had either looked for work in the four weeks prior to interview or were waiting to start a job they had already obtained.
All from official labour market stats (national statistics) www.nomisweb.co.uk
Source: Population/Employment July 2008-July 2009
Source: Average wage earnings (2009)
*Figures for Oct-Dec 2009

4.15.2 Prologis Employment Calculator Job Creation Calculator

From a survey Prologis did the following is an employment spit of a typical warehouse based on a survey of 32 warehouses with a combined employment of 5,930. This equates to 185 people at each site:

- 23% = office = 43 people;
- 36% = skilled warehouse staff = 67;
- 24% = semi skilled warehouse staff = 44;
- 12% = drivers = 22; and
- 5% = others e.g. security = 9.

Prologis say that you can work on 1 employee/1000 ft sq in their general marketing brochures

Hence a large shed such as CROSSFLOW 525 at Barnsley works out as follows; 527,700 feet square /49,025 metres square = 527 jobs.

4.15.3 AECOM Calculator

Easy Calculator = 1 million metres square = 10,750 jobs. This is very similar to the 11,000 from RIIG, but slightly more conservative that RIIG Calculator and splits out the employment types

Using same split of staff BUT based on notional 1 million square metres

Percentage	Employment Type	Staff Numbers based 1 mil^2 m
23%	Office	2472 people
36%	Skilled warehouse staff	3870
24%	Semi skilled warehouse staff	2580
12%	Drivers	1290
5%	Others e.g. security	538
TOTAL STAFF		10750

4.16 Cost

The development of a site is a costly business and there are many stages to go through before any actual building work begins. Clearly some sites are more suited to development than others and this will have a bearing on overall costs, land values, cost of construction, cost of land remediation, cost of studies and achieving planning permission all contribute to the final figure. The cost of connecting a site to the main road and rail networks is also a major factor to consider.

4.17 Grants and Incentives

There are grants and incentives available to help encourage further investment and regeneration of the area. The details of these have not been within the remit of this study but could potentially have a bearing on the attractiveness of the region for inward investment.

4.18 Size

Many sites are built out in stages as additional customers are attracted to the location. However, basic facilities have to be provided from the outset. In general for good road and rail connections to be provided costs a significant sum of money. Therefore, the larger the size of the development the more likely it is to have economies of scale that cover this outlay on infrastructure. For a SRFI to be economically viable it needs to be sufficiently large to spread the costs.

4.19 Availability/Timescale

The fact that a landowner is prepared to release a site has a major bearing on availability. Many potentially attractive sites may have a complicated mix of several landowners, some of whom may be less willing to sell their part of the site. Also, the levels of support from Local Authorities, environmental groups, Network Rail, Highways Agency and other stakeholders does have a major bearing on timescales. It is not unknown for developments to take over 10 years for the planning design and build stages.

4.20 Deliverability/Developer Interest

It is believed that for a site to go forward there must be real interest from one or more developers who provide the necessary vision, drive, finance and impetus. Without this any scheme is likely to remain undeveloped,

5 Methodology

5 Methodology

5.1 Introduction

This section provides an overview of the Assessment Framework used to identify the appropriate Strategic Rail Freight Terminal(s) in the Three Cities Area. This process was discussed by the Project Steering Group and the methodology was agreed at the meeting on 10th February 2010. The Project Steering Group assisted the study team with the development of a comprehensive, robust methodology for scoring sites using many of the contributory factors that developers consider when choosing a site. Whilst not all of the developers may use each of the individual facets when considering a site, they have been individually agreed and endorsed by the Steering Group.

Each site went through a Staged Process:

- Stage One - Go / No Go;
- Stage Two - Grading; and
- Stage Three – Modelling and detailed assessment of most likely sites.

5.2 Stage One – Go / No Go

The list of sites was compiled from those put forward for consideration by Local Authorities and other stakeholders. In the first stage all the sites have been reviewed against the fundamental requirements for being a strategic rail freight terminal.

These questions are listed below:

Question	Go / No Go
Is rail network connectivity available to either the SFN or secondary network without significant upgrades to get sufficient gauge or capability?	
Is road access to the site sufficient i.e. motorway / trunk roads can be relatively easily reached and there are no significant issues with junction capacity?	
Is there sufficient area for a Strategic Rail Freight site i.e. >approx 50 hectares and configuration capable of handling trains?	*
Is the site within the boundary of Sustainable Urban Extension**?	

* It should be noted that if the site is of insufficient area to be a Strategic Rail Freight Terminals this does not mean it is inappropriate as an intermodal point for a single user or at a sub-strategic level and does not necessarily preclude their development as a single user low volume rail freight terminal. It is acknowledged that some of these sites are candidate rail freight terminals which could be intermodal or other rail freight operations.

** A Sustainable Urban Extension (SUE) is a proposal for residential and complementary development on land on the edge of an existing built up area. For this Study, a SUE refers to a proposal which is coming forward through the planning system.

Some sites have been allocated a ‘No Go’ at this stage and did not therefore pass to Stage Two: Grading.

5.3 Stage Two – Grading

All the sites that passed through ‘Go / No Go’ moved through the grading stage. This allowed a numeric comparison and a colour range / traffic light approach to site identification. Each site was allocated a ‘Grade’ for each of the facets listed below. The factors were also graded primary and secondary and hence this allowed the use of a weighted scoring method for the most important factors.

The decision on which facets were graded primary or secondary was the Project Team’s decision based upon views of some developers and AECOM’s Development Planning team. The important factors are often outlined in developer brochures and are seen as very significant and therefore carry double weight. The methodology was brought in draft form to the Project Steering Group and after several iterations and amendments to the facets and parameters the process was agreed.

As part of the appraisal process an attempt has been made to generalise assumptions on capacity being available in the context of SFN development. . An attempt has also been made to highlight specific areas of the network that are known to currently have capacity problems. The East Midlands intermodal volumes are considered to fit within the overall intermodal volume forecasts developed by Network Rail and the Department for Transport.

5.4 Rail Access

5.4.1 Rail Network Connectivity

Sites were graded on their proximity to the proposed Strategic Rail Freight Network. The Strategic Rail Freight Network is a network of mainline routes which are operational to a high gauge clearance, the largest of these typically being W12 gauge with UIC GB+ (Continental Loading Gauge) potentially if it is affordable on High Speed One access to the Channel Tunnel.

1.1 Rail Network Connectivity ***Primary***	3	Direct Access to an SFN route with multiple routings
	2	Direct Access to an SFN route with single routing
	1	Within 2 miles of one or more SFN (but adjacent to existing rail infrastructure)
	0	Within 5 miles of one or more SFN (but adjacent to existing rail infrastructure)
	-1	Within 10 miles of one or more SFN (but adjacent to existing rail infrastructure)
	-2	Over 10 miles of one or more SFN (but adjacent to existing rail infrastructure)
	-3	No Direct Rail Access (No /Go)

5.4.2 Rail Frontage Length Available

The rail frontage length is the length of the site which adjoins the railway line. Having an appropriate length site will facilitate efficient operations and the longer the frontage the easier it is to accommodate multi directional connections. Conversely the shorter the frontage the less likely it will be possible to get connections in both directions. Sites which have 1km+ frontages are deemed ideal for SRFI while sites which have an existing rail connection are regarded to have additional benefits.

1.2 Rail Frontage Length Available ***Primary***	3	Existing rail connection multi-directional
	2	Existing rail connection single-directional
	1	Existing rail connection potential (formation exists but rails have gone)
	0	Frontage 1km plus
	-1	Frontage 600m to 999m
	-2	Frontage 400m to 599m
	-3	Less than less than 400m

5.4.3 Ability to Handle Trailing Length

Ability to handle trailing length is one of the keys to the success of any potential site. Sites which are able to process loads from trains over 775m in length will be more suitable for handling trains travelling to and from Europe which are generally longer than many freight trains operating on a national basis.

1.3 Ability to Handle Trailing Length of: ***Primary***	3	775m or over
	2	600m – less than 775m
	1	500m – 600m
	0	450m – less than 500m
	-1	387.5m – less than 450m (i.e. 775m required to split into 2)
	-2	775m train required to split into three
	-3	775m train required to split into four

5.4.4 Able to Create Network Buffer

.A large network buffer between the NR mainline and the loading / unloading pad will also facilitate ease of operations and create additional space for safe working. The prime objective therefore, is to allow the longest train to use the terminal to stand clear of the network but be in a position where the terminal operator can call the train onto the terminal as and when a terminal road is available i.e. neither the network nor terminal operator is compromised if the train has to be held. It is not an option to hold trains on a mainline while room is found in a terminal.

1.4 Able to create network buffer of ***Secondary***	3	1000m or over
	2	775m – less than 1000m
	1	600m – less than 775m
	0	500m – less than 600m
	-1	400m – less than 500m
	-2	300m – less than 400m
	-3	Less than 300m

The rail access aspects of the framework were marked by using mapping information and available data from Network Rail, which was supplemented where the information was available, from additional planning information. The grading was undertaken by a specialist rail freight infrastructure consultant who was part of the project team throughout.

5.5 Road Access

5.5.1 Access Road from Site

Road access to the site is extremely important as sites need to have excellent highway access to function effectively. Sites which score highly will be close to a motorway junction or to a grade separated junction on a dual carriageway trunk road.

Site access has been considered by reference to OS 1:50,000 plans and aerial photographs and local knowledge. This has enabled the characteristics of existing site access to be assessed. Access to the most relevant section of SRN has been examined. Some sites may be able to access separate SRN routes and this has been taken into consideration. Where sites have no existing access point to the highway network, an assumption has been made as to how this may most simply and directly be achieved.

2.1 Access Road from Site ***Primary***	3	Access to motorway or 2 dual carriageways
	2	Access to rural dual carriageway / SRN
	1	Access to other dual carriageway
	0	Access to rural single carriageway A Road
	-1	Access to urban single carriageway A Road
	-2	Access to any other road with width >=11.5m
	-3	Access to a minor road

5.5.2 Time to Access Motorway Network

Optimal operational performance will be achieved through swift access time to the UK motorway network.

Time to access the motorway and trunk road network has been calculated for an off peak period (to reflect 24 hour working) based principally on distance but also taking into account the characteristics of the network providing access to the motorway network.

2.2 Time to Access Motorway Network ***Primary***	3	5 minutes or less
	2	5 – 10 minutes
	1	10 – 15 minutes
	0	15 – 20 minutes
	-1	20 – 25 minutes
	-2	25 – 30 minutes
	-3	Over 30 minutes

5.5.3 SRN Link Stress

As well as proximity and accessibility to the SRN, it is also necessary to consider the performance of the nearest (most relevant) section of the SRN. The SRN exhibits varying levels of stress dependent on the level of traffic demand and the highway capacity of each route. Where stress is high, the network will have limited capability to accommodate significant additional traffic without adverse impacts on journey times and journey reliability. Conversely, where stress is low for a route it will be better able to accommodate increased traffic demand without detrimental impacts.

The assessment of link stress has been obtained from the Highways Agency 2010 East Midlands Route Network Report for the forecast 2016 and 2026 situations.

2.3 SRN Link Stress ***Secondary***	3	0-70%
	2	70-80%
	1	80-90%
	0	90-100%
	-1	100-110%
	-2	110-130%
	-3	>130%

5.5.4 SRN Junction Performance

The assessment of junction performance considers the current operation of the SRN junction likely to be most impacted by the potential strategic rail freight site. If a potentially impacted junction is already under pressure and there are no plans for improvement, this will represent a potential difficulty. The situation where a potentially impacted junction is currently operating satisfactorily and has a capability to accommodate increased traffic demand represents an opportunity.

This is a high level assessment and has taken into consideration known operating conditions and pressures using information provided by the Highways Agency Spatial Planning Framework consultants and comments received from the Highways Agency.

2.4 **SRN Junction Performance** ***Secondary***	3	No current issues or issues in 2016
	2	Minor issues by 2016 with potential for demand management solution
	1	Minor issues at present with potential for a demand management solution
	-	
	-1	Significant capacity issues expected in the longer term (2026)
	-2	Significant capacity issues in 2016
	-3	Significant capacity issues at present

5.5.5 Local Road Network Usage

The location of some sites may result in significant impacts on the local road network. These impacts will be affected by the characteristics of the network, frontage development, existing traffic levels and current network performance. The impact on the local network will be least where sites may be served principally by rural dual carriageway routes operating with significant spare capacity. Conversely, sites which are served by urban single carriageway roads which already exhibit traffic problems will be least able to accommodate traffic demand from a Strategic Distribution Site.

This high level assessment is based on the character of the local road network serving the site in terms of highway standard, level of traffic and a high level assessment of potential traffic impacts. Information has been sourced from Ordnance Survey maps, aerial photographs and local knowledge.

2.5 **Local Road Network Usage** ***Primary***	3	Rural dual carriageway local road access available to the SRN
	2	Use of high standard rural single carriageway road to SRN is available
	1	Use of urban dual carriageway local roads to SRN is available
	0	Use of single carriageway rural local roads required: slight issues with road standard,
	-1	Use of urban local roads required: slight issues with road standard, or peak time traffic volumes
	-2	Use of rural local roads required: significant issues with road standard, or peak time volumes
	-3	Use of urban local roads required: significant issues with road standard or peak traffic volumes

5.6 Physical Site Description

5.6.1 Site Area

A large site is preferable from an operational point of view and sites which are over 100 hectares will score a maximum in this category.

3.1 **Site Area** ***Primary***	3	100 hectares or over	
	2	75 – less than 100 hectares	
	1	60 – less than 75 hectares – i.e. above IPC threshold	
	0	50 – less than 60 hectares	
	-1	49 hectares but still capable of operation as strategic terminal (40-50 hectares)	
	-2	30-40 hectares	*
	-3	< 30 hectares	

** Sites of this size should be removed from this process as they are more suitable as 'seedcorn' or single user terminals. This review does not consider these sites in detail, but that is not to say that they are not suitable as intermodal facilities or to be expanded for rail freight use.*

The sites were measured by redrawing each site into a GIS Programme (Map Info) and the resultant area recorded.

5.6.2 Topography

Sites which are level are less costly to develop than those which are situated on an incline or possess an undulating landscape.

3.2 **Topography** ***Primary***	3	Site not requiring earthworks
	0	Site requiring moderate earthworks
	-3	Site requiring complete/extensive earthworks

The sites have been graded by analysis of Ordnance Survey Maps (1:25,000 scale) with the site area within the boundary under investigation. Sites which have a functioning railway line accessing the site with buildings of an appropriate scale for a Rail Freight Distribution Site ensure that minimal earthworks will be required and the site will be allocated 3 points.

Sites which require a railway link to be restored to the site or sidings to be located alongside an existing line and/or who require part of the site to be remediated score 0.

Sites which require extensive clearance/remediation and/or which are located over multiple contour lines on an Ordnance Survey map score -3.

5.6.3 Warehouse Configuration Potential

The potential position of development within a site is reviewed, where this is not known, an estimate is made of how the site could be planned.

3.3 Warehouse Configuration Potential ***Primary***	3	Excellent configuration and position
	0	Moderate configuration and position
	-3	Poor configuration and position

Sites were analysed with regard to their shape and ability to construct the size of warehouses which are necessary for a Strategic Railfreight Distribution Site. Sites of a high volume and a regular shape (ideally rectangular) were allocated 3 points. Those which are of a moderate shape and configuration score 0 points and those of an irregular shape or which are too small to house appropriate warehouses score -3.

5.7 Site Deliverability

If the site has a single owner (ideally one that has expressed an interest in development for this purpose) then it is likely that site delivery will be easier (and probably more cost effective.)

5.7.1 Ownership

4.1 Ownership ***Primary***	3	Single Owner known to have expressed interest in site development
	1	Single Owner who has not expressed interest in site development
	0	Unknown status on ownership
	-3	Multiple owners

Source: - this information was recorded when in discussion with a site promoter

5.7.2 Site Promotion

If the site already has interest from the private sector, then this is a good indicator of not only deliverability but also that that there is perceived demand for a site. This is measured by the number of individual private sector organisations that have made reference to it during the consultation process.

4.2 Site Promotion ***Secondary***	3	Mentioned Positively by 3 or more organisations
	2	Mentioned Positively by 2 organisations
	1	Mentioned Positively by one organisation
	0	No mentions

Source – As part of the consultation process any site that has had a positive reference by a private sector consultee has been recorded. These references are indicative of how deliverable a site is seen to be.

5.7.3 Land Allocation

Land development is more straightforward where a site already has a planning approval for a relevant land use, and/or has already been allocated for a relevant use in an adopted plan or is being considered as a potential development site for the relevant use in an emerging development plan document. Where a site has potential for an alternative, higher value use, this may represent a constraint on the potential for the site to come forward for strategic distribution purposes.

An investigation has been carried out to ascertain the planning status of potential sites by reference to Local Planning Authority web sites regarding planning approvals, Local Plan allocated development/saved policies and adopted/emerging Core Strategies.

4.3 Land Allocation ***Primary***	3	The entire site (or a significant part thereof) has planning permission for B8/B2 uses.
	2	The entire site (or a significant part thereof) has a allocation in an Adopted Plan for B8/B2 uses.
	1	The entire site (or a significant part thereof) has been proposed as a potential B8/B2 site in an Emerging Core Strategy.
	0	The entire site (or a significant part thereof) has no allocation in an adopted plan
	-1	The entire site (or a significant part thereof) has been allocated for a use in an adopted plan which would reduce its potential as a distribution site e.g residential or B1..
	-2	The entire site (or a significant part thereof) has been permitted for a use which would reduce its potential as a distribution site e.g residential or B1.
	-3	The entire site (or a significant part thereof) has been allocated for a use in an adopted plan which places a severe restraint on its potential as a distribution site e.g protected open space

5.7.4 Site Flooding

Sites which are at risk of flooding will require more remediation work and therefore will take longer and be more expensive to deliver. Using the Environment Agencies Flooding Map each site has been mapped and allocated an appropriate grading.

4.4 **Site Flooding** ***Primary***	0	No risk of flooding
	-1	In 'Areas benefiting from flood defences'
	-2	In 'Extent of Extreme Flooding' Area
	-3	In 'Flooding from rivers or without defences' Area

In order to allocate sites scores for flooding Flood Maps published by the Environment Agency were consulted. Sites scoring 0 are not at risk of any flooding. Sites which are in areas which benefit from flood defences score -1 with sites which are at risk of flooding under extreme conditions scoring -2. Sites which are at risk from flooding from rivers or the sea and don't possess defences score -3.

5.7.5 Site Contamination

Sites which require a significant amount of contamination remediation will increase development costs and time required to deliver. It is therefore preferable for the site to be clear and ready for immediate development.

4.5 **Site Contamination** ***Primary***	3	No Known contamination
	0	Anticipate Manageable Contamination Issues
	-3	Significant and Serious Contamination

Contamination risk on the sites has been assessed by using historic maps by AECOM's Environment team. Sites which are of a significant and serious contamination risk score a low of -3. Sites which are anticipated to contain contamination issues score 0. Sites which are believed to contain very little or no known contamination score 3.

5.8 Contribution to Regional Growth

5.8.1 Likely Contribution to Regional GVA

The site of a potential Strategic Rail Freight Terminal has the potential to influence the regional GVA. A sites contribution to regional GVA will be primarily dependent on the level and types of business the site can attract. As proposals for all the sites are currently in very early stages it is not possible to accurately predict the contribution to regional GVA the site may have, or even the types of traffic it may attract.

The table below has been created as an indicative estimate of the number of trains that could reasonably be predicted to be attracted to these potential sites once they reach full potential and hence the scale of contribution to regional growth that is likely for each of the sites. The list is based on a number of factors including the location, the likelihood of the terminal to be a preferred choice for the origins, the ability of the site to cater for the volume of traffic and the ability of the site to generate/attract its own specific users (anchor customers). This indicative list is developed with reference to historic examples of how SRFI sites have developed in other parts of the country. As an example in our opinion a particular site is the only one highly likely to attract a considerable volume of freight flows to/from a neighbouring traffic generator and hence has the highest level of trains expected. Most sites in a similar area are likely to attract a similar number of trains, hence Willington, Drakelow etc. all have the same figure. Clearly the number of trains cannot be aggregated across the sites. It is assumed that overall only two or three sites would go ahead. If more went ahead then there would be service abstraction between the sites and the relative volumes would be sub-optimal. The relative volume of services is likely to have the largest impact on contribution to regional GVA as the commodities likely to be handled by the sites are of relatively the same value.

Table 6 Indicative Estimate of Trains that could be Predicted to Serve Potential Sites

Site Number	Score	Trains/Day (TOTAL)	Anchor Company Train	Felixstowe	London ports	Southa-mpton	Other Ports	Channel tunnel	Domestic Inter Modal
2		10	1	2	2	1	1	1	2
6		6	0	1	1		1	1	2
7		8	0	1	2	1	1	1	2
12		8	0	1	2	1	1	1	2
15	-1	6	0	1	1	1	1		2
16		7	0	1	1	1	1	1	2
17	0	7	0	1	2	1	1	1	2
18	+1	8	0	1	2	1	1	1	2
19	+3	12	3	2	2	1	1	1	2
22	-3	1	1	0	0	0	0	0	0
23	+2	10	1	2	2	1	1	1	2
25		10	1	2	2	1	1	1	2
26		10	1	2	2	1	1	1	2
28		10	1	2	2	1	1	1	2
29	-2	2	2	0	0	0	0	0	0
31		2	2	0	0	0	0	0	0

The table below shows the scoring method used to predict the likely contribution to regional GVA from each of the sites. A map and long list of the sites are shown at the beginning of chapter 6.

6.1 Likely Contribution to Regional GVA ***Primary***	3	Up to 12 trains per day
	2	Up to 10 trains per day
	1	Up to 8 trains per day
	0	Up to 7 trains per day
	-1	Up to 6 trains per day
	-2	2 to 6 trains per day
	-3	1 train per day

5.8.2 Job Creation

A significant new development such as a rail freight terminal can assist in the creation of new employment possibilities.

Employee numbers required for each site have been estimated using the rail freight employment estimator tool AECOM developed for the Highways Agency in 2008. This takes as an input the projected square metres of warehousing for each site and calculates projected employment based upon a 90% B8 and 10% B1 development and the requirements for specialist rail staff. The tool also projects staff numbers working during different time periods (this will be used during the detailed highways analysis.

It has been assumed that on average 4,250 square metres of warehousing will be present per hectare of land available for each site based upon AECOM development team experience. For sites where warehousing plans already exist the square metres of warehousing has been taken into account per hectare for example: 1,403 (Markham Vale: Site 2), 2,510 (Lounge: Site 29) and 5,622 (Castle Donington: Site 25).

Scores have been assigned as follows:

6.2 **Job Creation** ***Secondary***	3	More than 30% above average
	2	20 – 30% above average
	1	10 – 20% above average
	0	± 10% from average
	-1	10 – 20% below average
	-2	20 – 30% below average
	-3	More than 30% below average

The average number of jobs expected to be created per site was approximately 9,000.

5.8.3 Deprivation

Score based on proximity to low wage / high unemployment areas (references use of indices of multiple deprivation).

6.3 **Deprivation** ***Secondary***	3	More than 30% above average
	2	20 – 30% above average
	1	10 – 20% above average
	0	± 10% from average
	-1	10 – 20% below average
	-2	20 – 30% below average
	-3	More than 30% below average

Average levels of deprivation for site employees have been estimated using a gravity model originally developed for the Highways Agency for the assessment of Warrington Parkside terminal. Working population levels have been taken at LSOA level (2008 mid-year estimates: 16-64 males and 16-59 females) for every area within 10km of the site and the gravity calculated as:

Working Population * (1 / Distance ^ g) (Where g (the gravity factor) is assumed as 1.1 (as within the Parkside assessment).

The Economic Deprivation Index (EDI) has then been taken at LSOA level using Tracking Neighbourhoods: The Economic Deprivation Index 2009 and the average EDI calculated for each site using the gravity weighted working population. The higher the EDI the more deprived the area is, therefore the more benefit new job creation is assumed to have.

