

**WEST MIDLANDS REGIONAL ASSEMBLY- REGIONAL PLANNING BODY**

This report has been prepared on behalf of the West Midlands Regional Assembly, the Regional Planning Body, as technical advice to inform the Regional Spatial Strategy Revision process. It is one of a suite of technical reports commissioned to inform the development of spatial policy as part of Phase Two Revision on West Midlands Regional Spatial Strategy.



## **WEST MIDLANDS REGIONAL LOGISTICS STUDY**

### **STAGE 2**

**A Technical Report Prepared for  
West Midlands Employment Land Advisory Group**

by

MDS Transmodal Limited  
Savills  
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### **FINAL REPORT**

September 2005

Our Ref: 204111r\_final

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# The West Midlands Region



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## 1. INTRODUCTION

### 1.1 Background

The Regional Spatial Strategy for the West Midlands (RSS11) was published in June 2004. RSS11 acknowledges that warehousing and distribution is an important and fast growing sector of the regional economy. It also recognised that a better understanding of the sector today and in the foreseeable future was needed before translating the requirements of the sector into land use decisions at a strategic level. RSS11 therefore required the Regional Planning Body (RPB), working in conjunction with other partners, to undertake a study to ensure an adequate supply of Regional Logistic Sites and identify the number, size and broad location of any additional facilities required.

The study has been undertaken in 2 stages. Consultants King Sturge were appointed by Advantage West Midlands in 2004 to undertake Stage 1 of the study. The purpose of Stage 1 was to identify the factors influencing the logistics industry in the short, medium and long term at both the national and regional level, and identify robust criteria for assessing and choosing Regional Logistics Locations and Regional Logistics Sites. The Stage 1 report was completed in June 2004. Consultants MDS Transmodal in association with Savills and Regeneris were commissioned by the Regional Planning Body in January 2005 to undertake Stage 2 of the study.

This report, which builds on the King Sturge work, comprises the conclusions of Stage 2 of the study. In summary, the Stage 2 study brief required the consultants to:

- Review the Regional Logistics Location and Regional Logistics Site criteria as recommended in the Stage 1 study undertaken by King Sturge, and to suggest amendments or additions to these criteria
- Recommend the number, size and broad location of Regional Logistics Sites required by the Region up to 2021
- Provide advice on drafting future RSS policy

Given the content of the study brief, the future needs of the logistics market were an important consideration. However the overarching RSS policy background has also been accounted for. Both the Stage1 and stage 2 reports are technical documents which will be fed into the Regional Spatial Strategy ‘partial review’, the second phase of which is due to commence later this year (the first phase being in the form of the Black Country Study). The views expressed in this report, therefore, are those of the consultants and should not be interpreted as the policies of the RPB.

An economic impact assessment and a sustainability appraisal of the conclusions reached have been undertaken. However, as the conclusions reached in this study concern general broad locations, rather than site specific recommendations, both of these assessments have

been undertaken at a fairly high level (the study brief stated that conclusions with regard to Regional Logistics Sites location could not be made at a site specific level). It is understood that more detailed assessments will be undertaken at the next stage of the RSS review process.

The West Midlands Employment Land Advisory Group (WMELAG) has acted as the steering group for both studies. WMELAG consists of members of various local authorities and other bodies such as the Environment Agency and the West Midlands Business Council.

## 1.2 The Role of Regional Logistics Sites

Policy PA9 in the Regional Spatial Strategy for the West Midlands (RSS11) states that a Regional Logistics Site will provide opportunities for the concentrated development of warehousing and distribution uses. However the policy itself and the text accompanying the policy did not define precisely the envisaged role of Regional Logistics Sites.