5.9 Commuting

5.9.1 Sustainable Commuting Access

In order to achieve a sustainable development it is necessary for any potential site to be well served by public transport options. The matrix below indicates the potential for sustainable commuting access and how a site may perform when compared to the national average.

7.1 Sustainable Commuting Access ***Primary***	3	More than 75% above average
	2	50 – 75% above average
	1	25 – 50% above average
	0	± 25% from average
	-1	25 – 50% below average
	-2	50 – 75% below average
	-3	More than 75% below average

An approximation of the sustainability of the sites for commuting has been made using working population levels at LSOA level (2008 mid-year estimates: 16-64 males and 16-59 females) for every area within 10km each of the sites. The larger the potential workforce that is residing close to the site the more sustainable the site will be in terms of access to the Labour Market and commuting time / distances.

5.9.2 Public Transport / Dedicated Transport Availability

It is preferable if the site is served by dedicated public transport links which serve the terminal direct from residential areas where site workers are likely to live. Higher scores are achieved for sites with excellent public transport links which are reached in a short amount of time from residential areas.

The Transport Direct website (www.transportdirect.info) was used to investigate what public transport options existed for travel to each site during the weekday peak periods, by inputting the nearest large town or city (representing home for the majority of the projected workforce) as origin and the postcode of the site as the destination. The typical duration of this journey was used to grade each site, with shorter journeys scoring higher.

7.2 Public Transport / Dedicated Transport Availability ***Secondary***	3	Excellent public transport facilities: site can be reached within 15 minutes by public transport from nearest major town or city
	0	Average public transport facilities: site can be reached within 30 minutes by public transport by 50% of projected workforce
	-3	Poor public transport facilities: site can not be reached within 30 minutes by 50% or more of the projected workforce

Transport Direct data was again used to provide guidance as to the range of public transport options available, followed by more detailed analysis of timetables downloaded from operator websites (in most cases bus companies). Analysis was undertaken of service frequency and how this varied across a 24 hour weekday period. Services which operate around the clock, or at 15 minute intervals or less at peak periods, scored highly.

7.3 Public Transport / Dedicated Transport Availability ***Secondary***	3	24 hour public transport with 15 minute frequencies or less at peak times
	2	24 hour services, or non-24 hour services with 15 minute frequencies or less at peak times
	1	Existing public transport with 30 minute frequencies or less at peak times
	0	Existing public transport with hourly services for at least 12 hours
	-3	Remote location no realistic prospect of public transport, or more than 15 minute walk required at end

5.10 Demand

5.10.1 Proximity to Market

The proximity of the site to the market is crucial to the potential success of the facility. If the site is not located close to the origin/destination of the goods which are to be transported then it is less likely to be cost effective.

Based upon 3 years aggregated data (2006 – 2008) from the Continuous Survey of Road Goods Transport (CSRGT) it is possible to determine roughly the volumes of road freight to the East Midlands from the Kent and Suffolk areas (Thames Ports / Felixstowe):

1. 5.9 million tonnes were moved from Kent to the East Midlands: 1.23% of all freight received by the region on HGVs.
2. 9.3 million tonnes were moved from Suffolk to the East Midlands: 1.93% of all freight received by the region on HGVs.
3. 6.7 million tonnes from East Midlands to Kent, 1.26% of all freight sent out of the region on HGVs.
4. 6.5 million tonnes from East Midlands to Suffolk, 1.21% of all freight sent out of the region on HGVs.

Looking at the individual areas in the table below within the East Midlands it can be seen that the main areas that are receiving long distance freight are Northamptonshire, Lincolnshire and Leicestershire. More long distance freight is received in Nottinghamshire than Derbyshire. This indicates that the priorities for location of a rail freight terminal within the 3 cities region based on current road freight trends should be:

- Leicestershire;
- Nottinghamshire – particularly North Nottinghamshire; and
- Derbyshire – particularly South and West Derbyshire.

Table 7 Showing East Midlands Freight Received From Other Counties in the UK

Area From	Area To	Tonnes	Area From	Area To	Tonnes
Kent CC	Derby	x	Suffolk	Derby	x
Kent CC	East Derbyshire	x	Suffolk	East Derbyshire	x
Kent CC	South and West Derbyshire	436,000	Suffolk	South and West Derbyshire	329,000
Kent CC	Nottingham	x	Suffolk	Nottingham	307,000
Kent CC	North Nottinghamshire	607,000	Suffolk	North Nottinghamshire	538,000
Kent CC	South Nottinghamshire	x	Suffolk	South Nottinghamshire	x
Kent CC	Leicester	550,000	Suffolk	Leicester	508,000
Kent CC	Leicestershire CC and Rutland	1,128,000	Suffolk	Leicestershire CC and Rutland	1,240,000
Kent CC	Northamptonshire	2,458,000	Suffolk	Northamptonshire	3,378,000
Kent CC	Lincolnshire	767,000	Suffolk	Lincolnshire	3,026,000

x = sample size is too small to report

In essence there are approximately 2 million tonnes per annum in each direction between Kent and the East Midlands. Using national CSRGT information, an articulated vehicle over 33T carries an average of 11.3 tonnes per journey (heavy articulated vehicles are most likely to be carrying out this type of long distance transport). This equates to over 175,000 trucks per year. If rail captures 5% of this market then 8,850 trucks could be removed from the road each year. This is enough to run a daily service Monday to Friday with a decent payload in each direction (approx 385 tonnes).

The same applies to volumes to/from Suffolk, although there is more of an imbalance in flows with significantly more traffic travelling to Suffolk from the East Midlands. Using a similar logic there is certainly a strong case for at least 1 train a day in addition to what is already running to DIRFT. Currently Felixstowe demonstrates a 26% rail market share (nationally) indicating that there may reasonably be the potential for 2 or even 3 trains per day to the East Midlands.

On the basis of the above scores have been allocated as follows:

8.1 Proximity to Market ***Primary***	3	Leicestershire
	2	Nottinghamshire
	1	Derbyshire

5.10.2 Proximity to Population

The proximity of the sites to the large urban centres, which are likely to generate demand for containerised freight, is also important in determining the likely demand for the sites in the long term.

Population levels at Lower Level Super Output Areas (LSOA) level (2008 mid-year estimates: 16-64 males and 16-59 females) have been taken for every area within 40km each of the sites. This is based upon the economic distance in which 2 return lorry journeys can be made per day (25 miles)

The larger the population with close proximity to the site greater the catchment of the site in terms of end user demand. The average site has 3,230,000 people living within 40km. At an average of 2 tonnes of goods required per person per year the following number of trainloads is needed per day:

3,230,000 * 2 tonnes / 13 tonnes per container / 25 containers per train / 260 days per year
=
76 theoretical trainloads per day if rail captured the whole market

If rail gained a 5% market share on average a site could achieve 4 trains per day. At a 25% market share (equivalent to Felixstowe) a site could achieve 19 trains per day. In the view of the study team it is assumed that the actual figure will be somewhere between the two, with rail perhaps achieving a 10% market share. This projection is reflected in the calculation of the number of trains.

It should be noted that the catchment areas for many of the sites overlap as many of the sites are located within short distances of each other.

Proximity to population has been scored as follows:

8.2 Proximity to Population ***Primary***	3	More than 30% above average
	2	20 – 30% above average
	1	10 – 20% above average
	0	± 10% from average
	-1	10 – 20% below average
	-2	20 – 30% below average
	-3	More than 30% below average

5.10.3 Anchor Tenant

The location of an Anchor Tenant (a potential user that would not need to go on the public highway to access the site), or an Anchor Customer (a significant potential customer who could use a site) does help ensure that there is sufficient demand for services.

8.3 Anchor Users ***Primary***	3	Anchor Tenant
	2	Potential Anchor Customer with flows of significant proportion of a trains
	1	Small Potential Customers
	0	Unknown potential Customers

Source: This is qualitative research and part of the private sector consultation, with potential users and developers.

5.11 Cost

An indicative scale of likely costs of rail freight access and road building to each development has been estimated and the costs ranked and graded; with the lowest costs receiving the highest score. Therefore if a site that had a former rail terminal could be re-used and road access was good then the likely costs to develop the site would be relatively low and the score higher. The scoring of the sites was considered and cross-checked in the light of detailed meetings with the Highways Agency and Network Rail later in the study.

Cost of Development ***Primary***	3	Re-use Existing Terminal
	2	Low Cost
	1	Medium Cost
	0	Highest Cost*

* The real issue with 'highest cost' is actually cost escalation risk i.e the business case and affordability is known but sites which require major infrastructure enabling costs make them more vulnerable to cost escalation pressures tipping the business case.

5.12 Environmental and Heritage

The environmental factors are also important and this has been done as a desk based study using the existing site designations. Examples of each designation type are provided for these sections.

10.1 Environmental Factors ***Primary***	-3	Very High (International or National)	Site of a very High importance and rarity, of international scale and very limited potential for substitution. An internationally designated site or candidate site (Special Protection Area (SPA), Special Area of Conservation (SAC), Ramsar Site, Biogenetic reserve). (Site of Special Scientific Interest (SSSI), National Nature Reserve.
	-2	Medium (Regional/ District)	Site of Medium importance and rarity, regional scale and, limited potential for substitution. Viable areas of key habitat identified in the Regional/District BAP or smaller areas of such a habitat which are essential to maintain the viability of the larger whole. Regional/District significant and viable areas of key habitat identified as being of regional value in the appropriate Natural England Natural Area.
	-1	Low (Local)	Low importance and rarity, local scale. Areas identified in a Local BAP or in the relevant natural area profile.
	0	Negligible	Very low importance and rarity, local scale. Areas of habitat considered to appreciably enrich the habitat resource within the context of the Parish or Neighbourhood.

Using historic maps and online maps and government databases the sites were analysed to give them an Environmental ranking. Sites which are internationally designated with large concentrations of threatened or important species will not be considered further and eliminated from the process. Sites which contain a nationally designated area (for example a SSSI) or possess a large part of a Biodiversity Action Plan (BAP) will score a low of -3. Sites which are of regional/district interest and those of local interest will be graded -2 and -1 respectively. Sites of a very low importance and rarity, existing on a local scale will score 0.

10.2 Archaeological and Industrial Heritage Sites ***Primary***	**-3**	**Very High or High**	- World Heritage Sites; - Assets of acknowledged international importance; - Listed Buildings; and - Historic landscapes of international or national sensitivity, whether designated or not.
	-2	**Medium**	- Sites/features that contribute to regional research objectives; - Unlisted buildings that can be shown to have exceptional qualities in their fabric or historical association; - Designated special historic landscapes and undesignated historic landscapes of regional sensitivity.
	-1	**Low**	- Undesignated sites/features of local importance; - 'Locally Listed' buildings and unlisted buildings of modest quality in their fabric or historical association; and - Historic landscapes whose sensitivity is limited by poor preservation and/or poor survival of contextual associations or with specific and substantial importance to local interest groups.
	0	**Negligible or Unknown**	- Assets with very little or no surviving archaeological interest; - Buildings of no architectural or historical note; buildings of an intrusive character; and - Landscapes with little or no significant historical interest. - Sites where archaeological sites/features cannot be ascertained

In order to assess sites importance on an Archaeological and Industrial Heritage scale investigation of historic maps and internet searches were carried out. Sites which included World Heritage Sites, Schedules Monuments or Listed Buildings were removed from the consideration process. Sites which feature unlisted buildings which have clear importance or special historic landscapes, important on a regional scale were awarded -3. Sites which possess features of local importance or locally listed/unlisted buildings of moderate quality or poorly preserved which have little importance were allocated a score of -2. Sites of negligible interest with little or no surviving archaeological importance or landscapes of little interest will grade -1. Sites where the archaeological importance/features cannot be ascertained will receive a score of 0 (unknown).

5.13 Meeting the DaSTS agenda

The development of rail freight is important to the Government's DaSTS (Delivering a Sustainable Transport Systems) Agenda and a framework showing the linkages has been drawn up.

Table 8 Comparison of Designated Issues with DaSTS Goals

Reference Number	Issue	To support national economic competitiveness and growth, by delivering reliable and efficient transport networks	To reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change	To contribute to better safety, security and health and longer life expectancy by reducing the risk of death, injury or illness arising from transport and by promoting travel modes that are beneficial to health	To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society	To improve quality of life for transport users and non-transport users and to promote a healthy natural environment
1.1	Rail Network Connectivity	✓	✓			
1.2	Rail Frontage Length Available	✓	✓			
1.3	Ability to Handle Trailing Lengths	✓	✓			
1.4	Ability to create network buffer	✓	✓	✓		
2.1	Access road from site	✓	✓			
2.2	Time to access motorway network	✓	✓			
2.3	SRN link stress	✓	✓			✓
2.4	SRN junction performance	✓	✓			✓
2.5	Proximity to SRN	✓	✓			✓
3.1	Site area	✓		✓		
3.2	Topography		✓			
3.3	Warehouse configuration potential	✓	✓			
4.1	Ownership	✓			✓	
4.2	Site promotion	✓			✓	
4.3	Land allocation	✓	✓		✓	✓
4.4	Site flooding			✓		✓
4.5	Site contamination			✓		✓
6.1	Likely contribution to regional GVA	✓			✓	✓
6.2	Job creation	✓			✓	✓
6.3	Deprivation	✓			✓	✓
7.1	Sustainable commuting access	✓	✓	✓	✓	✓
7.2	Public transport	✓	✓	✓	✓	✓
7.3	dedicated transport availability	✓	✓	✓	✓	✓
8.1	Proximity to market	✓	✓			✓
8.2	Proximity to Population	✓	✓		✓	
8.2	Anchor users	✓	✓			
9	Cost of development	✓				
10.1	Environmental factors			✓		✓
10.2	Archaelogical and industrial heritage sites			✓		✓

Capabilities on project:
Transportation

5.14 Stage 3 Detailed Assessment

The top scoring sites (A map and long list of the sites are shown at the beginning of chapter 6).then went through to a final stage, which allowed the development of a more detailed understanding of their impact. There are three concurrent aspects to this Stage.

The Environmental Agency, Highways Agency and Network Rail were consulted on the shortlisted sites so that these important stakeholders could provide comments regarding the impact of the potential developments on their networks and so that the sites being suggested were considered realistic propositions which could be expected to be delivered at some point in the future.

The other element of this final stage involves undertaking traffic modelling through the Diamond Model to understand the likely on the road impact. This is discussed later in the study.

The third aspect of this stage was to revisit the actual deliverability of each of the short listed sites, and check with Local Authorities and Developers as to their status. It is appropriate to recommend sites that are being put forward for alternative uses as although they could have potentially made a suitable location for a SRFI, there is no developer interest at present.

Clearly should alternative plans come to nothing then possibly they could be reconsidered at some point in the future.

6 Long List of Sites

6 Long List of Sites

6.1 Introduction

This section provides an over view of all the sites that were identified to the study team as possible locations for Strategic Rail Freight Terminals.

The following map and table show the indicative locations and sizes of all these sites.

Figure 10 Map Showing All Identified Sites and Study Area

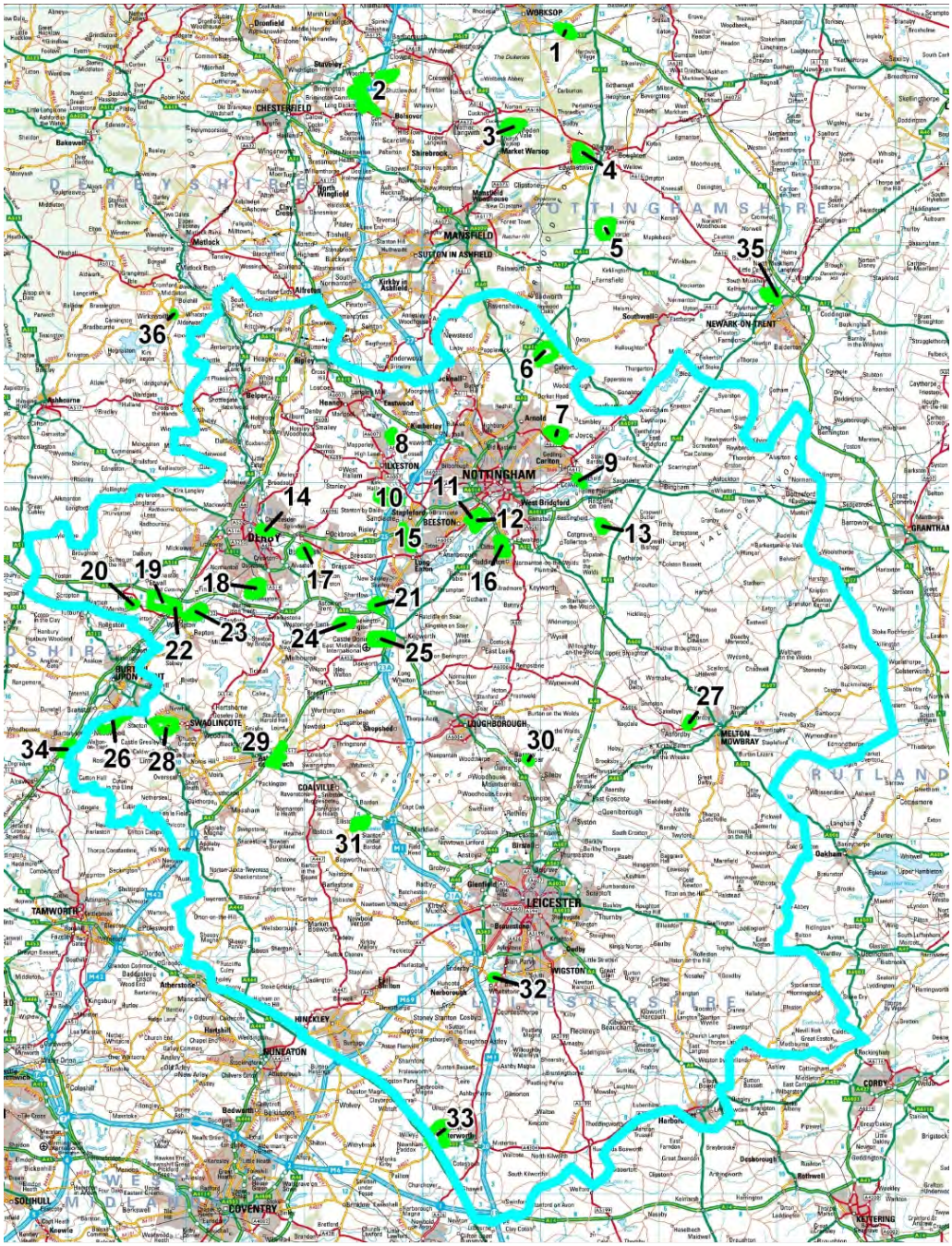


Table 9 Showing Locations of Potential SRFI Sites

	Site Name	OS Area	Grid Reference	Nearest postcode
1	East Worksop	SK	622783	S81 0UF
2	Markham, near Chesterfield	SK	450722	S44 6QL
3	Welbeck Colliery, Meden Vale, near Mansfield	SK	576700	NG20 9QG
4	Thoresby, near Ollerton	SK	634678	NG21 9PS
5	Bilsthorpe Colliery, near Mansfield	SK	655615	NG22 0DW
6	Calverton	SK	604510	NG14 6PF
7	Gedling Colliery, Nottingham	SK	614441	NG4 4PE
8	Bennerley coal site, Ilkeston	SK	474438	NG16 2YH
9	Colwick, Nottingham	SK	633401	NG4 2JT
10	Stanton Ironworks, Derbyshire	SK	471388	DE7 4QU
11	Beeston Sidings, Nottingham	SK	547371	NG90 4XY
12	Boots site, Nottingham	SK	542368	NG90 6BH
13	Cotgrave, near Nottingham	SK	653361	NG12 3HE
14	Chaddesden, Derby	SK	366359	DE24 8HX
15	Toton Sidings, Sandiacre, Nottingham	SK	487352	NG9 6LL
16	Ruddington, Nottinghamshire, Great Central Terminus	SK	567345	NG11 6NA
17	Old Textile Works, Spondon, Derby	SK	411342	DE72 3LN
18	Sinfin, Derby	SK	358310	DE24 9HZ
19	Egginton Common, Derbyshire	SK	279298	DE65 6GX
20	Hilton, Derbyshire	SK	255297	DE65 5FJ
21	Sawley Crossroads	SK	462296	DE72 2HP
22	Burnaston Cross, Derbyshire	SK	291293	DE65 6HE
23	Willington power station	SK	308291	DE65 6AS
24	East Midlands Distribution Centre, Leicestershire	SK	435283	DE74 2UT
25	Castle Donington, near East Midlands Airport	SK	465266	DE74 2AB
26	Drakelow power station	SK	238198	DE15 9NG
27	Holwell Works, Asfordby Hill	SK	725196	LE14 3RD
28	Tetron Point industrial estate (Nadins), Swadlincote	SK	281195	DE11 0BB
29	Lounge, near Ashby-de-la-Zouch	SK	374166	LE65 1JF
30	Sileby	SK	589165	LE12 8LX
31	Interlink (Bardon), Leicestershire	SK	447113	LE67 1PG
32	Whetstone, South-east Leicester	SP	561983	LE8 4JZ
33	Magna Park, Lutterworth	SP	512850	LE17 4XN
34	Central Rivers	SK	199175	DE13 8ES
35	Newark	SK	795558	NG24 2EB
36	Wirksworth	SK	289543	DE4 4FZ

6.2 Sites Outside the Study Area

Some sites which are located just outside the study area were still considered to be of benefit for consideration as they serve the outer reaches of the HMA's of Derby Nottingham and Leicester. The following sites are not felt to be suitable to serve as a SRFI for the three cities HMA area. They are briefly explored below but did not pass on to subsequent stages of the study. Although some of these locations or sites may well be worth further consideration for some form of Distribution uses including rail freight, but as briefly referred below most require investment to improve their strategic connectivity, and several are not well located to market demand.

6.2.1 Site 1 East Worksop

This is a sixty hectare site east of Worksop, which would be ideally placed to serve one or two companies. The site has direct road access to the A57, and is only 2 miles west of the A1. Its nearest motorway connection is the M1 at Junction 30, which would require a 15-20 minute drive. The site scores moderately for its shape.

Located on the Retford – Worksop rail line, the East Worksop site has no direct access to the Strategic Freight Network. Access to the Peterborough-Doncaster Joint line is gained via a combination of W7- and W6-cleared routes to Gainsborough, 20 miles away. However, connectivity at Gainsborough is not good for either north or southbound. Accommodation of 775m trains, coming from the east, appears possible, although the positioning of buildings on the site would be constrained. An alternative route for trains travelling would be via the Robin Hood Line which connects via Pye Bridge to the SFN on the Erewash Valley Line giving access via Toton.

Nonetheless this site offers a great deal of potential as a site for a small number of companies probably already located in the area, who are looking to rail freight for their transport solutions.

6.2.2 Site 3 Welbeck Colliery

One hundred hectare site north of Mansfield, with direct access to the single carriageway A60. The A632 then provides a 20-25 minute road journey to the M1 at Junction 29a. The site is located outside the study area and is not ideally located for demand.

Access to the Strategic Freight Network is poor. The colliery branch which connects to the W6 Nottingham-Worksop route provides an end-on connection into the site and will probably need reinstatement/upgrade work. There appears to be no constraint to 775m capability, or to the creation of a buffer zone. The connection at Clipstone Junction is orientated east necessitating a reversal to gain access via Worksop to either the ECML at Retford or the Joint Line at Gainsborough. In both SFN connection instances a further reversal would be required to go north.

6.2.3 Site 4 Thoresby near Ollerton

One hundred and ten hectare site north east of Mansfield. Access to the A1 is via the single carriageway A614, in 5-10 minutes. The site is located outside the study area, and is not ideally located near a centre of population.

The site is connected via an end-on connection to a freight line joining the W6 Nottingham-Worksop route, although significant investment would probably be required in order to bring the branch line back into use. There appears to be no constraint to 775m capability, or to the creation of a buffer zone. Reversal would be required at Clipstone to gain access to the ECML or the Joint Line at Gainsborough.

6.2.4 Site 5 Bilsthorpe Colliery, near Mansfield

One hundred and forty hectare site east of Mansfield with access to the A1 via the single carriageway A614 and A617, or the M1 via Mansfield (reached in 25-30 minutes). Junction 28 of the M1 currently operates at capacity, with the queuing on entries and exits to the junction at peak times. The site is located outside the study area, and is not located near potential demand.

Although connected via a rail freight line to the W6 Nottingham-Worksop route, significant investment would be likely to be required in order to bring the branch line back into use. There is an end-on connection into the western boundary of the site, which is excellent internal lengths and would have no problem accommodating 775m trains. There would also be room for a 775m buffer zone outside the site.

6.2.5 Site 34 Central Rivers

Forty hectare site located beside Bombardier's train depot on the W8 cross country line between Water Orton and Derby. Marketed as Centre 38, this site has been developed by ProLogis and is already largely let to Argos and Pirelli. The nearest trunk road is the adjacent A38 which is already under significant pressure. The M1 at Junction 24a is reached in around 45 minutes, and the M6 Toll in 25 minutes.

This site has been developed out with open access rail freight in mind but it is not realistic for this to become a large SRFI within the existing site envelope.

6.2.6 Site 35 Newark

This site is outside this study area's remit for this project but the location deserves some comment. This site could be used for a tri-modal terminal on the west bank of the River Trent where there is a disused wharf that could be brought back into use. It is understood that this wharf is currently accessible by barges able to carry about 600 tonnes and likely flows might include aggregates, agricultural products and even containers. If a container service from Hull/Immingham was considered then a barge carrying capacity of a minimum of 24teu (twenty feet equivalent units) would be possible as it is understood there are practically few restrictions to carrying high cube and pallet width containers to this wharf.

The land is owned by British Sugar who are still active in processing sugar beet into sugars for human consumption and pulps (much of which is used for animal feed). There is the route of an old siding into the plant which is south west facing towards Nottingham off the Nottingham to Lincoln line. The location lies very close to the East Coast Main Line but it is envisaged that if the site was developed for rail freight then the goods would most likely approach the site from the W7 gauge Lincoln direction, where the freight routes from Grantham to Doncaster are likely to be routed to avoid the two track section of ECML which is near full capacity with passenger trains. In the case of trains approaching from Lincoln a crossover and east facing access might be required.

The site would need a new road out to the A616 enabling easy access to the A46 Newark bypass. A major concern with this site is the propensity for localised flooding as the area is low-lying and has been the subject of much sand quarrying in the past. Although Newark is a relatively small town and the location would not be well placed to serve Derby or Leicester it is reasonably located to serve Lincoln and Nottingham. Newark has recently been chosen as a site by the A1 for new Distribution Centres for retailers such as the Currys/Dixon Group. In the view of the study team there is a reasonable prospect of a tri-modal terminal where rail could play a supporting role to water and road freight. Rail could be used by one or two local companies for niche traffic flows. The wider prospects for this promising location are the subject of another emda sponsored study currently looking at the freight potential of the River Trent.

6.2.7 Site 36 Wirksworth

Very small site of less than two hectares, located on a heritage railway. The site was identified from its status as a Strategic Freight Site under the Channel Tunnel Act. The partially operational branch is now disconnected to the cross country main line north of Derby at Duffield. However the link could be easily reinstalled. The site is backed by residential areas. Access to the motorway network is via a combination of rural A and B roads to the M1 Junction 28 in around 25 minutes. This site is not appropriate for a rail freight use.

6.3 Previously Allocated Site - therefore excluded from the study

Sites that have been allocated are excluded from the study; this will ensure that the site is not double counted in terms of allocation.

6.3.1 Site 24 – East Midlands Distribution Study / Castle Donington Power Station

Eighty hectare site located south west of Nottingham and south east of Derby. Constructed on land occupied by the former Castle Donington Power Station the site is already occupied by a number of distribution warehouses. A rail freight interchange is part of the proposals for this.

Rail Access

A freight rail line connects directly into the Castle Donington Branch which forms part of the Water Orton – Doncaster route. The rail connection is east-facing. The connection is due to be made to the network in the second half of 2010 At present it is understood from the developer that a site operator has yet to be identified.

Road Access

Local roads provide access to the A50 and M1 (with a journey time to Junction 24a of less than 5 minutes). The roads pass through developed areas on the way to this link. As this site develops, it will increase pressure on the M1 which is already under pressure and on M1 J24 which experiences queuing at peak times.

Public Transport

The site is within walking distance of Castle Donington village centre. There is currently an hourly bus service which connects the site with East Midlands Airport and Coalville.

Flooding

The site is in close proximity to the River Trent and is somewhat protected by flood defences. Despite this, according to the Environment Agency's flood maps part of the site is deemed to be at risk of flooding.

Environment

The site was formerly occupied by a power station which operated from 1958 until 1995. The area proposed for the rail link was formerly occupied by the power station cooling towers. As a result the site is of no historical or architectural interest and there are no Sites of Special Scientific Interest (SSSI's), Ramsar Sites, Special Protection Areas, Special Areas of Conservation or Nature Reserves within the site.

6.4 Site Outside the Study Area Retained in the Study

One site was identified as having such significant potential benefits for the study area that it was retained.

6.4.1 Site 2 Markham Vale

Markham Vale whilst being outside the study area is well located on the M1 to serve particularly the northern part of the study area comprising North Nottinghamshire and North Derbyshire. It has therefore been subject to further assessment as part of the site analysis process.

7 Results of ‘Go/No Go’ Stage

7 Results of 'Go/No Go' Stage

7.1 Introduction

Question	Go	No Go
Is rail network connectivity available to either the SFN or secondary network without significant upgrades to get sufficient gauge or capability?	Yes	No
Is road access to the site sufficient i.e. motorway / trunk roads can be relatively easily reached and there are no significant issues with junction capacity?	Yes	No
Is there sufficient area for a Strategic Rail Freight site i.e. >50 hectares and configuration capable of handling trains?	Yes	No
Is the site within the boundary of Sustainable Urban Extension?	Yes	No

7.2 Sites Excluded Due to Lack of Rail Connectivity

This study aims are to identify possible sites to come forward as Strategic Rail Freight Terminals; it is therefore important that the sites should be rail connected to facilitate access by freight trains. One site was identified that could not feasibly be connected directly to the rail network. It is therefore not within the remit of this study to take the site forward for further consideration. Nevertheless, the developer appears seriously supportive of improved access to rail freight from their site.

7.2.1 Site 33 Magna Park, Lutterworth Extention (Phase III)

An extension to the Magna Park Development at Lutterworth has been proposed, comprising an area of approximately 40 hectares. This existing distribution site is close to the M1 Junction 20 (to which access is achieved within 5 minutes) and the A5. It is also less than 15km from the existing DIRFT Rail Freight Terminal. It is known that existing site occupiers are already using DIRFT.

The developer is proposing to 'increase the attractiveness of the rail terminal at DIRFT'[24], to existing operators at Magna Park. They have suggested that this could be done through the funding of a dedicated and if necessary subsidised low carbon shuttle service between these two locations using specially purchased battery powered or LPG powered vehicles. This could be developed at the same time as Phase III is developed out.

7.3 Sites Excluded Due to Lack of Road Connectivity

This study's aims are to identify possible sites to come forward as Strategic Rail Freight Terminals; it is therefore important that the sites should be connected to appropriate roads to allow access to the site. No sites were designated 'No Go' on the basis of lack of road connectivity.

7.4 Sites Excluded Due to Insufficient Area

This study aims are to identify possible sites to come forward as Strategic Rail Freight Terminals; it is therefore vital to ensure that they are of sufficient area to handle sufficient volumes of freight. In some cases they may be more appropriate to develop as single user rail freight facilities.

7.4.1 Site 8 - Bennerley Coal Site, Ilkeston

This site comprises a sixty hectare former coal facility west of Nottingham. The site was excluded from considerations due to a number of factors. The site is divided into two separate portions of around 30 hectares each connected by two narrow strips of land. There are concerns about how it will be possible to install the necessary transport infrastructure through these narrow pieces of land and as a result there are concerns over the total size of the site which may be useable. The site is also located in the Green Belt and as this one of the narrowest points of the Nottingham and Derby Green Belt, it has a strategic importance. There is a Grade II* Listed former railway viaduct located on part of the site and the presence of this listed structure constrains access to the south part of the site reducing its potential usable area. The site is adjacent to the River Erewash and a large section is rated by the Environment Agency as being 'at risk of flooding without defences'. There are a number of Sites for Importance for Nature Conservation (SINCs) on the site.

[24] Email Don Morgan, Gazely

7.4.2 Site 9 - Colwick, Nottingham

Small and awkwardly-shaped fifteen hectare former Great Northern railway yards, located immediately north of where the W8 Nottingham-Grantham rail route crosses the River Trent. Access to the M1 is achieved in around 30 minutes by passing through or around Nottingham.

However, this site might have a potential as a tri-modal interchange serving the Nottingham area and it is the subject of another emda study.

7.4.3 Site 11 - Beeston Sidings, Nottingham

Ten hectare former Freightliner terminal in south west Nottingham, now used for rail engineering. Access to the M1 would take approximately 15 minutes via dual carriageways, and rail access to all routes through Nottingham and various cross country routes is possible. The route through Beeston itself is cleared to W8 gauge. However, the site is very small and constrained by residential and university land. Construction of better road links would therefore also be problematic.

7.4.4 Site 13 - Cotgrave, near Nottingham

Small, forty hectare former colliery south east of Nottingham. Rail access is from the W8 Grantham line and disused but mostly still in place (although additional investment would inevitably be necessary), and while it faces towards Nottingham the formation exists for a curve towards Grantham. Road access to the site would require a new spur from the nearby A46. The M1 is approximately a half hour drive.

7.4.5 Site 14 - Chaddesden, Derby

Small, thirty hectare site in central Derby, currently used for ballast recycling by Network Rail. The rail connection is south-facing into Derby station, providing access to W8 gauge London and Birmingham routes. The nearest road is the A52 towards the M1 (reached in 10 minutes) and Nottingham, although there is an absence of a good quality link to this road. The site itself is surrounded by the Pride Park industrial/business estate, presenting difficulties in terms of expansion or construction of improved access infrastructure.

7.4.6 Site 20 - Hilton, Derbyshire

Twenty Seven hectare site between Derby and Burton upon Trent, near the A50 and located beside the W7 Derby-Stoke rail route. The available land at the site is of a small size and awkward shape. It would be more suitable for accommodating one or two companies rather than a strategic freight terminal. The M1 can be reached in 15 minutes, and the M6 in 35 minutes.

7.4.7 Site 27 - Holwell Works, Asfordby Hill

Small, twenty hectare site west of Melton Mowbray with direct access to the W7 Syston and Peterborough railway, part of the proposed Felixstowe-Nuneaton W10-gauge upgraded freight route. Going east, the Midland Main Line north and south can be reached at Syston and to the west the East Coast Main Line south at Peterborough (northward access would require reversal). The A6006 provides access to the dualled A46, whereby the M1 can be reached in just over 30 minutes.

7.4.8 Site 28 – Tetron Point

Tetron Point was initially understood to have a large (over 100 hectare) area available for development. It has good rail connectivity via an existing line to the Water Orton - Doncaster Route at Branston Junction with good access to north and south. Access to the rail sidings for all users would be via the public highway and this adds considerably to the unit cost of rail freight (East Midlands Distribution Study: Nov 2006, paras 4.30-4.32). However, road connectivity to the strategic road network is not of a comparable standard, via the A444 through Burton on Trent to the A38 or cross country to the M42 / A42. During the course of the study it has been clarified that whilst around 42 hectares of the site has been allocated for industrial use only 8 hectares has not been built out. Most of the site has been allocated for community and sporting uses and hence is not available to become a SRFI.

7.4.9 Site 30 - Sileby

Very small, ten hectare site south east of Loughborough on the W7 Midland Main Line, with road access to the M1 in around 20 minutes via Loughborough or Leicester.

7.4.10 Site 32 - Whetstone, South-East Leicester

Very small, ten hectare site in south Leicester close to the M1 at Junction 21 (approximately a 5 minute drive). Rail access is to the W7 Birmingham to Peterborough cross country line (part of the proposed Felixstowe-Nuneaton W10-gauge upgraded freight route), providing links to the West Coast Main Line at Nuneaton and the Midland Main Line at Leicester. The land is designated as part of the Soar Valley South Green Wedge and a significant part of the site is within the floodplain of the River Soar. The potential road link (the B582) is a busy single carriageway road.

7.5 Sites Excluded Due to Being Within the Boundaries of a Sustainable Urban Extension

The steering group asked to ensure that no site was within a new Sustainable Urban Extensions. The latest information provided by the Housing Market Areas was reviewed and as such one site was removed from the process.

7.5.1 Site 10 – Stanton Ironworks

The local road network, providing access to the M1, is highly urbanised and unsuitable for HGVs in that it comprises largely unclassified roads with poor alignment and capacity which pass through residential areas. Access to the site could be improved through a direct link to the A6007 but this route is also not of a high standard and is largely residential in character. In addition, this route links with the A52 trunk road which is heavily congested at peak times and to M1 Junction 25 which also has significant congestion at peak times, with ramp metering employed. The widening of the M1 between J25 and 28 is likely to add further traffic volumes onto this junction. A new motorway junction could provide direct access to the site but is unlikely to gain approval from the Highways Agency and would involve a substantial infrastructure cost.

Rail access to the site is via a short spur branch directly onto the W8 Erewash Valley Line, which is being upgraded as part of Water Orton - Doncaster to W12 loading gauge by 2014. The connection is south-facing, which suits direct access towards Felixstowe (assuming that the MML is upgraded between Syston and Trent) and Southampton via the West Midlands. Northbound moves would require a reversal at Toton. There is sufficient space on-site to accommodate 775m trains, and there would be capability to create a buffer by taking over the branch as far as the connection to the Erewash Valley Line.

The site is earmarked as a Sustainable Urban Extension in the Greater Nottingham Aligned Core Strategies Option for Consultation document published in February 2010. Owing to its lack of easy connectivity to the trunk road network and the high costs of developing this brownfield site, this appears to be a more appropriate and viable use of this site.

A substantial area of employment land is also identified within the masterplan proposals for the site, and the masterplan has been designed flexibly to allow the provision of a rail based distribution facility of circa 500,000sq ft. It is understood that a planning application based upon the current masterplan proposals will be submitted in outline during 2010, and that the landowner is actively exploring tenant potential.

8 Consultation Summary

8 Consultation Summary

8.1 Introduction

A wide range of consultation was undertaken for this project, with both governmental organisations and the private sector. This section contains a brief summary of the consultation undertaken.

It includes information on the comments which we have received from key stakeholders, interested parties and Local Authorities. The data has enabled the project team to conduct further analysis of the most likely sites.

8.2 Consultation with Highways Agency, Network Rail and Environment Agency

Consultation has been undertaken with the Highways Agency and Network Rail, regarding the sites that are graded highest from the Framework Analysis (Stage 2) process.

The Environment Agency was also asked to comment on the same sites.

The combined summarised comments of the consultancy meetings with the Highways Agency, Network Rail and others follow below. It must be highlighted that these are not formal responses:

8.2.1 Site 2 – Markham Vale

Highways Agency: Raised issues with the capacity of M1 Jct 29a, and that its design may not be favourable for improvements. Further examination of the junction has revealed that improvements may require third party land and a new structure under the M1. This is clearly a potential risk area.

Network Rail: Connectivity potential to the SFN network was reviewed with connectivity being good into the section of the Water Orton - Doncaster route between Tapton and Aldwark Junctions with routing options both north and south.

There was also agreement on the rail connectivity to the site (and hence tolerance to reduced rail frontage) recognising that the branch would probably require fettling (fettling is an industry term used for re-instatement or 'making suitable for use again') as a minimum and quite possibly full reinstatement but that this would not be a fundamental obstacle. The branch could act as the 775m off network buffer and that the site looked fine for 775m operations despite its slightly irregular shape.

8.2.2 Site 12 – Boots

Highways Agency: Raised concern over the potential impact on the A52.,and that this could be examined through the Agency's A52 Corridor Study. We confirmed that the problems on the A52 and potential timing of A453 scheme would be considered further.

Network Rail: Agreed that as the site is south of Lenton Junction SFN connectivity would be at Trent but options then existed for both north and southbound routing via Water Orton - Doncaster. In the longer term MML electrification and gauge assists with connectivity to Felixstowe - Nuneaton at Syston and Channel Tunnel. There is however concern at capacity issues between Trent Junction and Lenton junction. It is noted that trains from Nottingham to both Sheffield and the Robin Hood line would have to be separated prior to the Boots site.

It is noted that the rail frontage was adequate to support a south bound connection which is all that would be required on this site. Considered that the site appeared adequate for both 775m buffer and 775m on terminal capability.

Broxtowe Borough Council/Nottingham City Council: Both councils are currently proposing housing and employment development on their respective parts of the site in their Aligned Core Strategies. Neither council wishes to see the site promoted as a SRFI.

8.2.3 Site 18 - Sinfin Moor

Highways Agency: The Agency raised some concern about the impact of this site on the A50 on the A38/A50 junction and M1 Junction 24. The site is likely to have less impact on the SRN than the sites at Eggington and Willington, but will still have some adverse impact and this would therefore need to be looked at.

Network Rail: SFN connectivity was considered to be a difficult issue. The Framework Assessment Potential would improve by 2026 when Stenson Junction - Clay Cross via Derby is gauge cleared. However, it will never deliver more than a north facing connection onto SFN with no easy access to Felixstowe, Channel Tunnel or Southampton without a reversal.

Rail frontage and the fact that the site has an existing rail connection (albeit it may require fettling or renewal) is fine

775m of network buffer can be provided by the branch. 775m capability on site is fine

8.2.4 Site 19 – Eggington

Highways Agency: raised serious concerns over the ability of the site to access the SRN. There may be both policy and standards issues to overcome which will need further consideration in the study in order to determine the level of risk around site suitability and viability in terms of highway infrastructure.

Network Rail: agreed that in the short term SFN connectivity was direction limited although there is a view that the Derby - Stoke line is clear east of Blyth Bridge which would make the route clear from the site to North Staffs Junction. Routing on Water Orton-Doncaster is currently restricted to northbound. Trains needing to go in the Birmingham direction would need to run to Toton via the Castle Donington Branch and run round. In the view to 2026 Network Rail confirmed that the Derby - Stoke line is emerging as the highest priority for gauge clearance (funding permitting) in Control Period 5 (CP5). This then gives connectivity via Stoke to the WCML with access to the North West and central Scotland. Equally if MML electrification proceeds with parallel gauge work Trent to Syston gives direct routing to Felixstowe and the Channel Tunnel.

It is agreed that the rail frontage on this site is more than adequate to support multi directional (east and west) connections to the site. 775m capability was not seen as a problem either in terms of the network buffer or on site capability.

8.2.5 Site 23 – Willington

Potential local highway network routing issues – will have implications on SRN impact and stance of HA.

Network Rail: There is network connectivity direct into the Castle Donington branch (part of Water Orton - Doncaster) but only east bound directionality. For trains needing to go either in the Birmingham direction or to the northwest via the WCML would need to travel first to Toton and then run round. It is regarded that this position would improve after 2026 with Trent to Syston assumed gauge cleared. However the SFN connectivity off the site would remain unchanged.

It would not be possible to connect into Water Orton - Doncaster on the Derby - Birmingham main line between Stenson Junction and North Staffs Junction. 775m capability was agreed to exist both in terms of the off network buffer and on site.

8.2.6 Site 25 – Castle Donington near East Midlands Airport,

Highways Agency: Raised concern over the indicative costings that have been presented by the developer relating to the infrastructure works at M1 Jct 24. Also raised concerns that the proposed infrastructure may not address the delay problems at M1 J24 without the major scheme that has been considered by the Agency but which is not programmed.

Network Rail: The ranking for rail connectivity was agreed given that the site is neither rail connected nor has a rail frontage. However Network Rail agree that if the rail link to the Castle Donington branch was provided then SFN connectivity would be excellent. It was agreed that the 775m off network buffer and on site capability was not a problem on this site.

A key concern was raised that *Planning, Environmental* (flood plain issues) and *Cost* scoring of this site have been indicated in such a way that they may understate the challenges associated with the site. It was regarded that the costs of rail access to this site are likely to be the highest of any site due to the cost of construction of a 3km railway which will include a bridge over a motorway.

8.2.7 Site 26 – Drakelow

Highways Agency: The Agency asked for the West Midlands RNR (Route Network Report) to be looked at for issues over link stress and junction operation as the site would impact on the A38 in the West Midlands. It has been indicated that we are already in discussion with JMP Consultants on A38 issues.

Network Rail: SFN connectivity was as per Tetron Point. Assuming that the south - west chord line is available from this site, the south to east chord has no value.

It was agreed that as the site is already rail connected (albeit the connection may require fettling/reinstatement it makes this site work well in terms of rail frontage

Again it was agreed that the 775m off network buffer and 775m on terminal capability would be no problem at this site.

8.2.8 Site 28 – Tetron Point

Highways Agency: Asked for West Midlands RNR to be looked at for issues over link stress and junction operation.

Network Rail: Supported the ranking on network connectivity to the SFN via the relatively short distance on the Leicester - Burton line to Branston Junction. Triangular junction here gives good connectivity in all directions on Water Orton - Doncaster with the added benefit that Wichnor Junction - Lichfield Trent Valley has been confirmed W12 clear giving northbound access onto the WCML. Added benefits accrue in terms of connectivity to Felixstowe and the Channel Tunnel with MML electrification and gauge enhancement in the 2026 scenario

Agreed that although the connecting branch looks to require complete reinstatement this should not prove a major obstacle and it was noted that this is west facing. The potential level crossing issue on the connecting branch was highlighted and it was considered that this would be dealt with either by bridging or a road diversion as part of the development. A 775m train would need to be split given the length of the siding. .

8.3 Consultation with Regional Bodies

Consultation was held with both the East Midland Development Agency (emda) and the East Midlands Regional Assembly, in relation to particular aspects of the study. It should be noted that EMRA has now been replaced by its successor body, East Midlands Councils (EMC) (as of 1st April 2010)

8.3.1 emda – Impact on Businesses and Employment

Additional consultation was held with emda in relation specifically to the impact on businesses of the development of a SRFI in the study area. emda highlighted the importance of identifying sites that could help support regional strategic economic objectives, and meet the needs of business. As such it was important to understand where there was a concentrated demand from businesses.

It was highlighted that the area just top the north of the main study area had been brought back into productive use using European funding. (including Site 2 Markham Vale).

emda highlighted the very different employment characteristics of the three city areas. Broadly these are:

Derby:

- Focused on skilled manufacturing (particularly transport technology) ; and
- Broad logistics market.

Leicester:

Logisitics sector is important.

Nottingham:-

The city is designated as a 'Science City' and has a variety of industries including pharmaceuticals. It was highlighted that the second market that should be considered is retail in the three cities in relation to the increasing importance of retailers using rail freight for trunking. As the 6Cs has been designated a growth point, the populations and retail will grow.

This report was felt to be critical in informing the wider infrastructure vision.

8.3.2 emra – Policy Context

emra (now East Midlands Councils) provided detailed information regarding the policy context that this study sits in. Highlighting the importance of DaSTS (Delivering a Sustainable Transport System), there are five DaSTS studies being undertaken in the East Midlands these are:

- Growth Connectivity in 6Cs Study;
- Lincoln, Grantham, Gainsborough Growth Connectivity Study;
- Northampton 'Arc' Growth Study;
- Update and extend Landuse Transport Model – Ptolemy; and
- Freight Study to update the State Freight Study (2002).