Regional Logistics Sites can be expected to perform four roles:

- i) Supporting the delivery of aims and objectives set out in public policy documents at a national level and at a West Midlands regional level, principally the aims and objectives set out in the policies of Regional Spatial Strategy
- ii) Meeting the future needs of the logistics sector through the provision of suitable sites which are able to accommodate the next generation of large distribution centres demanded by the market, demand which cannot be satisfied by the existing general site supply across the West Midlands
- iii) Meeting the future needs of the logistics sector through the provision of suitable sites which offer good quality access to the railway network, accommodating distribution centres where (by virtue of their supply chain characteristics) some flows of goods show a propensity to use rail freight and those logistics operators who will in future demand access to rail freight services for some of their transport requirements
- iv) To generate the benefits which result from concentrating logistics activity at one site

### Policy Aims

Policy PA9 Regional Logistics Sites in RSS11 cannot be considered in isolation from the other policies in RSS11, or wider policies at a regional and national level. Indeed this is stated up-front in Paragraph 1.1 of RSS 11: *'it is important to consider the document as a whole. Many policies are cross cutting and therefore apply across all other policy areas'*. Policy PA9 consequently forms part of a coherent framework for regional development. On this basis therefore, the first key role of Regional Logistics Sites must be supporting the

delivery of aims and objectives set out in the policies of RSS11, together with other policies at a West Midlands and national level.

Reference at this stage should be made to the relevant Prosperity for All policy statements, which are presented in Appendix 2 of this report. These show that a key aim and objective of RSS11 policy is improving the competitiveness and prosperity of the region's economy. By implication, therefore, improving the West Midlands' competitive position as a logistics location is also a key aim and objective of RSS11 policy, given that the logistics industry is a major sector of the regional economy in terms of employment and wealth generated. On this basis, a key role of Regional Logistics Sites is maintaining and enhancing the competitive position of the West Midlands as a logistics location i.e. supporting the delivery of the Prosperity for All policies.

Improving the West Midlands' competitive position as a logistics location can only be achieved through the provision of sites and facilities which address future market need. Consequently, a key output from this study will be the identification of the spatial factors which will allow this policy objective to be met and how these can be delivered through Regional Spatial Strategy, in particular the Logistics Locations and Sites selection policies. Changing conditions within the logistics market, in UK Government policy and in other regions could potentially reduce the competitive position currently held to date, and render other regions more competitive. Any revision of RSS policies should therefore be seen as a means of addressing potential threats to the competitive position of the West Midlands.

Policy PA1 also states that developments proposed on the edge of Major Urban Areas or on Greenfield sites should meet the following criteria:

- No suitable alternatives on previously developed land
- Capable of being served by rail or high quality public transport
- The development respects the natural environment

Any recommended revisions to the Regional Logistics Sites selection criteria and a suggested phasing strategy must also support this section of Policy PA1.

Regional Logistics Sites will also have a role in supporting the delivery of a number of other RSS11 policies. These include:

- The specific policy for freight (Policy T10)
- Policy T2 (Reducing the need to Travel)

The relevant statements from these policies are presented in Appendix 2 of this report. However it is worth emphasising at this stage Policy T10 in particular, which encourages the use of rail for freight, encourages the development of new rail freight terminals and

encourages developments that generate significant amounts of freight in locations that have good access to the rail network.

A number of national policy documents provides support for an increase in the amount of freight that is moved by rail in general, and in particular sets out policy with respect to new rail linked distribution facilities in terms of their location, form and structure. Given that regional policy is directed by broad policies at a national level, it follows that Regional Logistics Sites have a role in supporting the policies contained in certain key documents, such as the *New Deal for Transport and Sustainable Distribution*. Both documents encourage the use of rail freight and the allocation of sites for suitable new developments which can be served by rail. Reference should also be made to the *SRA Freight Strategy* and *Strategic RFI* policy documents, the relevant statements in which are described in Appendix 2. Regional Logistics Sites consequently have a role in delivering wider national policies.