Other regional alternative mode studies that are being undertaken include:

- Spalding Rail Freight Terminal – specialist rail freight connectivity for food sector; and
- River Trent Studies – use of the River Trent for freight, aggregates but also containerised traffic.

It was also highlighted that a revised draft of the East Midlands Regional Spatial Strategy Partial Review was submitted to the CLG on 26th March

8.4 Local Authority

Engagement has been sought with all the local authorities associated with the Nottingham, Derby and Leicester Housing Market Areas. Regular consultations have been held with Local Authorities whose boundaries include some of the most promising sites.

8.5 Consultation with Railway Representatives

Consultation was sought with both the Rail Freight Group (RFG) and Freight on Rail.

8.5.1 Rail Freight Group

The RFG highlighted the importance of developing freight terminals which are deliverable. Three suggestions to ensure this are:

- Private Sector take the lead;
- 'Follow' road based haulage communities; and
- Link up with good land use planning.

The importance of accessing the North South Axis for rail freight was also highlighted, as was the importance of accessing new markets including Trans Pennine and Short Sea Shipping.

8.6 Potential Users

As part of the study a number of companies who produce materials of sufficient volume in the region and may be interested in using Rail Freight were contacted to establish the following:

- Current operational details and use of Rail Freight;
- Interest in using Rail Freight in the East Midlands;
- Regular runs which may be suited to use of Rail Freight;
- Potential interest in using any sites shortlisted for a Strategic Rail Freight Distribution Centre;
- Products which companies may be interested in transporting; and
- Any minimum size requirements needed in a Rail Freight terminal.

Investigations revealed a number of trends throughout the companies contacted. There is a general enthusiasm for rail freight and the benefits it can bring but a varying degree of commitment to actually using it and introducing extra services to the East Midlands region. Reasons against this include cost and lack of suitable rail wagons for transporting individual products. All of the companies spoken to have regular runs from a variety of locations in the UK (and in some cases Europe) to locations in the East Midlands but generally, the longer the distances involved, the more interested companies would be in replacing road services with rail. Some companies have expressed the opinion that the place of a rail freight terminal in the East Midlands is closely related to securing slots to operate direct to Continental Europe through the Channel Tunnel (Nestle Waters UK and STVA), as the longer the potential run of each freight train, the more cost effective it becomes against respective road transport.

All of the companies spoken to listed location as an important consideration in their potential use of any Strategic Rail Freight Terminal. All interested parties insisted that this must be within 10 miles of their respective sites. Most also regarded the range of facilities, ability to handle their different type of products and ease of loading/unloading as more important than the potential size of any particular site.

Generally, companies already using rail freight in the UK were more interested in possible use of potential Strategic Sites in the East Midlands rather than those who did not. Companies such as this include STVA, Nestle Waters UK and Stobarts. A barrier to using rail freight to/from the East Midlands was identified as not being currently cost effective (Boots, NYK Logistics)

There was a trend in evaluating preferred site locations from many of the companies. Many expressed an interest in sites along the A50 corridor (Futaba, STVA) while others preferred sites located in a more central location in the region, Bardon, Leicestershire (Nestle Waters UK and Stobarts), Nottingham (Boots) and East Midlands Distribution Centre, Castle Donington (Malcolm Group)

Most companies contacted have policies and targets regarding reduced environmental impact (Boots, STVA, Malcolm, Stobarts and Nestle Waters UK) while some have specific policies on increased rail use where possible (STVA, Malcolm, Stobarts)

Many interesting comments were collected from companies on the operational issues surrounding transporting goods by rail freight. These include a lack of suitable wagons for transporting desired loads (Rolls Royce and Boots), concerns over delays in train routings and journey times, especially to Scotland (Boots) and possibilities of empty backloads (STVA).

8.7 Consultation with Developers

Engagement was sought with many of the Developers and Land Agents either active in rail connected warehousing or in the East Midlands. This consultation was taken to achieve two clear aims:

- Overview of sites promoted in the area; and
- Detailed information on the sites in the area.

The following developers were spoken to and a summary of comments are displayed below. Full details can be found in the Appendix.

Gazeley

Discussions were held over the site at Lounge (site 29). It was also explained how Gazeley have already developed one Rail Freight Site at Stanground, near Peterborough.

King Sturge

The site at Markham Vale was discussed and in particular the ability of the site to serve the Nottingham and Derby area. It was also discussed how the site would be utilised in the national context and the opportunities of having more than one site located within the same catchment area.

St Modwen's

Discussions were held regarding the site at Hilton (Site 20) and limited comments were provided.

WB Developments

Discussions were held regarding the site at Sawley Crossroads (site 21), Bardon (Interlink) (site 31) and the East Midlands Distribution Centre (EMDC) which Wilson Bowdon used to own. It was regarded that Sawley Cross, although not rail connected could be served by EMDC. The site at Bardon was originally designed with rail connectivity in mind but has now been designed to preclude such a scheme.

Helios Slough

Helios Slough has no interest in any of the sites within the study area and do not wish to consider developing any.

Prologis

The developer's enthusiasm for developing rail freight was discussed along with the type of services which could operate to/from the site. Customers of Prologis are extremely keen where possible to use rail freight in order to avoid the congested motorway network.

Clowes Developments

The developer confirmed that EMDC (site 24) is anticipated to be connected to the rail network in late 2010. However, no operator has yet been signed up to use the site.

Lambert Smith Hampton

Discussions concerned the site at Tetron Point (site 28) and the difficulties associated with bringing this forward for rail. It was highlighted during the discussions that most of this site has now been allocated for sporting uses.

Savills, Holmes Antill, Lawrence Walker Ltd, Roxhill Developments

Discussions took place in a dedicated meeting to discuss the site at Castle Donington (site 25). A technical analysis was discussed on how the rail and road links to the site would be constructed and it was also explained how the scheme would be delivered. The viability of the site was also discussed

Capabilities on project:
Transportation

Savills, Severn Trent Property, Property Planning Consultancy

The site at Etwall Common (site 19) was discussed. The configuration was examined along with its potential to be delivered as a SRFI. Discussions took place on how the scheme would fit into the context for national and international distribution. Job creation and potential clients of the site were also analysed.

Barton Willmore

A letter was received by *emda* discussing the merits of the site at Burnaston Cross (site 22) in the context of the Issues and Options Draft of the South Derbyshire District Council Core Strategy.

9 Results of the ‘Framework Analysis’ Stage

Capabilities on project:
Transportation

9 Results of the 'Framework Analysis' Stage

9.1 Introduction

All the remaining sites were put through a framework analysis, where all their facets were compared to each other. This chapter highlights the results of this process and those sites that were excluded by this process are profiled. Originally 16 sites out of 36 were put through this analysis. In the light of consultation following the project workshop on March 3rd 2010, a 17th site was taken forward for framework analysis. As will be seen 9 of the sites scored lower in their analysis and have not been taken through to the 'short list' stage. The sites which are highlighted in green 'Go' under the analysis sheet below have been authorised to proceed for further investigation. Site 24, East Midlands Distribution Centre is not considered in the matrix below as the site is already partially constructed and has been fully planned out.

Capabilities on project:
Transportation

Figure 11 Go/No Go Results Matrix

	Site Name	Go / No Go	Score									Total
			Rail Access	Road Access	Site Design Opportunities	Planning	Contribution to Regional Growth	Commuting	Demand	Environmental	Cost	
Site 1	East Worksop	No Go										
Site 2	Markham, near Chesterfield	Go										
Site 3	Welbeck Colliery, Meden Vale, near Mansfield	No Go										
Site 4	Thursbury, near Ollerton	No Go										
Site 5	Bilsthorpe Colliery, near Mansfield	No Go										
Site 6	Calverton	Go										
Site 7	Gedling Colliery, Nottingham	Go										
Site 8	Bennerley coal site, Ilkeston	No Go										
Site 9	Colwick, Nottingham	No Go										
Site 10	Stanton Ironworks, Derbyshire	No Go										
Site 11	Beeston Sidings, Nottingham	No Go										
Site 12	Boots site, Nottingham	Go										
Site 13	Cotgrave, near Nottingham	No Go										
Site 14	Chaddesden, Derby	No Go										
Site 15	Toton Sidings, Nottingham	Go										
Site 16	Ruddington, Nottinghamshire, Great Central Terminus	Go										
Site 17	Old Textile Works, Spondon, Derby	Go										
Site 18	Sinfin, Derby	Go										
Site 19	Egginton Common, Derbyshire	Go										
Site 20	Hilton, Derbyshire	No Go										
Site 21	Sawley Crossroads	Go										
Site 22	Burnaston Cross, Derbyshire	Go										
Site 23	Willington power station	Go										
Site 25	Castle Donington, near East Midlands Airport	Go										
Site 26	Drake Low power station	Go										
Site 27	Holwell Works, Asfordby Hill	No Go										
Site 28	Tetron Point industrial estate (Nadins), Swadlincote	No Go										
Site 29	Lounge, near Ashby-de-la-Zouch	Go										
Site 30	Sileby	No Go										
Site 31	Interlink (Bardon), Leicestershire	Go										
Site 32	Whetstone, South-east Leicester	No Go										
Site 33	Magna Park, Lutterworth	No Go										
Site 34	Central Rivers	No Go										
Site 35	Newark	No Go										
Site 36	Wirksworth	No Go										

Key

	3
	2
	1
	0
	-1
	-2
	-3

9.2 Sites Excluded Through Assessment Process

The grading system was applied to the sites and the following do not meet the requirements to be a Strategic Rail Freight Terminal compared with some of the other sites identified.

Each of the sites is described with a small commentary on why it is believed they are not suitable as a Strategic Rail Freight Terminal but some may have potential for other uses. This is for a variety of reasons as set out in the text below.

9.2.1 Site 6 Calverton Colliery

Description: One hundred and sixty hectare former colliery near the village of Calverton, north of Nottingham. Access to the M1 at Junctions 26 or 27 is achieved in twenty minutes via local roads.

However, there is extensive congestion on the local road network, and this is likely to affect the journey time to the SRN. The M1 is affected by delays from the local road network, and there is little if any spare capacity – this was noted at the 2001 Broxtowe Local Plan Inquiry where development in the vicinity of Junction 26 was removed partly due to these issues.

The site at Calverton connects into a currently disused railway which would need to be reinstated at developer expense. This colliery branch then connects with the W6 Nottingham-Worksop route. Network Rail was concerned about the colliery branch which connects into the single line section of the Robin Hood line and there are capacity issues on this route. Equally, traffic from this site which, as with the Boots site, would need to go to Trent Junction, would get embroiled with Nottingham - Sheffield and Robin Hood line services as far as Lenton Junction and would have the same potential capacity issues as the Boots site between Trent and Lenton Junctions.[25]

Commentary: Calverton Colliery is remote from both the strategic rail freight network and strategic road network, coupled with a lack of interest from private sector means that this site would be challenging to deliver. Network Rail is unwilling to accept freight of any sort on to the single tracks section of the Robin Hood Line so this site is not an option.

9.2.2 Site 7: Gedling Colliery

Description: One hundred hectare former colliery north east of Nottingham with access to the M1 at Junction 26 via the Nottingham ring road (A6211, A6514, and A610) in 20 minutes. Part of the site is an Open Space, known as Gedling Colliery Park

The site has a dedicated branch off the W8 Nottingham - Grantham line. Routing to the Strategic Freight Network would be via Nottingham to Trent Junction. There could be potential capacity issues through Nottingham station area. There is an end-on connection which has no obvious limitations, and the length of rail within the terminal appears to be 1-2 km so presents no difficulties in accommodating 775m trains. The fact that the site is served by a dedicated branch may offer some opportunities to create the 775m buffer zone although it is noted that the branch runs through predominantly built up areas which may be disadvantageous to trains waiting to go into the terminal, particularly at night. However, there is extensive congestion on the local road network, and this is likely to affect the journey time to the SRN. The M1 is affected by delays from the local road network, and there is little if any spare capacity – this was noted at the 2001 Broxtowe Local Plan Inquiry where development in the vicinity of Junction 26 was removed partly due to these issues.

Commentary: This site is in an urban area and does not have appropriate road access and whilst appearing having its own branch line this has been disused for some time. This means that the site does not lend itself naturally as a site for a SRFI. Furthermore, in the 'Greater Nottingham Aligned Core Strategies' (Options for Consultation) this site has been identified for Housing (1,120 Houses), and a new 'appropriate scale' retail centre[26].

9.2.3 Site 15: Toton Sidings

Description: Seventy five hectare site in south west Nottingham, partially in use for engineering by DB Schenker. Road access to the M1 Junction 25 is one mile away via the dual carriageway A52. However, the A52 is heavily congested at peak times in the vicinity of the site and providing a high quality access to the site could be difficult.

Toton has access to the W8 Erewash Valley Line, which is being upgraded as part of Water Orton - Doncaster to W12 loading gauge by 2014. The Erewash Valley line connects at both ends to the Midland Main Line, at Clay Cross, south of Chesterfield, at its northern end and at Long Eaton at its southern end. The site is effectively split in two by the four track railway, the western side being more substantial. Movements between the different sides would be practically impossible and therefore it is likely that only the western part would be used for rail freight. On the western side it would be possible to achieve 775m lengths both within the site and as an external buffer.

---

[25] ~Network Rail Consultation

[26] Greater Nottingham Aligned Core Strategies (Options for Consultation) February 2010 http://www.nottinghamcity.gov.uk/CHttpHandler.ashx?id=16091&p=0

Network Rail were highly concerned that this 'split site' cannot be treated as a single site due to them being dissected by the Erewash Valley line i.e. the presence of the operational railway prevents them from acting as a single cohesive site. Therefore this considerably reduces the land area[27].

Commentary: The rail access to this site is satisfactory, although it removes the long term future for both traction servicing and much needed long siding facilities for train storage. Therefore this site would be important in supporting several of the other sites perform efficiently in terminal roles. However this site is not a feasible SRFI owing to being very close to the existing residential areas makes it more difficult to be able to mitigate the noise and light implications of the potential 24 hour working that a rail terminal would require. Finally, a significant part of the site is being considered for residential development in the Greater Nottingham Aligned Core Strategy.

9.2.4 Site 16: Ruddington, Nottinghamshire, Great Central Terminus

Description: This is an 85 hectare site south of Nottingham at the northern end of a surviving section of the Great Central line, which runs from the W7 Midland Main Line at Loughborough to the southern edge of the Nottingham conurbation. Part of the area is currently designated as a nature reserve.

The rail connection would be via the privately owned Great Central Railway (North) to Loughborough and thence via the Midland Main Line. The proposed MML Strategic Freight Network upgrade or electrification between Syston and Trent Junction would assist SFN connectivity. The rail connection at the site is end-on. Trains of 775m length could be accommodated because the site is approximately 2km in length. The external buffer is probably achievable, particularly if the reinstated branch towards the Great Central Railway heritage centre is included. The site can access the SRN at M1 Junctions 24/25/26, which all have a journey time of around 20 minutes, although as noted previously there are significant capacity issues on the local road network on the routes to these SRN junctions. Part of the area is currently designated as a nature reserve.

Commentary: This site is a Greenfield site surrounded by the built up areas of Ruddington, Clifton and West Bridgeford. At the core of the site in a Great Central cutting which is now the Wilwell Farm Cutting[28] a SSSI and Local Nature Reserve, this site would therefore be challenging to deliver through the planning system as it is easy to envisage that there could be public opposition to the site.

Whilst the site is adjacent to the A52, at this point the A52 is at capacity and there is no easy way of accessing the site the cost of reinstating the track is likely to be high. Whilst in the long run it could have good connectivity through tram extensions, at present it has poor public transport connectivity.

9.2.5 Site 17: Spondon

Description: This is a 45 hectare site in East Derby, on the W7-gauge rail route between Loughborough and Derby.

The nearest Strategic Freight Network point of contact is Trent Junction, approximately 7 miles distant. For northbound routes, trains would travel from Trent Junction via the Erewash Valley line. In order to access lines to Felixstowe, the Midland Main Line would need to be gauge cleared or electrified. Access to the W8-gauge Castle Donington Branch and beyond would require reversal at Toton. The site has a west-facing connection. There is insufficient internal length to accommodate 775m trains without them being split in two, although the buffer length from the network connection to the site boundary exceeds 775m and so trains could be held here. Access to the M1 can be achieved in around 10 minutes via the A52.

Commentary: This site will not have appropriate road access without a new river crossing to connect the site directly to the A6, whilst this does give good connectivity to the A52 it is likely to be prohibitively expensive for any developer. The site does not connect directly onto the SFN. No private sector interest in this site.

9.2.6 Site 22: Burnaston Cross

Description: This is a 30 hectare site between Derby and Burton upon Trent, located next to the junction of the A38 and A50. A recent planning application for strategic distribution covered an area measuring 42 ha (including land to the south of the railway line to be used for structural landscaping and a balancing pond). The M1 at Junction 24a can be reached within 15 minutes via the A50. The use of rural local roads is likely to be required with the site accessed from an existing roundabout on the B5008 Etwall Road. The local highway authority, Derbyshire County Council, raised no objection to the application for a strategic distribution site in this location.

There are a number of issues concerning the A38/A50 Junction close to the Toyota site at Burnaston. Depending on when any new development causes an increase in traffic volumes there could be significant issues with road standards or peak time

[27] Network Rail Consultation
[28] http://www.nottinghamshirewildlife.org.uk/nature-reserves/wilwell-farm-cutting-lnr-sssi/?/reserves/wilwell_farm.htm

volumes. An improvement scheme involving the signalisation of the Junction has been developed and is anticipated to be funded by developers following the South Derbyshire housing sites Public Inquiry. This is expected to be in 2016.

The nearest Strategic Freight Network route is the northeast-southwest cross country main line. Access is also possible to the Derby - Stoke line, which has been proposed for an upgrade to SFN status. In fact, Derby - Stoke is already clear to W12 from North Staffs Junction - Blythe Bridge, so eastbound SFN access from the site is good. However, if Burnaston Cross were to operate as a stand-alone site separate from Egginton Common it would not support multiple direction connectivity due to short rail frontage. Within the site, 775m trains would be required to split and there is also insufficient buffer room beyond the site to accommodate complete trains.

Commentary: The site configuration, gradient, size, even at 42ha and rail frontage do not support its use as a SRFI. It would be suitable for a one or two company development with perhaps one rail siding but it is suggested by the project team that rail connectivity could be provided by a private road connection under the A38 to Site 19 Egginton Common. This would help to more evenly distribute traffic flow for this site and help ensure site viability.

9.2.7 Site 21 Sawley Crossroads

Description: Sixty hectare site south west of Long Eaton.

The site lies adjacent to the A50 and close to a grade separated junction which also serves the East Midlands Distribution Centre. Development of the site would result in an impact on the A50 but the key impact could be on M1 Junctions 24a, 24 and 23a which currently experience congestion in peak periods. The Highways Agency has been examining improvements for these junctions, but there is no programmed scheme

There is no direct rail access to this site but it could be connected to the Castle Donington Branch which forms part of the committed SFN network. Land would need to be acquired to achieve this connection into the Castle Donington Branch (circa 400m direct) and the developer has indicated that although it may well be desirable to create a triangular junction for access in both directions. However it would be impossible to pursue the triangular junction for this site and for Site 25 if both were pursued due to their proximity to each other and the inability to accommodate the associated signalling and signalling overlaps..

Commentary: Sawley Crossroads does have developer support, but would require significant rail infrastructure. It appears that the site could be within the functional flood plain and therefore would the sequential test as outlined PPS25 to ensure that it is the best site for this purpose of development in the area.

The site could potentially be used for distribution. It could be rail connected off the Castle Donington branch but the rail connections would be very close to the M1 and Site 25. The nature of rail connections, require sufficient space to allow for safe operating practice. Network Rail have brought to our attention that it would be impossible to connect both Sites 21 and 25 to the national rail network. As Site 25 is in the short list of chosen sites for this study this factor needs to be carefully considered. Site 21 also needs reassurance from the risk of flooding.

9.2.8 Site 29: Lounge

Description: This is a 30 hectare site east of Ashby-de-la-Zouch. The site is adjacent to the A42 which provides linkage to the M1 at Junction 23 (10-15 minutes) and the M42 (5-10 minutes). A14 Junction 13 (adjacent to the site) already operates with severe capacity issues at present, which will be exacerbated in the future. There are no plans at present to improve this junction.

The site connects into the W6 Leicester - Burton freight only line. The west-facing existing connection would enable traffic to be routed to Branston Junction and then onto the Water Orton - Doncaster Route. Considerable lengths of the Leicester - Burton line may require upgrading at developer expense to enable access to the Strategic Freight Network. The requirement for buffering would constrain trains to 500m length, since the distance from network connection to the railhead is 1km in total.

Commentary: The Lounge Site appears to have great potential for a single user (or small number users). However, due to its relatively close proximity to the existing and successful, Hams Hall and Birch Coppice (BIFT) Rail Freight Terminals along the M42 / A42 and scale, it is unlikely to be viable as an open access SRFI. It does have good rail freight access if the gauge issues on this route are resolved. The project team is inclined to agree with the developer's Transport Assessment that the proposed 2 trains per day[29] for this site would be sensible and therefore could provide a valuable location for single user. Further discussion took place with the developer in the latter stages of the study about the site being expanded to cater for 5

[29] GAZELEY AND UK COAL LTD - LOUNGE DISPOSAL POINT - LOCAL DEVELOPMENT FRAMEWORK - Core Strategy SUBMISSION - Section Rail Transport 4.20

trains a day. It is considered that the site could make a good rail connected terminal but is not suited to be a major SRFI, capable of handling 10 or more trains a day.

9.2.9 Site 31: Interlink (Bardon), Leicestershire

Description: An existing 60 hectare site north-west of Leicester with planning permission for B8/B2 uses for the whole of its area.

The site connects into the W6 Leicester - Burton freight only line. An existing south-east-facing quarry connection could be used, although this would need to be upgraded to a triangular junction in order for traffic to be routed to Branston Junction and then onto the Water Orton - Doncaster Route or via Leicester onto the Peterborough - Nuneaton route. The full length of the Leicester - Burton line may require upgrading at developer expense to enable access to the Strategic Freight Network. Site constraints restrict both the internal accommodation length and external buffer size to less than 775m. The site is located close to M1 Junction 22 (5 minute journey time). There are no real issues with either local roads or this M1 junction at present, but future housing growth in the area is likely to place severe pressure on the highway network in the area.

Commentary: It is understood from the developer that there is no more capacity at the site, the final area having been sold to handle waste. It has been clarified from both the developer and the local authority that the initial site plan did include a rail freight terminal, and it is understood from our demand survey that there could be demand for rail freight access at the site. This location is also at the heart of the Golden Triangle so could be advantageously located for an open access SRFI for Leicester.

However, without purchasing additional land, then this site is unlikely to be available to develop a SRFI. If land was to become available it could perhaps provide a valuable route for businesses that is currently on the site and potential to serve the wider Leicester area.

10 Results of the Short List Stage

10 Results of the Short List Stage

10.1 Introduction

This section explores the remaining sites. These can be broadly grouped into two groups:

- Those sites that are potentially good rail freight terminals but also have other uses that might be considered more important to meet the regions needs.– four sites; and
- Those sites that are potentially good rail freight terminals – three sites.

10.2 Potential Sites Which Should be Taken Forward for Other Uses

These sites meet all the criteria of making ideal rail freight terminals but have been identified in the planning process for other purposes and have not got the private sector support needed to ensure their delivery.

10.2.1 Site 12 – Boots

Description: One hundred hectare site located in south west Nottingham, opposite Beeston Sidings. It is currently an industrial estate. Nottingham City Council and Broxtowe Borough Council have both proposed using this site for housing and employment, and neither supports the development of a strategic rail freight interchange.

The Boots site is larger and has a more convenient shape than Beeston Sidings, making it preferable. Rail frontage length is good and there would be capability to accommodate 775m trains. There would also be room for a 775m buffer, although some thought would need to be given to the orientation of the buffer and the terminal on the site. Rail access to all routes through Nottingham and various cross country routes is possible. In the longer term, electrification of the Midland Main Line and gauge enhancements would increase connectivity to the Felixstowe – Nuneaton route and the Channel Tunnel at Syston Junction. Currently the route through Beeston itself is cleared to W8 gauge. It should be noted that Network Rail do have some concerns regarding capacity issues between Trent Junction and Lenton Junction, the route upon which this site is located.

Access to the M1 would take approximately 15 minutes via congested urban A roads. There are significant capacity issues at present at junctions on these routes, which are expected to worsen in future. The Highways Agency has raised concerns regarding how vehicles would access the site from the Strategic Road Network; their current A52 Corridor Study may shed light on this issue.

Commentary: Whilst the Boots site is nearer to the centre of the Nottingham conurbation than any other site's and hence possesses a great potential to serve that city, this means that any road connectivity will be through the A52 which is currently at full capacity. The downside of the sites location is that it is significantly less attractive to serve the rest of the study area. The site is close to Nottingham City station and there are regarded to be capacity problems in this area.

Therefore a use that is not reliant on freight transport would be suitable, and as the site has been identified for mixed use employment and housing in the Greater Nottingham Aligned Core Strategies Option for Consultation (February 2010). This is regarded to be a better use of this land.

10.2.2 Site 18 – Sinfin, Derby

Description: One hundred and twenty hectare greenfield site south of Derby. The entire site (or a significant part thereof) has been proposed as a potential B8/B2 site in the City of Derby Local Plan review. The Highways Agency has some concerns regarding the impact of a development at Sinfin on the A50 itself, the A38/A50 Junction and M1 J24. The site's relative remoteness from these junctions will reduce the extent of these impacts but they will still need to be considered..

Sinfin has an end-on, north-facing rail connection into Derby station. There is good capability for accommodating 775m trains, and the branch line (which may need renewal) from the W8-cleared North East-South West main line to the site could act as a buffer. However, there is no easy Strategic Freight Network (SFN) access based on current committed schemes. The proposed future SFN network includes Stenson to Clay Cross via Derby, which would aid connectivity. Nevertheless, orientation of the connection with the North East-South West main line favours northbound movements so SFN connectivity to key ports and the Channel Tunnel would remain difficult (reversal would be necessary).

Commentary: The available land is adjacent to the existing Rolls Royce facility in central Derby. However, at present aerospace has least use of immediate connectivity to rail freight network, further more it is closer to housing than other sites, this means that it could be more suitable for an employment purpose that does not typically involve 24 hour working

10.2.3 Site 23 – Willington

Description: Willington is a former power station site which measures some 75ha. Five cooling towers remain present on the site. It is located on the main Derby to Birmingham railway line beside North Stafford Junction (allowing rail access in the direction of Derby, Birmingham, Nottingham, and Stoke) and close to the junction of the A38/A50. Access to the site is

provided along rural single carriageway A5132, through the village of Willington to eventually join up with the A38. Willington has been designated as a 'potential site' for a strategic distribution facility in the Derby City Core Strategy Options Paper.

The site has eastbound connections into the W8 gauge Water Orton - Doncaster route which should be noted is planned W12 from March 2014, through reactivation of the former power station connection into the Castle Donington Branch. However, it would be impossible to connect into the Derby - Birmingham line due to the proximity of Stenson and North Staffs Junctions. Trains bound for Birmingham or the North West via the West Coast Main Line would need to go to Toton and run round. Connectivity would improve somewhat in future following gauge clearance between Trent and Syston junctions, but access to the Strategic Freight Network would remain unidirectional. The rail connection is end-on and accommodation of 775m trains would be achieved easily between the north east and south west corners of the site. A sufficient buffer could be achieved when the full length of the connection into the Castle Donington branch is taken into consideration.

Commentary: The site has the potential for good rail access; however road access on from the site is very poor with the shortest access to the SRN being through Willington village. SRFI traffic through the village would cause serious adverse impacts which would be difficult to address. This means that the site might be more suitably developed for a purpose that minimises levels of generated traffic. It is understood from SDCC that the site may be redeveloped as a gas powered station with rail access for oil as an additional fuel source. This could be a good way of maximising the value of the rail connectivity at the site.

10.2.4 Site 26 – Drakelow

Description: A one hundred and ten hectare site to the south of Burton-on-Trent and close to the River Trent. Most of the buildings relating to the former power station have been demolished.. The area of land available here (the former Drakelow C site, in the ownership of E.On) measures some 110 ha, excluding the wildlife reserve (which also forms part of the flood plain, the electricity substation (still operational) and the site covered by a recent planning consent for a new gas-fired power station. The adjacent Drakelow A and B site (in the ownership of Roger Bulivant Ltd.) measures some 30 ha. The total area would therefore measure some 140 ha**.** The surrounding road network is currently operating within capacity, but it is expected that by 2026 this will no longer be the case. Any minor issues have had solutions or mitigations identified but further improvement may be necessary in the longer term.

Commentary: Drakelow has very good rail connectivity, however the site is severely constrained by its lack of a suitable road access to the SRN which could involve a new crossing of the River Trent and new grade separated junction on the A38. Such a highway infrastructure requirement would have a substantial cost implication, and is coupled with a lack of developer interest in the site, significantly impacts on the site's deliverability.

The site is also partly developed out with a nature trail. This has existed since when the original power station was operational. A new gas power station on the site is sought with planning permission applied to double the capacity. It has also been identified as a site which more than 2000 new homes could be located on to form an urban extension to Burton on Trent.

This range of planned uses plus the fact that it is so close to the existing Burton RFI makes the site less popular. Also, due to its location in the A38 corridor, it means that it would be as much focused on the West Midlands as the study area. This area is relatively well served by the existing and potential expanding Hams Hall, BIFT and Landor Street.

10.3 Potentially Deliverable Strategic Rail Freight Interchange.

There are four sites that have been identified as having the potential to provide Strategic Rail Freight Interchanges that could serve the study area and this includes site 24 (East Midlands Distribution Centre) which has already received consent. The others are:

- **Site 2 – Markham Vale;**
- **Site 19 – Egginton Common; and**
- **Site 25 – Castle Donington Nr East Midlands Airport**.

Following the final review a total of three sites, which have received the highest scores and which appear most deliverable have been allowed to proceed for further analysis. (explained below).

Given the importance attached to the issue of access to the SRN, Further consultation has also taken place with the Highways Agency to review the potential scope of highway infrastructure that may be necessary to provide access to the Strategic Road Network. This discussion concluded that for each of the three sites, there is currently insufficient information available to ascertain the scale and deliverability of highway infrastructure that may be required to adequately serve each site., and further assessment work is required so that site feasibility can be confirmed.

As well as considering site access issues, we have also used the Highway Agency's Development Impact Assessment Model of Network Demand (DIAMOND) to assess the impact of development trips on the wider highway network for the future year

scenario (2026). This model has been developed for the Highways Agency to assist in assessment of the impact of planned growth, including individual developments and the cumulative impact of growth on the Strategic Road Network, and to assist discussions with Local Planning Authorities on development options.

The DIAMOND model has been run for the SDS' earmarked as being potentially deliverable. The sites have been included in DIAMOND as standard B8 (Commercial Warehousing) sites due to the lack of accurate trip data for SDS'. By mapping the results, the impact on both the strategic and local highway networks can be demonstrated, as seen in **Appendices 2 to 7**. Two model runs have been carried out for each of the deliverable sites, one of which illustrates the likely distribution of t traffic heading to and from a site given predicted network conditions in 2026. The second illustrates what is termed the "demand flow" – this reflects what route traffic would take if there were no predicted network issues of congestion or delays etc. The distribution of development trips is mapped on the highway network serving the sitesin different coloured bands, indicating the quantum of development traffic predicted to assign to a particular link.

For example, for the Castle Donington Site (Site 25) under predicted network conditions in 2026 (as shown in **Appendix 7**), between 101-200 trips are predicted to route via the A50 (between the M1 and A50 Junction 1) in both directions.

The DIAMOND model outputs provide an initial high level indication of potential development impacts on the highway network in this report. It should be noted that this assessment is not suitable on its own to support planning applications, but can form part of a comprehensive Transport Assessment and Travel Plan model Assumptions and Limitations can be found in **Appendices 2 to 7**.

10.4 Site 2, Markham Vale, near Chesterfield

Description: This 199 hectare site comprises five separate parcels of land. The area serves the north of the region and is located between the towns of Staveley to the west and Bolsover to the east.

There are 5 existing rail freight connected sites within the overall area giving it a range of possible options. Rail Connectivity potential to the Strategic Freight Network has been reviewed and is regarded to be good with the site connecting into a section of the Water Orton - Doncaster route between Tapton and Aldwark Junctions with routing options both north and south. Due to the rail link being a former colliery branch line, it is likely that it may need re-fettling and re-instatement.

There was agreement on the rail connectivity to the site (and hence tolerance to reduced rail frontage) recognising that the branch would probably require fettling as a minimum and quite possibly full reinstatement but that this would not be a fundamental obstacle.

It is regarded that the branch which serves the site could act as the 775m off network buffer. Investigations have shown that the site looks suitable for 775m operations despite its slightly irregular shape. There are potential difficulties with rail connectivity to the north west sector of the site due to the topography of the land and its former use as a colliery. There is a proposed rail terminal on the east side of the M1 as well.

This site is located immediately to the east of the M1, just to the north of Junction 29a and as such the site has excellent access to the M1. Recent capacity analysis undertaken for other developments impacting on the junction has indicated some spare capacity in the future assessment year. However, this spare capacity is unlikely to be sufficient to accommodate traffic potentially generated by a new strategic distribution site, especially given pressure from LDF growth in the area. Land within the highway boundary is also very constrained and, as a result, improvements may require the acquisition of third party land and a new bridge to enable provision of an additional link under the M1.

Use of the DIAMOND model demonstrates that the majority of trips originate from Sheffield, and route via the M1 from Junction 32. A reasonable number of trips also originate from Mansfield, and these also route via the M1. The M1 is expected to be under pressure in the future but this will be alleviated through implementation of programmed Managed Motorway schemes, including hard shoulder running between Junctions 28-31 south of Sheffield and Junctions 32-35a east of Sheffield. (A scheme to widen M1 to four lanes between J25-28 should be completed in April 2010).

There are existing bus services which serve Bolsover, Chesterfield, Sheffield and Mansfield and it is likely that the development of the site could extend and enhance these as they already serve the areas that employees are forecast to originate from.

The site has been investigated under a number of different environmental categories:

- *Contamination Assessment* Reference to google earth http://maps.google.co.uk/maps revealed that the site comprises former mining land. There are several notes referring to 'Coal depot' and evidence of opencast mining. The southernmost parcels of land appear to contain industrial buildings and are adjacent to a sewage works. Watercourses and railway lines could be seen in several of the parcels of land forming the site.
- The old maps website www.old-maps.co.uk has been reviewed to determine the historical use of the site. The 1883 map shows the site was predominantly agricultural land. The Midland Railway is shown to the east. The 1899 map shows Markham Colliery no. 1, Markham Colliery no. 2 and Markham cottages. New railway lines can be seen linking the collieries to the existing railway. Development of the collieries and evidence of opencast mining could be seen on subsequent maps until the latest available map was from 1938. Therefore there may be a risk of encountering ground gas and ground contamination.
- *Environmental Assessment* Reference to the magic online map government database http://www.magic.gov.uk/ determined that there are no Sites of Special Scientific Interest (SSSIs), Ramsar Sites, Special Protection Areas, Special Areas of Conservation, nature reserves of green belt within or near the site. It is not known whether there are any important species on the site and it is recommended that a habitat survey is carried out.
- *Archaeological Assessment* Reference has been made to http://www.heritagegateway.org.uk . There is a Grade II listed building in the vicinity of the north east part of the site shown as the Ruins of Romiley Hall. It is recommended that further research is undertaken into the exact location of the building to determine whether it is within the site boundary.

10.5 Site 19 Egginton Common

Description: This 172 hectare site is located close to Derby alongside the A50 at the A50/A38 junction and serves the west of the region. It is close to a number of major employers in the region including JCB, Nestle and Toyota. The site is regarded to possess the right credentials to be a Strategic Railfreight Interchange, due to its large size, technical configuration, compliance with Policy 21, good rail connection and ability to handle 775 metre trains. A Masterplan for the site has been drawn up which includes an intermodal terminal, several warehouses of which at least two are rail connected and two siding to meet the requirements of loading cars for Toyota. They also intend to use the site for inbound logistics. There is also strong indication of interest from other local businesses including JCB and Nestle.

Rail access to the site is regarded to be very good as it is directly alongside the Derby-Stoke-Crewe line which is scheduled to receive enhanced gauge clearance. The only negative point is that trains travelling to Birmingham and the South West will need to travel to Toton and run round. The immediate rail connections to the site are regarded to be straight forward although they will need to be installed from scratch. A rail frontage of over 775m at the site has been identified.

This site is located away from the built up area of Derby, and is bordered by the SRN to both the north and east of the site. However, the site does not have access to the SRN and the means of achieving a new access to the SRN is therefore a key consideration. The Highways Agency has, to date, been involved in pre-application discussions with Severn Trent (who own the land) regarding access to the SRN. Access via a new junction on the A50, and also direct access onto the A38/A50 junction have been proposed by Severn Trent. There are uncertainties over the acceptability of these potential options in terms of policy, standards and safety points of view. It is therefore crucial to determine whether these options or any further options are deliverable.

For the purposes of examining the likely impact of the development using the DIAMOND model, access directly onto the A38/A50 junction has been assumed. This indicates that there will be impacts of over 200 vehicles (in the AM peak) on both the A50 to the east of the site, and the A38 in either direction, although impacts on the A38 would appear to be tidal and linked to commuting from Derby and Burton. The A38 is currently under pressure and the traffic generated by the development would increase journey times on this route, particularly prior to completion of proposed A38 Derby Junctions scheme.

There are currently no Public Transport services at the site, with the nearest stopping services being at Willington. Investment in new bus services would need to secure sustainable links both to Burton and Derby. Congestion on existing bus routes into Derby will present a further barrier to delivering successful sustainable access to the site.

The site would be built for 24/7 operation and there are plans to have at least 100 metres gap to the nearest dwelling. There is recognition that there is a perceived flooding problem but it is believed that this will not be a problem to resolve.

Access to the labour market is regarded to be good due to the ease of access from Derby. It is believed that the site will bring 5,000 direct jobs with more during the construction stage and additional staff in the rail terminal. It is likely to attract secondary jobs in service industries such as training. Importantly the building of the facility at this location could safeguard jobs particularly at Toyota.

The site has been investigated under a number of different environmental categories.

- *Contamination Assessment* Reference to google earth http://maps.google.co.uk/maps revealed that the site appears to be predominantly agricultural comprising open fields. A sewage works is present in the south of the site. The boundary road runs through the site in an east-west direction. Egginton Railway Station is shown in the south west corner of the site. There are residential properties within the site boundary on Egginton Road. A small stream or ditch could be seen in the north west of the site.
- The old maps website www.old-maps.co.uk has been referred to to determine the historical use of the site. The 1887 map shows the North Staffordshire Railway to the south. A gravel pit is shown immediately to the west of the western site boundary and properties on Egginton Road are shown noted as Gravelpit houses. Round House is shown in the centre of the site. The current A38 Burton Road was shown as Rykneld Street (Roman Road). The 1901 map shows settling tanks and filter tanks to the south of the Round House. A note shows a sewage farm but no structures could be seen. On the 1923 map, a network of drains cover the site all denoted as tanks. Therefore there is a moderate risk of encountering ground gas and ground contamination There were no more recent maps available.
- *Environmental Assessment Reference* to the magic online map government database http://www.magic.gov.uk/ determined that there are no Sites of Special Scientific Interest (SSSIs), Ramsar Sites, Special Protection Areas, Special Areas of Conservation, nature reserves of green belt within or near the site. It is not known whether there are any important species on the site and it is recommended that a habitat survey is carried out.
- *Archaeological Assessment* Reference has been made to http://www.heritagegateway.org.uk . No evidence of buildings of historical importance was found

10.6 Site 25 – Castle Donington near East Midlands Airport

The site occupies an area of approximately 224 hectares on land adjoining the northern periphery of East Midlands Airport. It is proposed that the site would connect directly onto the A453 and then onto M1 Junction 24 of the M1 with high quality access to the A50 for the West and North West and the A42 for the South West. There is currently no rail connection to the site but it is proposed that a branch will be connected off the Castle Donington branch line which has a large amount of capacity as it is not used for scheduled passenger services and only relatively lightly used for freight. The line is proposed to cross the M1 between Junctions 24 and 24a and enter the site from the West where there will be capacity to handle 775m trains. It is proposed that the 775m buffer will take the form of a passing loop immediately adjacent to the network connections.

The developer has calculated the cost of this rail link and it has been deemed to be viable by a number of parties including Network Rail who have undertaken early stage development up to the point of single option selection for the network connections.

This site is located to the west of the M1, and to the North of East Midlands Airport. The site is close to the very busy M1 Junction 23a, 24 and 24a junctions where the A42, M1, A50 and A453 meet. The site therefore has excellent access to the SRN but there are significant congestion problems in the area that raise significant issues for major development in this location. The Highways Agency is considering at major junction improvements at M1 J23a-24. It should be noted that there are already significant congestion issues at Junction 24. Preliminary options to improve capacity at these junctions have been produced but there is no committed scheme at present. The promoters of the site have brought forwarded initial proposals for accessing the site that are compatible with the HA's preliminary scheme, but this involves a significant level of highway works including a number of new structures. The extent of these proposals raises a level of risk in the delivery of the site. In addition, it is not yet clear whether the proposed access arrangement would sufficiently address existing traffic problems in the area in the event that the HA improvement scheme does not come forward at least in the medium term.

Assessment using DIAMOND indicates the largest traffic impact will be on M1 J24 and the M1 itself both north and south of the site. The A453, A50 and A42 will also be impacted. There are significant traffic problems on the A453 between the M1 and A52 but these should be alleviated by the proposed A453 Improvement scheme.

Public Transport in the area is reasonable, but is largely focussed on serving passengers and employees at East Midlands Airport. Services link the Airport with Derby (every 30 minutes), Leicester (every hour), Nottingham (3 services an hour), Loughborough (3 services an hour), Coalville (every hour), and East Midlands Parkway (every 30 minutes). Most of these services run 24 hours a day, albeit at lower frequencies overnight. The promoter of the site has indicated that a dedicated access for public transport would be provided to include a new bridge over the M1 and link to the A453. Whilst this would provide good public transport accessibility to the site, it places an additional infrastructure cost on the site.

The site is an irregular shape with an elongated finger that extends to the north east. The soil conditions at the site are known to be good (either rock or gravel) and cross sectional modelling has revealed that the development can be designed to minimise visual impact. The developer has confirmed that solutions can be provided for the sections of railway line across the flood plain (from the Castle Donington branch to the bridge over the M1). The issue of flood risk needs further investigation

beyond the remit of this study. Public transport links to the site are proposed to be good. Bus links will be established which comprise of a shuttle service serving primarily the 3 cities and the newly built East Midlands Parkway station. The public transport links will be comprised of phased infrastructure add-ons and it is proposed that these will comprise a guided bus link allowing direct access from the site to the A453 (Nottingham direction) avoiding junction 24. This will require a bridge to be constructed over the M1 to the south of junction 24a.

Contamination Assessment

Reference to google earth http://maps.google.co.uk/maps revealed that the site appears to comprise agricultural land. There is a farm (Field Farm) and a tree plantation (King Street Plantation) within the main part of the site. The eastern boundary of the site lies immediately adjacent to the A453 and A50 and beyond these, the M1. The north eastern finger of land crosses the M1 motorway and extends as far as the railway line where a gravel pit and several large ponds are shown. In the main part of the site several watercourses and ditches can be seen. Several public footpaths cross the site. Immediately to the south of the site is the East Midlands Airport. The ruins of a castle are shown approximately 100m north west of the site.

The old maps website www.old-maps.co.uk has been reviewed to determine the historical use of the site. The 1887 map shows the site is predominantly agricultural land. The Midland Railway is shown adjacent to the north eastern tip of the site. There are no changes shown on any of the maps reviewed. The most recent available map was from 1921.

Therefore there is a low risk of encountering ground gas and ground contamination.

Environmental Assessment

Reference to the magic online map government database http://www.magic.gov.uk/ determined that there are no Sites of Special Scientific Interest (SSSIs), Ramsar Sites, Special Protection Areas, Special Areas of Conservation, nature reserves or green belt within or near the site. It is not known whether there are any important species on the site and it is recommended that a habitat survey is carried out.

Archaeological Assessment

Reference has been made to http://www.heritagegateway.org.uk . There are 20 listed buildings within 1km of the centre of the site. It is recommended that further research is undertaken into the exact location of the buildings to determine whether they are within the site boundary.

11 Conclusions

Capabilities on project:
Transportation

11 Conclusions

11.1 Introduction

This section summarises the results of the study and draws together the conclusions of the report, exploring the reasons why these conclusions have been reached

Table 10 Final Analysis Matrix of all Sites

	Site Name	Stage Discounted as SRFI serving study area?	Reason	Rail Freight Use?
1	East Worksop	No Go	Outside Area - *Access to the Strategic Freight Network is poor - suited to 1-2 company terminal*	✓
2	Markham, near Chesterfield	Potentially Appropriate	Good road access right next to Junction 29a of the M1. Rail connectivity to the Strategic Freight Network is regarded to be good	SRFI
3	Welbeck Colliery, Meden Vale, near Mansfield	No Go	Outside Area - *Access to the Strategic Freight Network is poor.*	
4	Thoresby, near Ollerton	No Go	Outside Area - *Road and rail access is poor*	
5	Bilsthorpe Colliery, near Mansfield	No Go	Outside Area - *Road and rail access is poor*	
6	Calverton	Framework Assessment	Large site but low gauge rail route, no capacity on rail route, high levels of congestion on strategic road network, no capacity for development according to Local Plan.	
7	Gedling Colliery, Nottingham	Framework Assessment	Large site but no capacity on rail route, extensive congestion on local road network, site designated as protected open space.	
8	Bennerley coal site, Ilkeston	No Go	Initially due to insufficient area but following new information, concerns about other issues	
9	Colwick, Nottingham	No Go	Insufficient area - *possible small tri-modal terminal*	
10	Stanton Ironworks, Derbyshire	No Go	Within Boundaries of Sustainable Urban Extension	✓
11	Beeston Sidings, Nottingham	No Go	Insufficient area	
12	Boots site, Nottingham	Lack of Deliverability	No Private Sector interest. Road Access via at capacity A52, at access point to rail network is congested, although appropriate gauge. This site has been identified for mixed residential and employment use.	
13	Cotgrave, near Nottingham	No Go	Insufficient area	
14	Chaddesden, Derby	No Go	Insufficient area	
15	Toton Sidings, Sandiacre, Nottingham	Framework Assessment	Excellent rail connectivity but very poor road access and close to urban area. May be able to provide a stabling facility for trains accessing other sites	✓
16	Ruddington, Nottinghamshire, Great Central Terminus	Framework Assessment	Adjacent to the A52 but heavy road congestion in area, site is located in Greenfield with neighbouring SSSI's, cost of reinstating rail line to site	
17	Old Textile Works, Spondon, Derby	Framework Assessment	Good road access but very expensive to connect to. The site does not connect directly to the Strategic Freight Network, there is no private sector interest in the site	
18	Sinfin, Derby	Lack of Deliverability	Close to residential areas, with no private sector interest in using this site for rail freight. However, it is understood that the site is to be potentially used for a business park and housing.	