## Scale

As stated above, a key RSS policy objective is improving the West Midlands' competitive position as a logistics location. This can only be achieved through the provision of sites and facilities which address future market need. A key market trend identified in this report is increasing demand for larger warehouses. Therefore a key role of Regional Logistics Sites will be meeting this demand through supplying the large plots, of an appropriate layout, which will be required.

Appendix 4 of this report provides an analysis of the floor space of new-build distribution centres in the West Midlands since 1996. The results of this analysis show that the general trend is towards larger warehouses. Between 1996 and 1999, 28 new warehouses were built in the region, but only 5 of these new facilities were over 25,000m<sup>2</sup> (approx 250,000 sq ft) in size. This equates to 31% of all new floor space being in units over 25,000m<sup>2</sup>. However since 2000, of the 48 new warehouses which have been built in the West Midlands, 23 were buildings greater than 25,000m<sup>2</sup>. This equates to 75% of all new floor space being in units over 25,000m<sup>2</sup>. Sections 3.2 to 3.5 below consider the changes within the logistics market which are driving this demand for larger buildings.

In addition to this general trend, very large warehouses of up to 100,000m<sup>2</sup> (approx 1 million sq ft) can be expected to be demanded by the market in the near future. Since 2000, 5 new warehouses built in the region have been larger than 60,000m<sup>2</sup> (approx 600,000 sq ft). On the basis that the floor space of a distribution centre occupies 40% of a total site footprint, a single 100,000m<sup>2</sup> warehouse alone will require a plot size of around 25 Hectares. However an analysis of existing general site supply (Section 6.3) suggests that the availability of plots of this size in the region is very limited.



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## Rail linkage

The ability to gain access to rail freight services is likely to become an increasingly important requirement for most medium to large scale logistics operations. Given the need to supply sites which address future market need, to enhance the West Midlands' competitive position (RSS policy), a key role of Regional Logistics Sites will therefore be meeting this future market need by providing access to the railway network.

To date, road haulage has been the dominant mode of transport to and from distribution facilities. The road haulage industry has provided the cost efficiency, quality and flexibility required by the logistics market, primarily a result of road haulage being an open, competitive private sector industry. However a number of EU/Government policy initiatives which will be introduced over the next few years and other factors are likely to increase the relative costs of transporting goods by road in the medium to long term. These are discussed in Section 3.4 below.

As a result of these policy initiatives and other factors, logistics operators will want to adopt more cost effective transport solutions in order to remain competitive. Consequently, many logistics operators are increasingly seeking rail freight solutions for some of their transport requirements. On a practical basis, this means logistics operators continuing to use road haulage as the main mode of transport, as it will remain the most practical and cost effective form of transport for most flows of goods, but with the ability to utilise rail freight for some flows from the same location, when the volumes involved and the length of haul means that it provides the most practical and cost effective option.

This increasing role of rail will be aided by other changes in market conditions, notably import substitution and purchasing trends within the retail sector. These factors are discussed in Sections 3.2 and 3.3 below. Briefly, greater volumes of goods are originating from fewer locations. As rail freight operates at its most economic when goods are moved in full length trains, the increasing concentration of goods on fewer sites should generate the required volumes to operate full length train services. As a large proportion of rail freight's costs are fixed, the costs per unit moved are consequently reduced.

However the key factor which renders rail freight competitive compared with road transport, both from a cost and service quality perspective, is the ability to locate distribution centres on rail linked sites. The ability to locate on some form of rail connected distribution facility will therefore become a key requirement of the logistics market over the medium to long term. Regional Logistics Sites have an important role in meeting this market requirement.