19	Egginton Common, Derbyshire	Potentially Appropriate	Good road links via the A50 and A38 but real concerns over the immediate access and egress to the site. The interchange roundabout is currently close to full capacity and a direct link from this into the site is of major concern to the Highways Agency. This site could potentially provide rail access for site 22.	SRFI
20	Hilton, Derbyshire	No Go	Insufficient area - *suited to 1-2 company terminal*	✓
21	Sawley Crossroads	Framework Assessment	Close to A50 and M1, nr Castle Donington Branch (part of SFN) but lacks ability to handle 775m trains. The site has high development costs and major concerns over the flood risk. If site 25 were to go ahead there is insufficient room for a rail connection for this site.	
22	Burnaston Cross, Derbyshire	Framework Assessment	Located close to the A38 and A50 but short site frontage, site size and shape limits its appeal as a SRFI. No multi direction rail connectivity. The site will be more suited to a 1-2 company development. If site 19 goes ahead then a direct connection to this site could be provided via a road under the A38, thus saving the site having its own rail connection. However, should site 19 not go ahead then the site could be connected to the Derby-Stoke line.	
23	Willington power station	Lack of Deliverability	Has good rail connectivity to Water Orton – Doncaster, road connectivity to the SRN is only via small country roads, therefore new road access might need to be developed. A planning application for the development of a gas fired power station covering the whole of the Willington site has been submitted. The site may benefit from the retention of rail access so that a potential power station could receive alternative supplies of fuel such as heavy oil.	
24	East Midlands Distribution Centre, Leicestershire	Built	This site will be rail connected in the autumn and is partly developed out	Built
25	Castle Donington, near East Midlands Airport	Potentially Appropriate	Close to A50 and M1, nr Castle Donington Branch (part of SFN) and has the ability to handle 775m trains. The site has very high development costs and concerns over the flood risk on the rail approach to the site. If site 21 were to go ahead there is insufficient room for a rail connection for this site.	SRFI
26	Drakelow power station	Lack of Deliverability	Close proximity to the Water Orton - Doncaster Route at Branston Junction with good access to north and south. There is a lack of appropriate connectivity to the SRN, a new connection to the A38 would need to built this would include a new river crossing. The site has alternative uses identified, including housing, nature trails and has recently received planning consent for a new gas fired power station.	
27	Holwell Works, Asfordby Hill	No Go	Insufficient area	
28	Tetron Point industrial estate (Nadins), Swadlincote	No Go	The total area with planning consent for industrial and business development here measured some 42 ha (rather than 150 ha), although most of this is now built out, with 8 ha remaining undeveloped. The remainder of the site has planning consent for use as a golf course and associated ancillary development, construction of which is underway.	

Capabilities on project:
Transportation

29	Lounge, near Ashby-de-la-Zouch	Framework Assessment	Close A42 but poor rail gauge capability. The site is located near to Hams Hall and Birch Coppice (BIFT) terminals. Short buffering area. Their transport assessment suggests 2 trains a day but could accommodate up to 5 trains a day. Current rail access and site shape suggest the location is more suited to a small company rail terminal rather than a SRFI.	✓
30	Sileby	No Go	Insufficient area	
31	Interlink (Bardon), Leicestershire	Framework Assessment	Demand for rail access to site from Logistics co. and manufacturer but poor gauge capacity. If a RFI could be developed this would create a small useable facility as it is in a good location. There are no developers currently interested in developing this site for an SRFI and it is proposed that part of the site could be developed as a waste treatment plant.	✓
32	Whetstone, South-east Leicester	No Go	Insufficient area	
33	Magna Park, Lutterworth	No Go	No Rail Connectivity - *Good road distribution site, but lacks rail connectivity, possible electric vehicles to DIRFT*	
34	Central Rivers	No Go	Outside Area – *Fully Developed*	
35	Newark	No Go	Outside Area - *Insufficient area for a SRFI but a possible tri-modal terminal, subject of another emda study*	✓
36	Wirksworth	No Go	Outside Area - *Insufficient area*	

11.2 Other Potential Rail Connected Sites

The following sites have been identified as potentially providing rail freight facilities, which whilst not functioning as a SRFI could provide additional terminals to increase rail freight use in the region. This is to be encouraged as even small rail facilities can enable extra trains to run which will contribute to the target set out on the Regional Freight Strategy of an additional 30 freight trains a day across the region.

Although these sites have not been put through the rigorous appraisal in terms of road and rail access and environmental impact it is considered that it would be worth further exploration of their potential.

11.2.1 Site 1 - East Worksop

The East Worksop is relatively small and remote from much of the rest of region with poor access to the Strategic Freight Network, however there are understood to be several local companies in the area, who would be interested in using rail freight in their operations.

11.2.2 Site 20 - Hilton, Derbyshire

This former military site still as rail infrastructure in place and despite being too small and having inappropriate road access to perform as a SRFI, would definitely have potential for providing rail connectivity for a small number of companies located on the site.

11.2.3 Site 10 – Stanton Ironworks, Derbyshire

The site is in an area for Sustainable Urban Regeneration and has difficult road access. Current masterplan proposals being promoted by the owner of the Stanton Ironworks site (Saint-Gobain) indicate a mixed use, residential based development. A substantial area of employment land is also identified within the masterplan proposals, and the masterplan has been designed flexibly to allow the provision of a rail based distribution facility of circa 500,000sq ft. It is understood that a planning application based upon the current masterplan proposals will be submitted in outline during 2010, and that the landowner is actively exploring tenant potential.

11.2.4 Site 22 - Burnaston Cross, Derbyshire

Burnaston Cross is too small, awkwardly shaped and is too steep to perform as a SRFI. Following this assessment produced by AECOM for partners in the Three Cities, it might arguably be seen as having a potentially negative effect on the East Midlands potential to see SRFIs if putting a rail connection into the site means that Egginton Common (Site 19) would not be taken forward as an SRFI.

It is noted that this site is awaiting the outcome of a Public Inquiry to evaluate if it is to be taken forward

11.2.5 Site 29 - Lounge, near Ashby-de-la-Zouch

The site at Lounge is too small and distant from the study area, to effectively serve transport needs of this area. Furthermore, the National Forest Line that provides its rail access has gauge capacity issues, which means deepsea / hi-cube containers will not be conveyable to the site. Nonetheless if an appropriate site occupier can be developed this site could make a useful site for a small number of companies.

11.2.6 Site 31 - Interlink (Bardon), Leicestershire

The existing Interlink site is fully developed out, but companies using the site have indicated that the site would facilitate significant model shift. Therefore if a suitable site close or ideally adjacent to Interlink became available, there could be significant value in this function as it could provide a route for modal shift for current site occupiers and other Leicester companies. There are no developers currently interested in the site and there railway line has a poor gauge clearance.

11.2.7 Site 35 - Newark

Whilst the potential site at Newark is relatively small, and remote from the study area, it does provide an interesting opportunity to create a tri-modal inland terminal, with connectivity to the road network via the Newark ring road to the A1, inland and potentially coastal shipping via the River Trent and to the SFN.

11.3 Potential Strategic Rail Freight Interchanges Serving the Area

There have been four sites identified by this study as having the potential to operate as SRFIs that could serve the study area. The first two sites - Site 24 EMDC and Site 2 Markham Vale - have been partly developed out and have the potential to meet the early needs to the region in terms of rail freight connectivity.

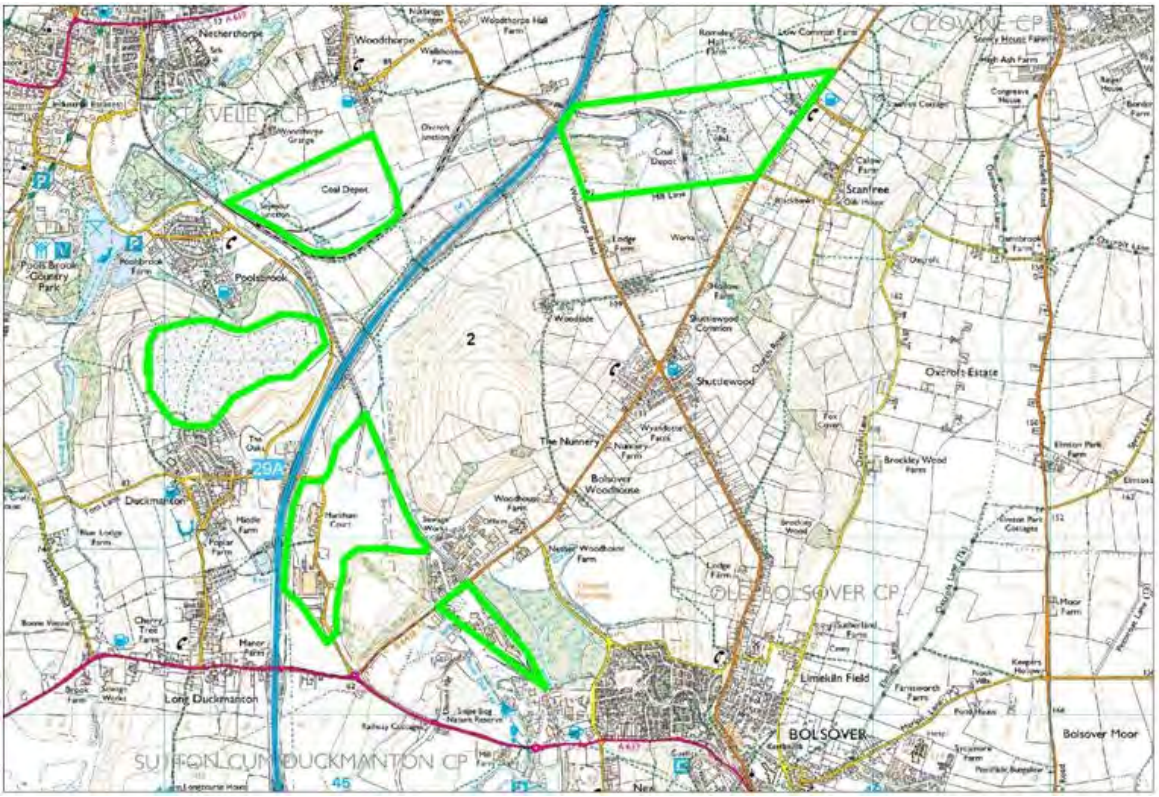
Site 24 EMDC does not as yet have rail connectivity. The connection is understood to being put in during the next few years,. With this development the site has the opportunity to offer a potential to provide for the first time, rail connectivity to the area. The potential to create a good interchange point should be nurtured, as it has the potential to support the aspirations for modal shift of companies in Nottingham and Derby.

Site 2 Markham Vale despite being outside the study area should be available to provide the option of rail connectivity to companies to the north of the area. Coupled with its a ability to supply rail connectivity to northern Derbyshire and Nottinghamshire coupled with southern parts of Yorkshire, this should provide sufficient hinterland to be able support rail connectivity to a range of destination.

Recommended Sites for the development of a Strategic Rail Freight Interchange

Site 2, Markham Vale

Figure 11.2 Site Map for Site 2 Markham Vale



Demand

Although this site is north of the 3 Cities Sub-area it is well located from a freight distribution perspective on the M1 to serve the needs of North Derbyshire, North Nottinghamshire, Sheffield and indeed parts of South Yorkshire. The site is split into several parts on either side of the motorway and would allow a mixed development for several potential users. There are 2 potential rail freight connected sites within the overall area giving it a range of possible options. The markets that could be served by site 2 include rail services of deep-sea boxes from the ports, services from the Channel Tunnel, trains serving industrial processing that could take place on part of the site and the emerging domestic intermodal customer base. The site is large enough that it could feature two or three rail freight facilities which might consist of an intermodal terminal, a dedicated siding to possibly serve a waste/industrial facility and potentially rail connected warehousing. The developer has interest from several potential anchor tenants for the site but it is unclear if rail freight is required to serve these likely customers yet. It is expected that the site will have some manufacturers and heavy industrial units but these are likely to be segregated from the distribution type of applications. There is an emerging interest amongst the manufacturing sector in the Chesterfield/Sheffield area for rail served facilities. The developer has been really proactive in promoting rail freight by having a dedicated rail freight leaflet which is very positive.

Road Access

This site is located to the east of the M1, just to the north of the recently constructed M1 Junction 29a and as such is easily accessible to the M1 and routes that link with it. Recent capacity analysis undertaken for other developments impacting on the junction has indicated some limited spare capacity in the future assessment year. However, this spare capacity is unlikely to

be sufficient to accommodate traffic potentially generated by a new strategic distribution site, especially given pressure from LDF growth in the area. In this event, it is likely that improvements will be necessary to M1 J29a.

Significant improvements to M1 J29a may be difficult to achieve as the land within the highway boundary appears to be relatively constrained and, as a result, improvements may require the acquisition of third party land potentially to provide an additional link under the M1. Further work is therefore crucial to identify a preferred means of accessing the site which is acceptable to the HA and deliverable.

Use of the DIAMOND model demonstrates that the majority of trips originate from Sheffield, and route via the M1 from Junction 32. A significant number of trips also originate from Mansfield, and these also route via the M1. The M1 is expected to be under pressure in the future but this will be alleviated through implementation of programmed Managed Motorway schemes, including hard shoulder running between Junctions 28-31 south of Sheffield and Junctions 32-35a east of Sheffield. (A scheme to widen M1 to four lanes between J25-28 should be completed in April 2010)

Rail Access

Rail Connectivity potential to the Strategic Freight Network has been reviewed and is regarded to be good with the site connecting into a section of the Water Orton - Doncaster route between Tapton and Aldwark Junctions with routing options both north and south. Due to the rail link being a former colliery branch line it is likely that it may need re-fettling and re-instatement.

There was agreement on the rail connectivity to the site (and hence tolerance to reduced rail frontage) recognising that the branch would probably require fettling as a minimum and quite possibly full reinstatement but that this would not be a fundamental obstacle.

It is regarded that the branch which serves the site could act as the 775m off network buffer and that the site looks suitable for 775m operations despite its slightly irregular shape. There are potential difficulties with rail connectivity to the North West sector of the site due to uneven levels and orientation. The site master plan infers possibilities with rail connectivity that the practicalities of the site may preclude such as rail's ability to get alongside the sheds may be difficult due to curvature and the difference in levels. However it may constrain but is not impossible. There is a proposed rail terminal on the east side of the M1 as well.

Rail is not impossible on the North West segment of the site but levels and orientation are difficult. As always the site master plan infers possibilities with rail connectivity that the practicalities of the site may preclude.

Public Transport Access

There are existing bus services which serves Bolsover, Chesterfield, Sheffield and Mansfield and it is likely that the development of the site could extend and enhance these as they already serve the areas that employees are forecast to originate from.

Construction

The site is being built on some Brownfield and ex-colliery sites. Part of the land is on an incline which would need addressing.

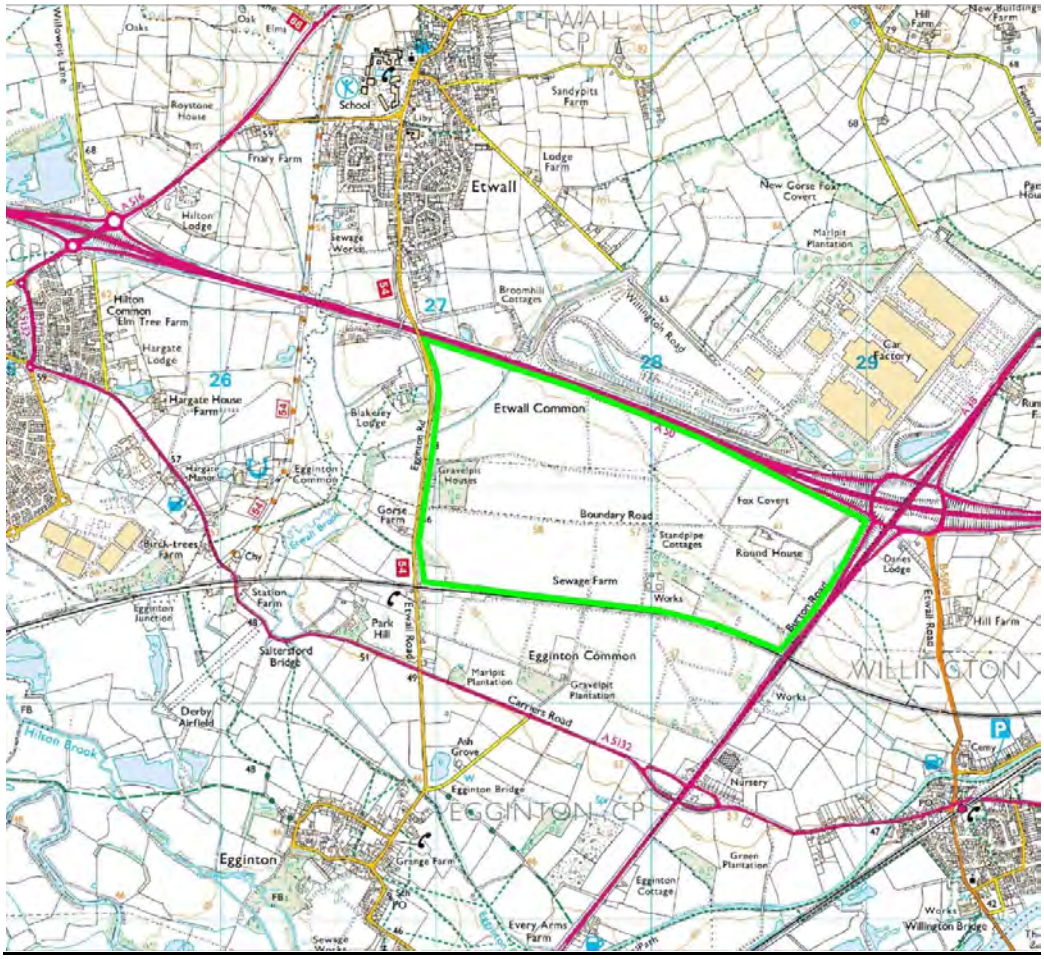
Timescale

The timescale for the project runs from 2010 to the end of the RSS in 2026. As the site already has some interest it is likely that this can be developed out earlier than some of the other sites. Also because rail served the colliery site in the past the track bed and connections should be easier to fettle. The waste services company hope to begin running trains to their part of the site in 2012.

However there is a lack of clarity as to aspects of the layout of the site for example its curvature and as such it is recommended that additional work is conducted to prove viability.

Site 19, Eggington Common

Figure 11.3 Site Map for Site 19 Egginton Common



Demand

There are four different markets likely to be satisfied by the development of this site on the A50/A38 (Egginton Common). Firstly there is the movement of imports and exports serving Toyota who as a likely anchor tenant have signed a letter of interest in using this site as it is the only potential terminal that provides the opportunity for direct access without needing to move goods on the public highway. Secondly, rail services could serve the active industrial base in Derby and South Derbyshire including local manufacturers such as Nestle, JCB and possibly Rolls Royce. Thirdly the site would lend itself to be a location for National Distribution Centres. Fourthly the site could satisfy the demand for transport of international and domestic containers and/or swapbodies.

Rail Access

Rail access to the site is considered to be very good and the report is in agreement with trains being able to travel in a westerly or easterly direction on the Derby-Stoke-Crewe line which is scheduled to receive enhanced gauge clearance. The only negative point is that trains travelling to Birmingham and the South West will need to travel to Toton and run round. The immediate rail connections to the site are regarded to be straight forward although they will need to be installed from scratch. A rail frontage of over 775m at the site has been identified.

Road Access

There are good road links to the site via the A50 and A38 but there are real concerns over the immediate access and egress to the site. The interchange roundabout at the A38/A50 junction is predicted to be close to full capacity by at least 2016 and a direct link from this into the site is of major concern to the Highways Agency.

This site is located in close proximity to the junction of the A50 and A38 and therefore could have good accessibility to these corridors and to the M1 corridor, via M1 J24 and 24 which is some 13 miles to the east. Although the site is bordered by the SRN to both the north and east, it does not have direct access to the SRN and the means of achieving a new access to the SRN is therefore a key consideration. The Highways Agency has, to date, been involved in pre-application discussions with Severn Trent (who own the land) regarding access to the SRN. Access via a new junction on the A50, and also direct access onto the A38/A50 junction have been proposed by Severn Trent. There are uncertainties over the acceptability of these potential options in terms of policy, standards, congestion and safety points of view. It is therefore crucial to identify a preferred means of accessing the site which is acceptable to the HA and deliverable.

For the purposes of examining the likely impact of the development using the DIAMOND model, access directly onto the A38/A50 junction has been assumed. This indicates that there will be impacts of over 200 vehicles (in the AM peak) on both the A50 to the east of the site, and the A38 in either direction, although impacts on the A38 would appear to be tidal and linked to commuting from Derby and Burton. The A38 is currently under pressure and the traffic generated by the development increase journey times on this route, particularly prior to completion of proposed A38 Derby Junctions scheme. This issue will also need to be given further consideration, particularly in terms of the timing of the development and the A38 Derby Junctions Improvement scheme and the potential for new public transport services to the site which may mitigate impacts on the A38 and A50.

Public Transport Access

There are currently no Public Transport services at the site, with the nearest stopping services being at Willington. Investment in new bus services would need to secure sustainable links both to Burton and Derby. Congestion on existing bus routes into Derby will present a further barrier to delivering successful sustainable access to the site.

Access to Labour

Access to the labour market is regarded to be average. The site is located within close proximity to South Derby where there is a large population and ready labour market. Public transport access to the site is poor and as is demonstrated by many surrounding businesses which are accessible by private car only.

Environment

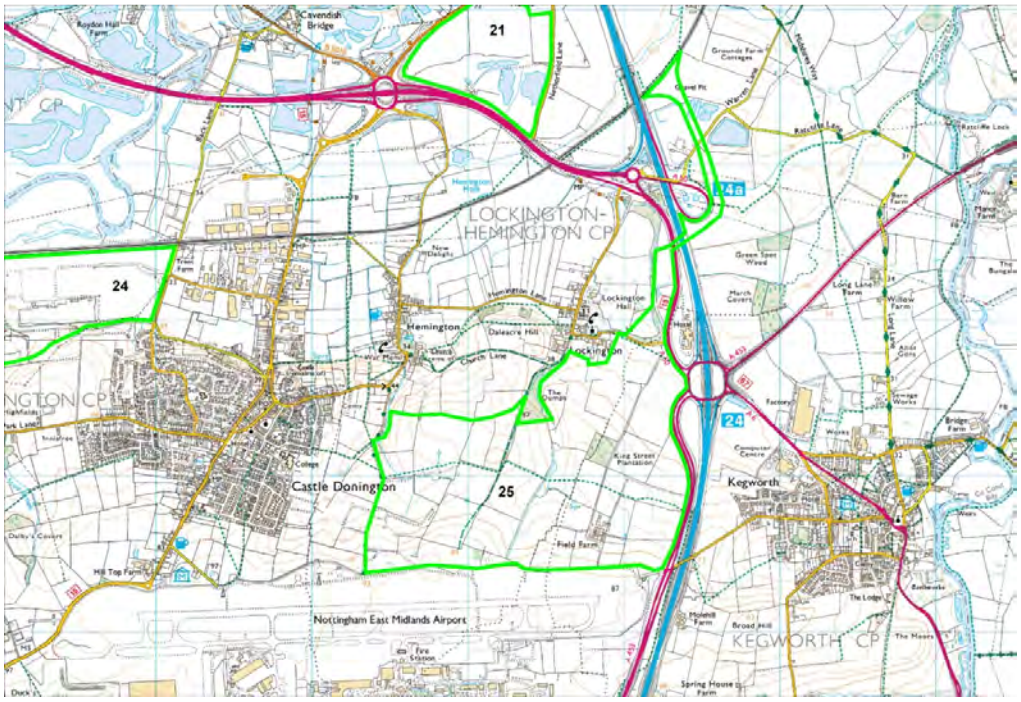
Environmental constraints are minimal and environmental considerations are therefore considered to be acceptable. The area is predominantly agricultural comprising open fields and there are no Sites of Special Scientific Interest (SSSIs), Ramsar Sites, Special Protection Areas, Special Areas of Conservation, nature reserves of green belt within or near the site. The report does not discuss extensively but confirms there is at least one Tree Preservation Order on the site. No evidence of buildings of historical importance has been found at the site.

Timescale

The timescale for the project runs from 2010 to the end of the RSS in 2026. It is estimated that should the site be developed it would be ready for opening sometime around 2015.

Site 25, Castle Donington, near East Midlands Airport

Figure 11.4 Site Map for Site 25 Castle Donington, near East Midlands Airport



Demand

There is no doubt that there is a need for a rail freight terminal close to the three cities Sub-area. In the same way as the Daventry area where DIRFT is located is proving to be a popular site to serve the needs of the South Midlands, the area near Castle Donington is a good location from a freight distribution perspective to serve the North East Midlands. The attractiveness of the location is likely to have a major bearing on the commercial viability of the scheme. Site 24, the East Midlands Distribution Centre, is in close proximity to the site and is likely to be built out in the near future. The markets likely to be served by Site 25 include rail services of deep-sea boxes from the ports, new services from the Channel Tunnel and the emerging domestic intermodal customer base. The developer has confirmed it is too early to have interest from an anchor tenant for the site but usually the investment is built and then the traffic is created i.e at Hams Hall. It is not expected that the site will have any manufacturers but will operate more like a DIRFT type site. The location of the site could cater for lighter goods which are time responsive and indeed the proximity to the freight hub at the East Midlands airport could potentially bring additional albeit low volumes of trade in rail-air services. Organisations such as Air France and DHL are already considering this type of express rail freight network that might replace certain flights in the future. Connectivity into High Speed 2, (the recently announced proposed fast rail route from London to the Midlands), could enhance a possible business case for this.

Road Access

There are congestion issues in the area and it has been suggested that a bypass between the A50 and A453 would allow A50 traffic to enter and leave the motorway at Junction 23A meaning the traffic between the M1 and A42 to the south of Kegworth would not have to use Junction 24 at all. It has been discovered that 40% of traffic travels from the A453 to the A50 following a series of model runs.

This site is located to the east of the M1, and to the North of East Midlands Airport. The site is close to the very busy M1 Junction 23a, 24 and 24a junctions where the A42, M1, A50 and A453 meet. The site therefore has an excellent location in terms of the M1 and A50 corridors but there are significant congestion problems affecting the M1 junctions in the area that raise significant issues for major development in this location. The Highways Agency is looking at major junction improvements at M1 J23a-24. Preliminary options to improve capacity at these junctions have been produced but there is no committed scheme at present.

The promoters of the site have brought forwarded initial proposals for accessing the site that is compatible with the HA's preliminary scheme, but this involves a significant level of highway works including a number of new structures. The extent of

these proposals raises a level of risk in the delivery of the site. In addition, it is not yet clear whether the proposed access arrangement would sufficiently address traffic problems in the area in the event that the HA improvement scheme does not come forward at least in the medium term. This issue will therefore need to be given further consideration, particularly in terms of the potential timing and extent of future Highways Agency improvement schemes in the area and the extent to which the proposed highway infrastructure to serve the site will safeguard the operation of M1 Junctions 24 and 23 and provide high quality public transport access to the site are deliverable.

Assessment of the development using DIAMOND indicates the largest traffic impact will be on M1 J24 and the M1 itself both north and south of the site. The A453, A50 and A42 will also be impacted. There are significant traffic problems on the A453 between the M1 and A52 but these should be alleviated by the proposed A453 Improvement scheme. The implementation of this scheme is subject to review through the on-going Three Cities – Agglomeration and Accessibility DaSTS Study.

Rail Access

Access to the rail network is identified as a potential risk area as it requires 3 kms of new railway including a bridge over the M1 and some of the route may either be on an embankment or potentially a viaduct as it goes through a flood plain. All the land necessary to build a link to the site is owned either by Network Rail, the Highways Agency or promoters of the scheme. There needs to be clarity on whether a Transport and Works Act order will be required as the scheme has already been taken to GRIP 3 level by Network Rail. GRIP 3 is the 3rd of 4 levels which are taken by Network Rail when considering practicality. This therefore confirms that the scheme is feasible and there are no insurmountable obstacles that would prevent ultimate delivery. A rail frontage of 775m or over has been identified. The rail scheme has been independently costed by the Railway Engineering Associates and the developer is willing to fund this. Although some contingency has been factored in, as with any infrastructure scheme if the actual building cost is significantly above the projected amount then there is a risk to the overall development.

Public Transport Access

Public transport services are available in the area And these are focused on serving passengers and employees at East Midlands Airport. Services link the Airport with Derby (every 30 minutes), Leicester (every hour), Nottingham (3 services an hour), Loughborough (3 services an hour), Coalville (every hour), and East Midlands Parkway (every 30 minutes). Most of these services run 24 hours a day, albeit at lower frequencies overnight. The promoter of the site has indicated that frequencies of these services would be increased, including extra services at shift changeovers. It is also proposed that a dedicated access for public transport would be provided to include a new bridge over the M1 and link to the A453. Whilst this is would provide good public transport accessibility to the site, it places an additional infrastructure cost on the site.

Flooding

There is a significant concern about the risk of flooding on the alignment of the rail access route although not the actual site itself as it lies south of the identified zone of flood risk in the Trent Valley near the confluence of three rivers. Solutions can be provided for the sections surrounding the railway line which flood (from the Castle Donington branch to the bridge over the M1) and there would be no impediment.

Environment

Environmental impacts should be manageable. The site is dominated by major transport and development infrastructure and is in a close proximity to s a nearby town (Castle Donington), (farmland and woodland. There are no relevant statutory landscape designations. . The site possesses no SSSIs and has nothing of archaeological and cultural heritage. The environmental impact of the site needs to be designed to avoid visual impact. An environmental statement has not yet been put forward for the site.

Construction

The rail link to the site which includes the construction of a bridge over the M1 could be very expensive although the potential developer has experience constructing the only private bridge over a motorway currently in the UK at M42 junction 4. The site itself is on favourable ground conditions either rock or gravel.

Timescale

The timescale for the project runs from 2010 to the end of the RSS in 2026. The developer envisaged a 2025 completion date for the whole project which is around the end of the current RSS timeframe. A typical timeframe might involve 1 year completing the planning application, 1 year for the decision, 3 years for the inquiry, and 5 years before construction.

Summary of Recommended Sites

The sites listed above have been chosen due to their good rail links to gauge enhanced or potentially enhanced rail connected routes, excellent connectivity to the SFN and the likely demand from companies to utilise their facilities. The three sites have the capability to serve different areas of the region and with different facilities. It is anticipated for example that any possible future site at Egginton Common could be used to assist companies in this area who deal with heavy machinery and large bulk products.

There are few, if any environmental grounds under which these sites should not be able to be constructed.

11.4 Development Principles

Highway Access

The proposed sites for Strategic Rail Freight Interchanges will have significant impacts on adjacent SRN junctions and on the wider SRN network. This study has identified a number of issues in relation to SRN access and impacts which cannot be resolved without further detailed investigation. In several cases developers have already commenced these investigations, including consultation with the Highways Agency, and this is applauded. Going forward, it is imperative that this work is progressed through Transport Assessments and Travel Plans so that constraints and requirements can be identified, including development phasing, traffic impacts and mitigation options. This process should include early and close engagement with the Highways Agency to enable SRN access solutions to be developed that are acceptable and deliverable.

Public Transport

Strategic Rail Freight Interchanges will be significant employment sites and it will be important that they are accessible by sustainable modes. Given the location of proposed SRFI sites, sustainable access will principally be provided by bus services. Attractive and frequent bus services will need to be provided between SRFI and their principle labour market areas. Proposed provision will need to be identified in Travel Plans together with any other proposals for sustainable access. The options and approach to sustainable access and potential implications for mode split of trips generated by a SRFI should be discussed at an early stage with the Highways Agency and relevant Local Highway Authority.

The development of SRFIs will enable the region to fill the hole which currently exists between the Birmingham/Coventry area and Doncaster Railport to the north.

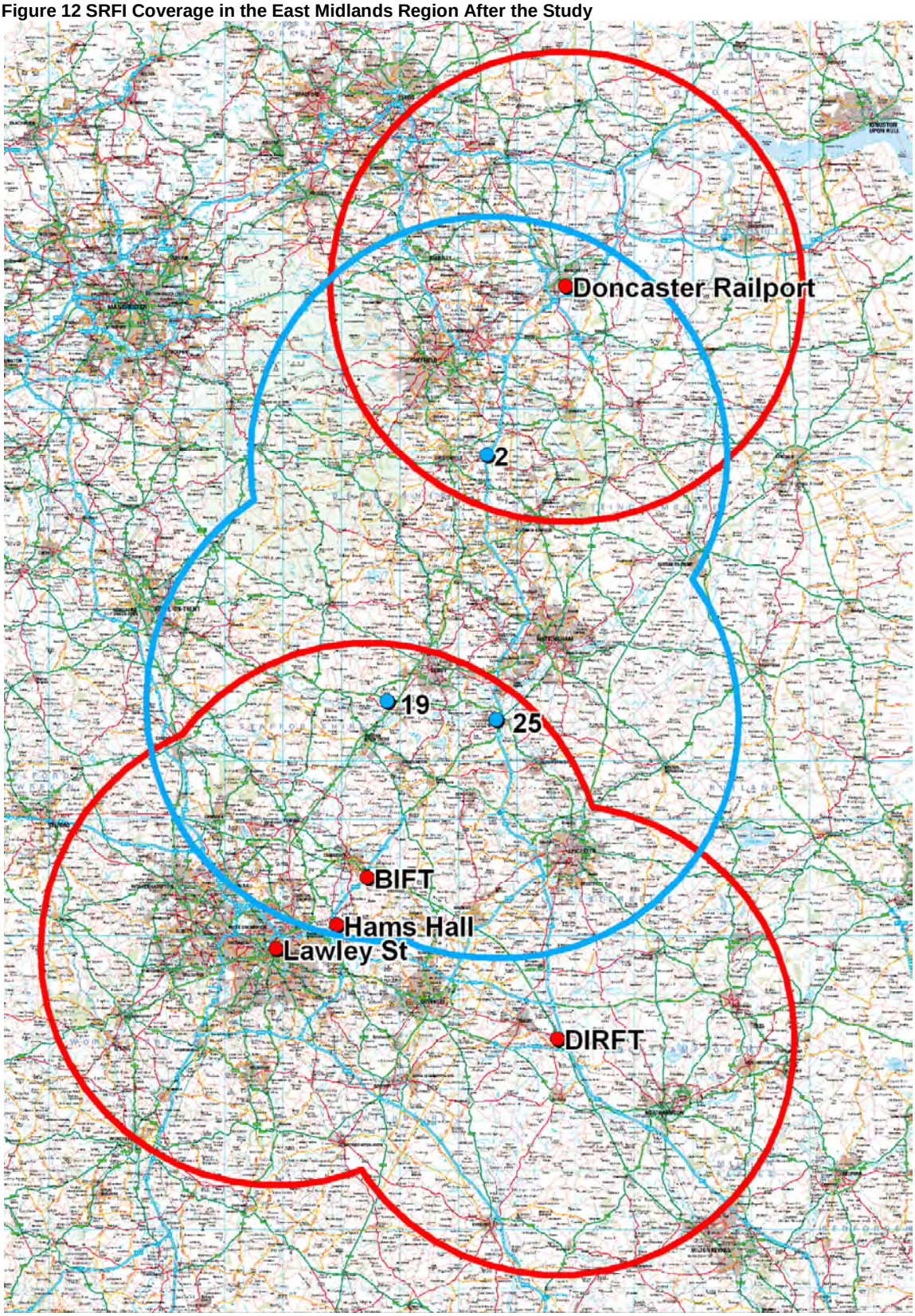
11.5 Overall Conclusion

Figure 11.5 illustrates the effect that the development of SFRI's in the Three Cities Sub-area could have in the region. The blue line illustrates the gap that could be filled with the red circles indicating a 25 mile (40km) zone which represents approximately one hour travelling time in a HGV. Currently there is a gap which includes important strategic areas including the city of Nottingham.

This study has provided guidance as to where the preferred location for SFRIs. It is acknowledged however that there is potential for further work which evaluates the preferred locations in further detail and evaluates potential demand for the sites.

Capabilities on project:
Transportation

Figure 12 SRFI Coverage in the East Midlands Region After the Study



Appendix A -

Appendix A -

Detailed information of conversations/contact with developers is enclosed below:-

Name	Don Morgan
Organisation	**Gazeley**
Description	AECOM had spoken to a number of people in the organisation. Detailed conversation and emails of information have been provided.
Sites mentioned within study area	Additional area at Magna Park will have an energy efficient rail connection via electric trucks. Lounge – a rail connected former UK Coal Site
Sites mentioned outside study area	Peterborough (Stanground) http://www.gazeleygoodneighbour.co.uk/InitialProposal.aspx Additional Site nr DIRFT NB by Glyn Stubbing not Don Morgan

Name	Matt Smith
Organisation	**King Sturge**
Description	AECOM called Matt who was very interested in highlighting the potential of Markham Vale (Site 2) to serve Nottingham and Derby particularly.
Sites mentioned within study area	Markham Vale http://www.markhamvale.co.uk/

Name	Jon Sleeman
Organisation	**King Sturge**
Description	Comments were provided that considered the study area as part of the national context and then reviewed the opportunities of having two sites within the same catchment area and the merits and disbenefits of this.
Sites mentioned within study area	Whole study area

Name	Jo Ward
Organisation	**St Modwen's**
Description	Contact was made with the company who own this site.
Sites mentioned within study area	Hilton (Site 20)

Name	David Ward
Organisation	**WB Developments**
Description	AECOM called Stephen Pendrick-Moyle then David Ward.
Sites mentioned within study area	Detailed discussion of three sites, EMDC, Sawley Cross and Interlink.
Sites mentioned outside study area	East Midlands Distribution Centre – previously WB owned Sawley Cross – not rail connected but could be served by EMDC Interlink – originally planned to be rail connected but has now been developed in such a way as to preclude rail connectivity.

Name	Mike Hughes,
Organisation	**Helios Slough**
Description	AECOM contacted the company and introduced the study. It was stated that Helios Slough had no interest in any sites in the area and whilst being aware of some sites they did not want to explore them
Sites mentioned within study area	None

Name	Robin Woodridge
Organisation	**Prologis**
Description	The company has acknowledged that their customers do not consider administrative boundaries in their decision process. When developing rail freight terminals Prologis not only considers the 'terminal' services that could operate to and from a site, but also whether there are any existing flows that they could 'pull over' to part/load unload. Customers of the Prologis Group like to use rail freight as it means that they can bypass the congested motorway network.
Sites mentioned within study area	Aware that the East Midlands Distribution Centre is moving toward providing rail freight interchange opportunity but this has nothing to do with Prologis. Prologis have communications regarding Eggington Common (A50 / A36)
Sites mentioned outside study area	**Corby** 3.5 million square foot **DIRFT** planned growth to 14 million square foot. **Hams Hall** **Landor St** **Centre 38** http://www.centre38.co.uk/masterplan.htm no rail access.

Name	Paul Shanley
Organisation	Clowes Developments
Description	Confirmed that EMDC is anticipated to be connected to the rail network in late 2010 , but does not have operator lined up yet.
Sites mentioned within study area	EMDC

Name	Nick Ford
Organisation	Lambert Smith Hampton
Description	Discussed the planning history of Tetron Point and the difficulties associated with bringing this forward for rail. It was highlighted that most of this site has now been allocated for sporting uses.
Sites mentioned within study area	Tetron Point (Site 28)

Name	Barry Allen, John Holmes, Steve Johnstone, Kate Bedson
Organisation	Savills, Holmes Antill, Lawrence Walker Ltd, Roxhill Developments
Description	Discussed the opportunities present for a site at Castle Donington and provided a technical analysis of how the rail and road links to the site would be constructed. It was also explained how the scheme would be delivered and its viability was also discussed
Sites mentioned within study area	Castle Donington, near East Midlands Airport (Site 25)

Name	Barry Allen, Guy Dixon, Peter Frampton,
Organisation	Savills, Severn Trent Property, Property Planning Consultancy
Description	The site configuration was discussed along with its potential to be delivered as an SRFI. Discussions took place on how the scheme would fit into the context for national and international distribution. Job creation and potential clients of the site were also analysed.
Sites mentioned within study area	Etwall Common (Site 19)

Name	Iain Painting
Organisation	Barton Willmore
Description	A letter was received discussing the merits of the site in the context of the Issues and Options draft of the South Derbyshire Core Strategy.
Sites mentioned within study area	Burnaston Cross (Site 22)

Name	Don Morgan
Organisation	Gazeley
Description	An e-mail was received discussing the likely increase in trains from the proposed 2 a day initially proposed. Further explanations were submitted for the low or middle scores for Contribution to Regional Growth, Rail Access and Road Access.
Sites mentioned within study area	Lounge , near Ashby-de-la-Zouch (Site 29)

Name	David Ward
Organisation	Wilson Bowden
Description	A telephone conversation was held to discuss the merits of connecting this potential site with Site 24 and using the same rail terminal versus the benefits of having a self contained site. Site 21 was originally excluded from the final stages of the study due to a misunderstanding of the status of a rail terminal at this site. Following representation from the developer the project team reviewed the Stage 2 scoring analysis for this location as can be seen on the results page.
Sites mentioned within study area	Sawley Crossroads (Site 21)

Name	Keith Fenwick
Organisation	Alliance Planning
Description	An e-mail was received from the group. Current masterplan proposals which are being promoted by the owner of the Stanton Ironworks site (Saint-Gobain) indicate a mixed use, residential based development. A substantial area of employment land is also identified within the masterplan proposals, and the masterplan has been designed flexibly to allow the provision of a rail based distribution facility of circa 500,000sq ft. It is understood that a planning application based upon the current masterplan proposals will be submitted in outline during 2010, and that the landowner is actively exploring tenant potential.
Sites mentioned within study area	Stanton Ironworks (Site 10)

Name	Vivienne Clements
Organisation	Henry Boot Developments
Description	Following a useful discussion with Matt Taylor, the Derbyshire County Council Project Manager for the site, AECOM spoke directly to the developer, Henry Boot. A detailed conversation and sharing of information took place. The status of the site was provided and discussion took place on two potential locations for rail terminals. The developer has already had talks with at least two potential terminal operators and trains could start operating as early as 2012 in connection with a waste facility also located at the site.
Sites mentioned within study area	Markham Vale (Site 2)

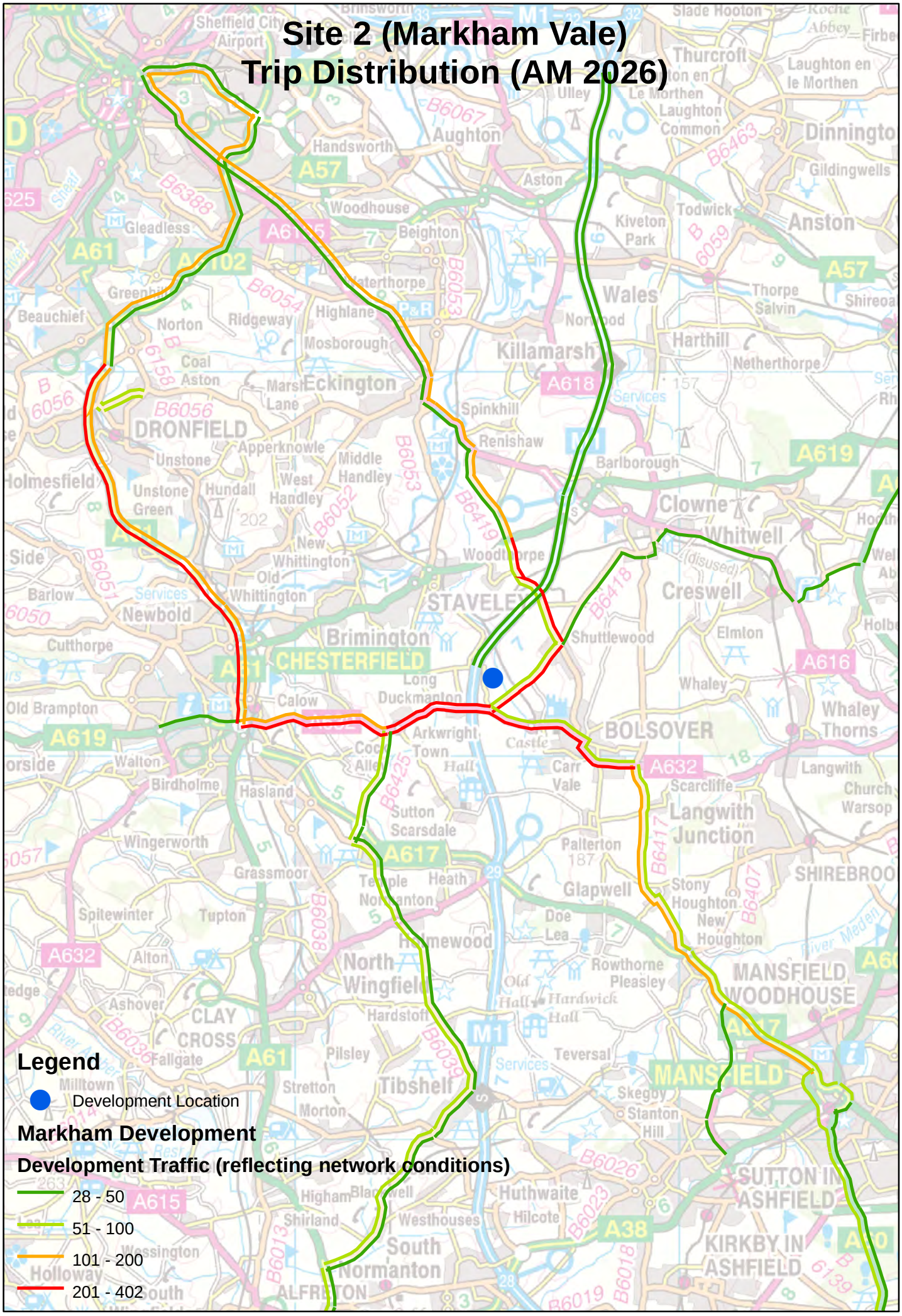
Appendix B -

Capabilities on project:
Transportation

Appendix B -

Markham Vale (Site 2) Trip Distribution AM 2026 – Development Traffic (reflecting network conditions)

Site 2 (Markham Vale)
Trip Distribution (AM 2026)