## Concentration

There are also a number of benefits which result from concentrating logistics activity at specific sites, compared to dispersing logistics activity to individual sites. These benefits include:

- Efficiency of the planning system. Approximately the same amount of effort, time and expense can be incurred in trying to seek planning permission for a 50 hectare site and a 150 Hectare site.
- Infrastructure costs. Economies of scale are be gained from any infrastructure which is required.
- The concentration of logistics activity at specific sites maximises the use of infrastructure. A key aim of national policy is that infrastructure should be used to the full before new capacity should be adopted. Goods vehicle activity can be concentrated at specific sites away from incompatible land uses, where the infrastructure should be able to accommodate large numbers of vehicles with the minimum of environmental impact
- Concentrating activity at specific sites avoids littering the landscape with a large number of individual schemes.
- The concentration of logistics employment at specific sites provides the critical mass required to render public transport services viable for employees. This benefit is linked to the role of Regional Logistics Sites in supporting the delivery of RSS11 policies. Policy T5 of RSS11 stated that the development of public transport is a key element of the Regional vision.

Regional Logistics Sites consequently have a role in delivering these wider benefits.

This fourfold role for Regional Logistics Sites has formed the background against which the analysis for this study has been undertaken, and informed the consequent findings and recommendations.

### 1.3 The Importance of Logistics to the Regional Economy

The manufacturing sector has traditionally played a key role within the West Midlands economy. Over recent years, however, the number of people employed in the manufacturing sector has declined at a steady rate, and consequently its contribution to the regional economy has also fallen. The table below provides details on the number of employees in the manufacturing sector both within the West Midlands and nationally.

**Table 1: Number Employed in Manufacturing West Midlands and Great Britain**

Year	Manufacturing Employees Great Britain (000s)	% GB Workforce	Manufacturing Employees West Midlands (000s)	% West Mids Workforce
1995	4,725	18.4	618	26.5
1996	4,813	18.5	626	26.8
1997	4,818	18.2	635	26.9
1998	4,793	17.9	630	26.3
1999	4,737	17.5	628	26.0
2000	4,578	16.7	595	24.8
2001	4,405	15.9	557	23.3
2002	4,268	15.3	550	22.6
2003	4,115	14.6	535	21.9
2004	3,802	13.4	486	20.0

Source: Office National Statistics (Nomis)

In 1995, approximately 618,000 people were employed in the manufacturing sector in the West Midlands, equating to 26.5% of the region's workforce. While the manufacturing sector is still the largest employer in the region, by 2004 the number employed had declined to around 486,000 (20% of the region's workforce). This pattern is also reflected at a national level, with the number employed in manufacturing falling from around 4.7 million in 1995 (18.4% of the workforce) to 3.8 million in 2004 (13.4% of the workforce).

The process of 'import substitution' is the major cause of these trends, whereby goods are being sourced from international markets, particularly the Far East, rather than being produced domestically. Section 3.2 discusses the main factors which are behind import substitution. The long term decline of the manufacturing sector, both at a regional and national level, is likely to continue. The future of the manufacturing sector within the Region's economy is likely to be at the 'high tech' and high value end of the market rather than in volume production of general consumer goods. Employment density at future manufacturing sites will consequently be lower compared to the high volume factories of the past.

Clearly, an economic and planning strategy based on an expanding high volume manufacturing sector is unlikely to succeed. Over time, new jobs will need to be created in the Region to replace those which are being lost in the manufacturing sector. In this respect, the logistics sector can play an important role for three reasons.

Firstly, new logistics developments can generate significant levels of new employment. Section 9 of this report provides a labour market impact assessment of the main conclusions reached in this study with regard to number and location of Regional Logistics Sites. The impact assessment suggests significant net additional employment at both a local and regional level. In addition, employment densities at logistics facilities are comparable to

those at traditional large high volume manufacturing sites. A large logistics development can be expected to employ:

- 40 full time equivalent distribution centre employees per Hectare
- 5 HGV drivers per Hectare

Secondly, the wage rates enjoyed by logistics sector employees are similar to wages rates in the manufacturing sector and in many cases are higher than wages rates in the service sector. The table below describes average gross wage rates for various logistics sector functions and for a number of other occupations.