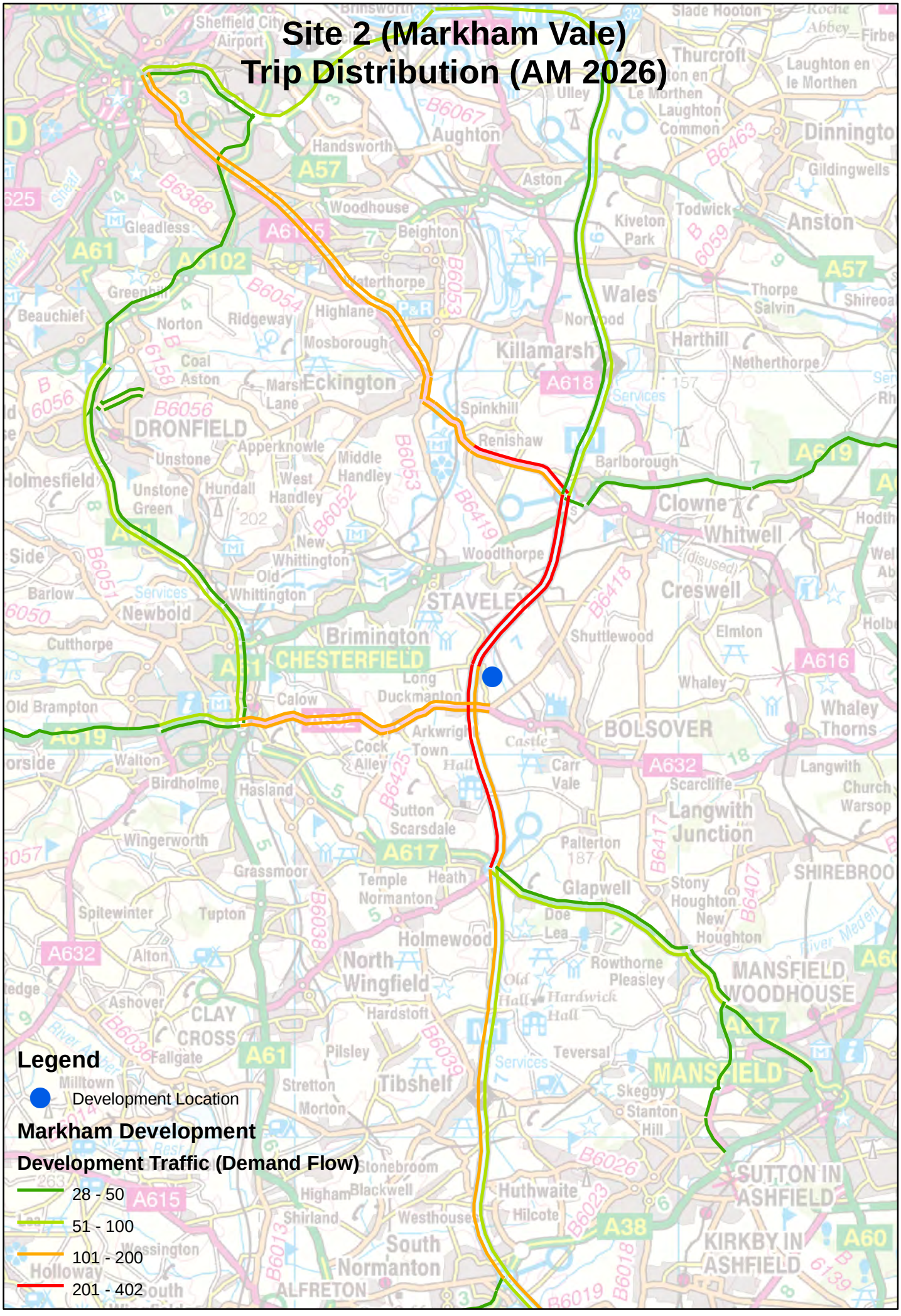


Appendix C -

Capabilities on project:

Appendix C -

Markham Vale (Site 2) Trip Distribution AM 2026 – Development Traffic (demand flow)


Site 2 (Markham Vale)
Trip Distribution (AM 2026)
Legend
Development Location
Markham Development
Development Traffic (Demand Flow)
28 - 50
51 - 100
101 - 200
201 - 402

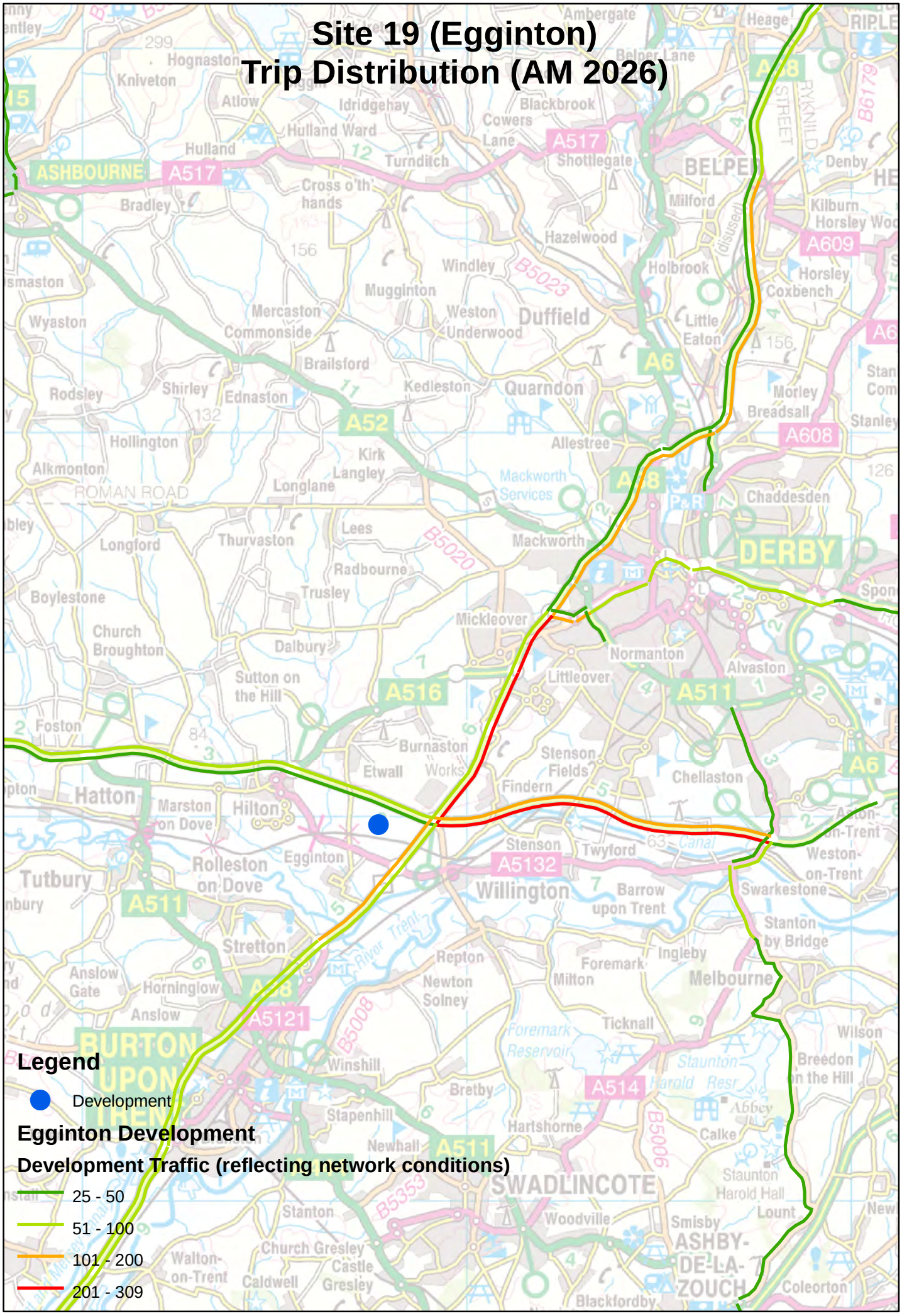
Appendix D -

Capabilities on project:

Appendix D -

Egginton Common (Site 19) Trip Distribution AM 2026 – Development Traffic (reflecting network conditions)

Site 19 (Egginton)
Trip Distribution (AM 2026)



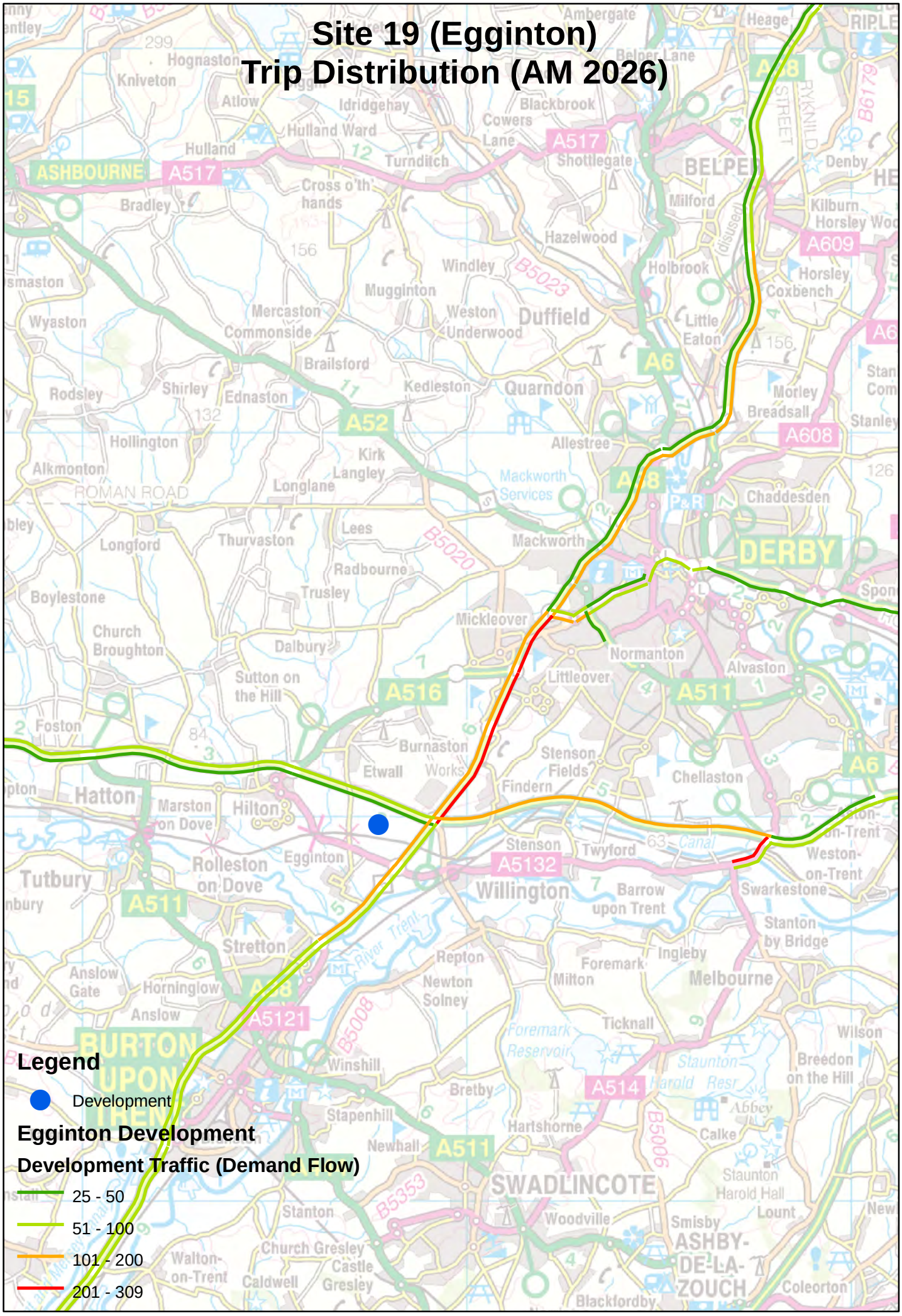
Appendix E -

Capabilities on project:
Transportation

Appendix E -

Egginton Common (Site 19) Trip Distribution AM 2026 – Development Traffic (demand flow)

Site 19 (Egginton)
Trip Distribution (AM 2026)

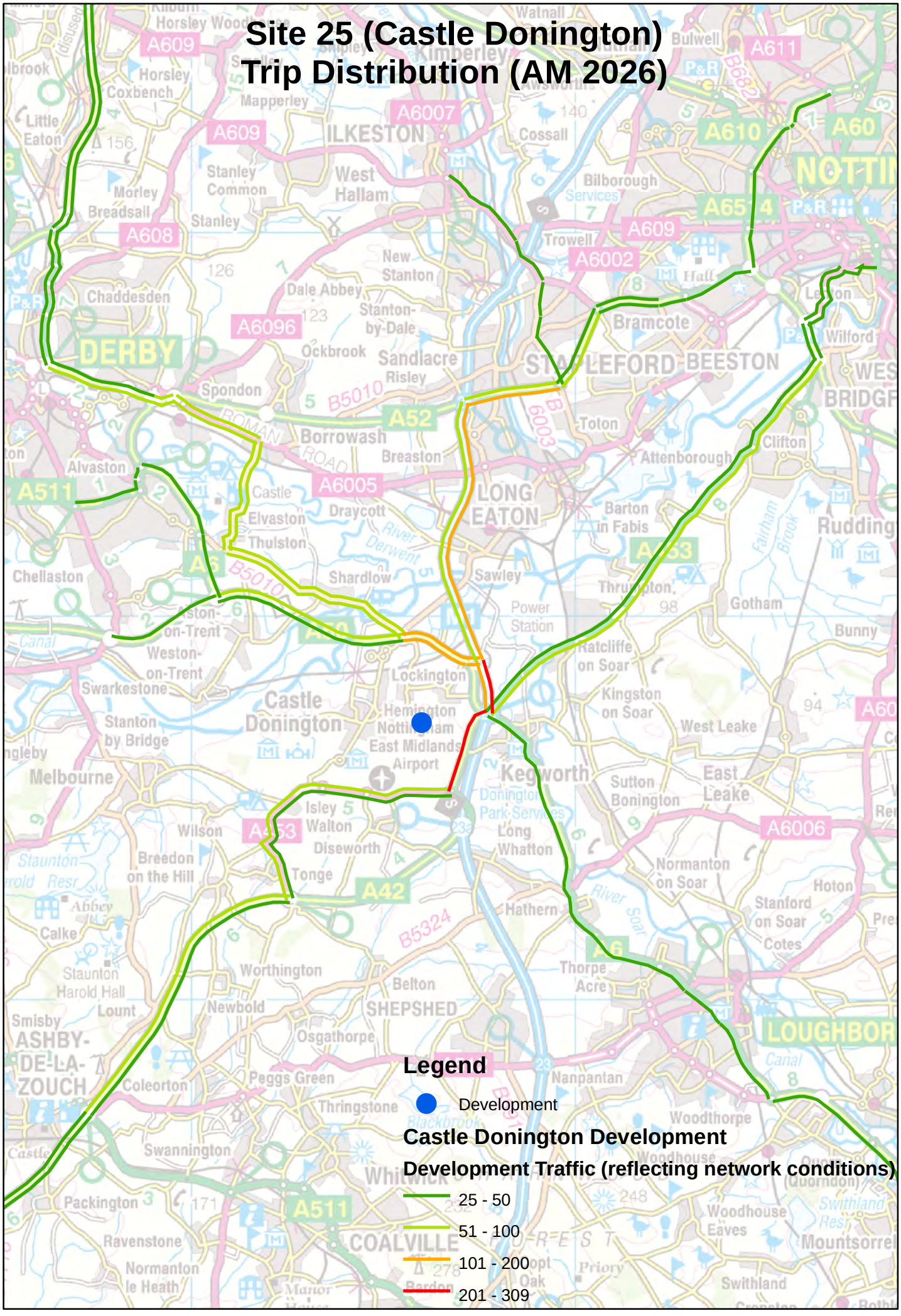


Appendix F -

Capabilities on project:

Appendix F -

Castle Donington (Site 25) Trip Distribution AM 2026 – Development Traffic (reflecting network conditions)


Site 25 (Castle Donington)
Trip Distribution (AM 2026)
Legend
Development
Castle Donington Development
Development Traffic (reflecting network conditions)
25 - 50
51 - 100
101 - 200
201 - 309

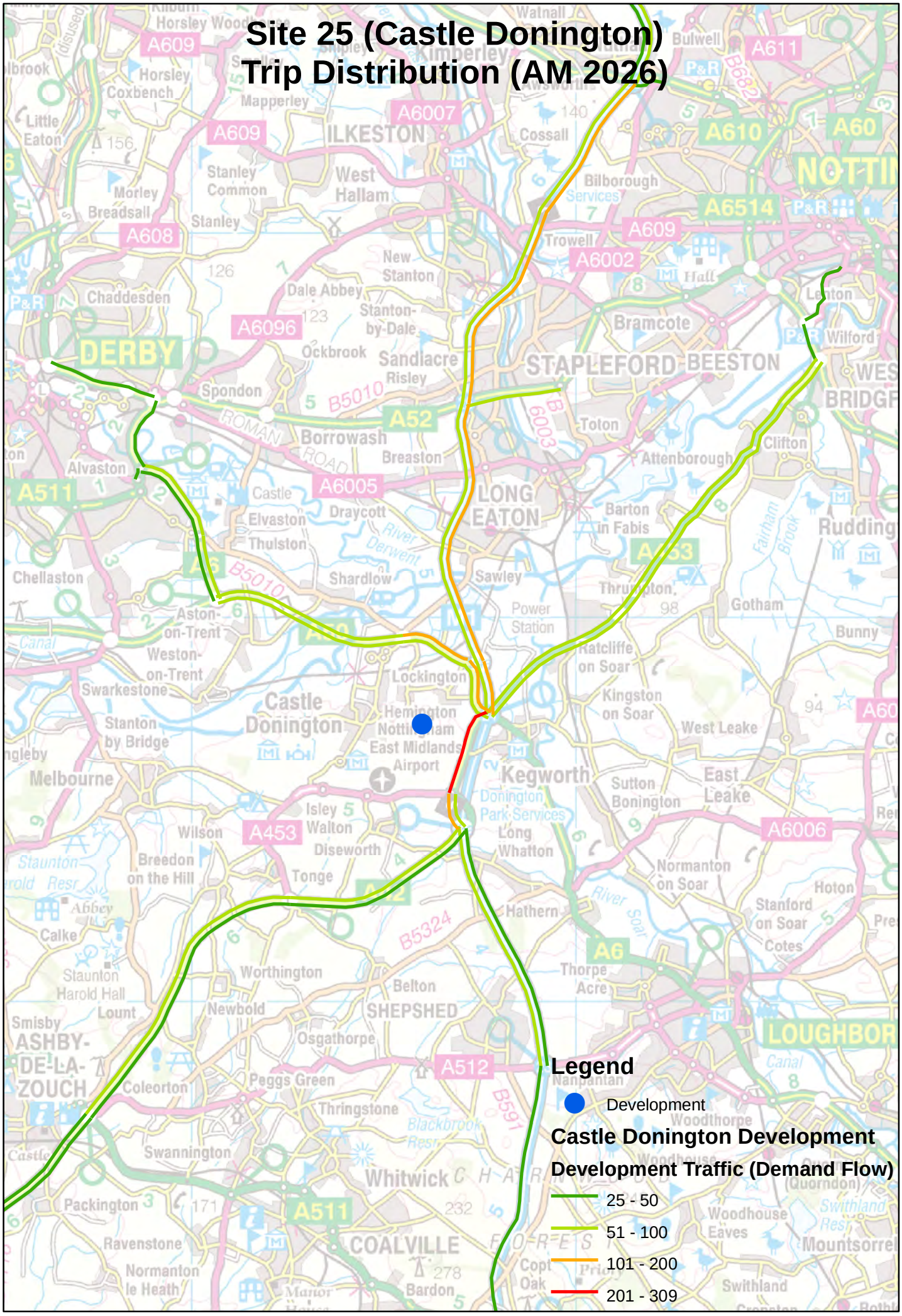
Appendix G -

Capabilities on project:

Appendix G -

Castle Donington (Site 25) Trip Distribution AM 2026 – Development Traffic (demand flow)

Site 25 (Castle Donington)
Trip Distribution (AM 2026)



Glossary

Capabilities on project:

Glossary

BAP – Biodiversity Action Plan

BIFT – Birmingham Inter modal Freight Terminal

CLFS – Cross London Freight Strategy

CPC – Certificate of Professional Competence

CSRGT – Continuous Survey of Road Goods Transport

DaSTS – Delivering a Sustainable Transport System

DFT – Department For Transport

DIAMOND – Development Impact Assessment Model Of Network Demand

DIRFT – Daventry International Rail Freight Terminal

ECML – East Coast Main Line

EDI – Economic Deprivation Index

EMC – East Midlands Councils

EMDA – East Midlands Development Agency

EMDC – East Midlands Distribution Centre

EMRA – East Midlands Regional Assembly

EMSDS – East Midlands Strategic Distribution Study

GSM-R – Global System for Mobile Communicatin

GVA – Gross Value Added

HMA – Housing Market Area

HGV – Heavy Goods Vehicle

IPC – Infrastructure Planning Commission

LDF – Local Development Framework

Lo-Lo – Lift on- Lift off

LTP – Local Transport Plans

MML – Midland Main Line

NDC- National Distribution Centre

NPS – National Policy Statement

RDC – Regional Distribution Centre

RES – Regional Economic Strategy

Ro-Ro – Roll on- Roll off

RFG – Rail Freight Group

RFI – Rail Freight Interchange

RIIG – Rail freight Interchange Investment Group

RNR – Route Network Report

RSS – Regional Spatial Strategy

RTN – ‘Routes to the North’ study

Capabilities on project:

RTS – Regional Transport Strategy

SDS – Strategic Distribution Sites

SFC – Strategic Freight Capacity

SFN – Strategic Freight Network

SIRFT – Sheffield International Rail Freight Terminal

SLW – Single Line Working

SRA – Strategic Rail Authority

SRN – Strategic Rail Network

SRFI – Strategic Rail Freight Interchange

SSSI – Sites of Special Scientific Interest

TaSTS – Towards a Sustainable Transport System

TIF – Transport Innovation Fund

WCML- West Coast Main Line

Bibliography

Capabilities on project:
Transportation

Bibliography

Network Rail Freight Route Utilisation Strategy 2007

(http://www.networkrail.co.uk/browse%20documents/rus%20documents/route%20utilisation%20strategies/freight/freight%20rus.pdf)

Office of Rail Regulation, National Rail Trends (2008-09), page 43

http://www.freightonrail.org.uk/FactsFigures.htm (originally Network Rail, 2008)

Network Rail Freight Route Utilisation Strategy 2007

(http://www.networkrail.co.uk/browse%20documents/rus%20documents/route%20utilisation%20strategies/freight/freight%20rus.pdf)

Office of Rail Regulation, National Rail Trends (2008-09), page 43

http://www.freightonrail.org.uk/FactsFigures.htm (originally Network Rail, 2008)

Office of Rail Regulation, National Rail Trends (2008-09), page 39

Office of Rail Regulation, National Rail Trends (2008-09), page 44

Choosing and Developing a Multi-modal Transport Solution (figure courtesy of Rail Freight Group), page 3

Office of Rail Regulation, National Rail Trends (2008-09), page 5

Strategic Rail Freight Interchange Policy, (Strategic Rail Authority, March 2004), pages 29 & 30

Choosing and Developing a Multi-Modal Transport Solution (August 2008), page 9

ATOC Energy and Emissions Statement 2006/07, page 4 (http://www.atoc-comms.org/admin/userfiles/

Energy%20&%20Emissions%20Statement%20-%20web%20version.pdf

British Transport Infrastructure – Strategic Rail Freight Network: The Longer Term Vision, DfT 2009

Planning Act 2008 Chap 29 http://www.opsi.gov.uk/acts/acts2008/ukpga_20080029_en_3#pt3-pb3-l1g25

Department for Transport -Guidance on Transport Assessment

http://www.dft.gov.uk/pgr/regional/transportassessments/guidanceonta

Department for Transport - *Delivering Travel Plans through the Planning System*

http://www.dft.gov.uk/pgr/sustainable/travelplans/tpp/

http://ec.europa.eu/regional_policy/objective2/index_en.htm

~Network Rail Consultation

Greater Nottingham Aligned Core Strategies (Options for Consultation) February 2010

http://www.nottinghamcity.gov.uk/CHttpHandler.ashx?id=16091&p=0

Network Rail Consultation

http://www.nottinghamshirewildlife.org.uk/nature-reserves/wilwell-farm-cutting-lnr-sssi/?/reserves/wilwell_farm.htm

GAZELEY AND UK COAL LTD - LOUNGE DISPOSAL POINT - LOCAL DEVELOPMENT FRAMEWORK - Core Strategy SUBMISSION - Section Rail Transport 4.20

East Midlands Regional Spatial Strategy, 2009

East Midlands Regional Spatial Strategy, 2009
DfT Logistics Perspective, 2008

National Policy Statement for Ports, 2009

East Midlands Regional Economic Strategy, 2006

East Midlands Regional Freight Strategy, 2005

Greater Nottingham Aligned Core Strategies (Options for Consultation) February 2010

http://www.nottinghamcity.gov.uk/CHttpHandler.ashx?id=16091&p=0

http://www.nottinghamshirewildlife.org.uk/nature-reserves/wilwell-farm-cutting-lnr-sssi/?/reserves/wilwell_farm.htm