**Table 2: Gross Weekly Earnings in Logistics and Other Occupations**

Type of Employment	Gross Weekly Earnings
<b>Logistics</b>	
Distribution Centre Manager	£846
Transport Manager	£594
Section Head	£404
Transport/Warehouse Supervisor	£374
Mobile Machine Drivers and Operatives	£352
Transport drivers and operatives	£341
Stock Control Clerk	£338
Elementary Warehouse Operatives	£304
Despatch Clerk	£299
<b>Other Occupations</b>	
Process, Plant and Machine Operatives	£367
Administrative Occupations General	£309
Elementary Administrative Occupations	£292
Leisure Occupations	£292
Customer Service Occupations	£278
Sales Assistants and Retail Cashiers	£265

Sources: Croner Rewards Survey and ONS (Nomis)

The table shows that lower grade positions within the logistics sector (Despatch Clerks, Warehouse 'pickers') attract an average gross weekly wage of around £300 per week. HGV drivers and forklift truck operatives can attract a gross weekly wage of approximately £350. Supervisory positions show an average gross weekly wage of between £370-£400. These wages are similar in nature to manufacturing sector employees. By contrast, many service and administrative jobs of a comparable position attract lower average gross weekly wages. Customer service occupations, which would include 'call centre' positions, offers a gross weekly wage of around £278.

Finally, a commonly held perception of the logistics sector is that it creates low value/low skill employment comparable to ‘supermarket shelf stacking’ This perception is incorrect, and many positions within the sector now require a variety of skill levels, including the ability to use IT systems.

Logistics has traditionally been seen as the management of transportation, warehousing and distribution. However distribution centres are now responsible for management of the total flow of the distribution channel from the supplier to the ultimate user. Customer demand for quality products, quality service and increasing value has increased the importance of the logistics function, and it has made a corporate transition from a clerically managed activity to a strategic ‘cost controlling’ function, with organisations becoming increasingly focused on its ability to provide sustainable competitive advantage. Increasing demands made by final customers in terms of product availability and variety, and rising competitiveness, particularly between retailers, are raising the levels of skills needed in the logistics sector. As a result, Regional Logistics Sites are likely to involve high technology multimodal methods of working, and will be utilised by significant regional or indeed national employers. This means that goods handling and storage occupations will require skill levels in line with NVQ level 2, including literacy, numeracy and IT skills.

On this basis therefore, an expanding logistics sector will be able to make an important contribution to the future prosperity of the regional economy. A growing logistics sector will be able to replace many of the jobs currently being lost in the manufacturing sector. Such employment, according to the table above, is comparable in terms of wage rates to positions in manufacturing.

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## **STAGE A – REVIEW OF LOCATION AND SITE CRITERIA**

The aim of Stage A of the study is to review the Regional Logistics Location and Regional Logistics Site criteria as recommended in the Stage 1 study undertaken by King Sturge, and to suggest amendments or additions to these criteria.

## 2. REVIEW OF RELEVANT POLICY AND STUDIES

It is important that the review of the Regional Logistics Location and Regional Logistics Sites criteria is undertaken against the background of current planning policy, other relevant guidance and the conclusions/recommendations emerging from key studies. Section 1.2 stated that one of the key roles of Regional Logistics Sites is supporting the delivery of aims and objectives set out in public policy. As a result, the policy agenda will need to be taken into account during the review of the location and site criteria and the assessment of future Regional Logistics Sites demand. The review is presented in detail within Appendix 2 of this report, but the most relevant policies and documents are summarised below.

### Regional Spatial Strategy for the West Midlands (RSS11)

The Spatial Strategy can be broadly summarised as enabling all parts of the Region to sustainably meet their own needs, in a mutually supportive way. Protecting and enhancing the Region's environmental assets, and where appropriate making economic use of them, together with prudent use of natural resources, is a core element of this and will be particularly important in guiding the nature and location of development and improvements at sub-regional and local levels.

RSS11 identifies:

- Logistics as an important sector of the regional economy and that the enhancement of the West Midlands' competitive position as a logistics location will be a critical part of the success of the Spatial Strategy (Prosperity for All).
- The importance of warehousing and distribution to the regional economy within *Policy PA9 (Regional Logistics Sites)* and the provision of RLS to provide opportunities for the concentrated development of warehousing and distribution uses.
- In *Policy T10 (Freight)*, how the efficient movement of freight is a key component of a successful regional economy.
- In *Policy T2 (Reducing the need to travel)*, that developments which generate significant travel demands should be located where their accessibility by public transport is maximised and to encourage those developments which could generate significant freight to locate close to suitable intermodal freight terminals.

## West Midlands Regional Freight Study

The study identified that:

- The crucial factor in rendering rail freight cost competitive against other modes is the availability of intermodal terminal capacity and distribution warehousing which is located on rail linked sites;
- A need for additional warehousing on rail linked sites generally in the West Midlands, particularly to the north and west of the West Midlands conurbation, as a means of attracting greater volumes of rail freight;
- A 'critical mass' of warehouse floor space is required on large rail linked distribution sites in order to attract a number of rail freight services to/from a wide range of destinations;

A Recommended Freight Strategy for the West Midlands was the main output from the study. The recommended strategy included:

- Support for an increase in rail freight terminal capacity and the amount of warehousing that is located on rail linked sites in the West Midlands region, particularly on sites to the north and west of the West Midlands conurbation.
- The adoption of a criteria based approach to assessing potential sites, and also a recommended list of criteria.

## Regional Logistics Study Stage 1

- Provided a picture of the logistics sector in the short, medium and long term in the Region
- Recommended a set of criteria for assessing broad sub-regional areas where demand for logistics/distribution facilities is required or will be required in the future (Regional Logistics Locations),
- Recommended a further set of criteria for assessing specific sites (Regional Logistics Sites).

## Regional Employment Land Study

RELS provides data and analysis of the Region's land supply and take-up. Data is provided by local authorities and county councils and is collated by the Joint Data Team (JDT).

- The executive summary identifies the employment land availability, land available for B8 use, and land which has access to the railway network.
- Out of the total supply of 3,747 ha, 1,453 ha (39%) was recorded as readily available.
- Within the RPG Employment Land Portfolio it is identified that Hams Hall remains the only Regional Logistics Site in the West Midlands with a significant amount of land



available: 30 ha of readily available land and 45 ha of not readily available land as at April 2003

- The majority of readily available land with redundant/mothballed rail access is limited to and remains concentrated on the ProLogis Park, Coventry (15 ha) and Hams Hall (30 ha). In addition, the Metropolitan area and Staffordshire contain significant areas of readily and not readily available sites with potential for rail access.

### **A Freight Strategy, SRA 2001**

- Identifies the need for additional rail freight terminal capacity
- Supported an increase in intermodal handling capacity and the amount of warehousing that is rail connected
- Sets out a number of criteria which should be used in establishing the suitability of sites proposed as rail freight terminals
- States that it is important that new rail terminals have direct access to a route which already offers a generous loading gauge, or one which the SRA is committed to delivering
- Identifies the key role to be played by regional and local planning authorities, particularly in facilitating the provision of a substantial increase in rail-connected warehousing

### **Strategic Rail Freight Interchange Policy, SRA 2004**

- States that Strategic RFIs are large distribution parks, comprising intermodal facilities serving distribution centres located within the park and others in the wider region (essentially large scale distribution parks which happen to be rail linked, and not simply rail freight terminals)
- States that Strategic RFIs will be at least 40 hectares in size, and will be located with good access to the primary road network, and with high quality links to the rail network
- Identified the north and west of the West Midlands Region as lacking RFI capacity.
- States that Regional planning policy should identify suitable areas where strategic RFIs could or should be developed

### 3. LOGISTICS MARKET: KEY ISSUES AND MARKET TRENDS

Appendix 3 to this report describes how the logistics market is currently structured, how it operates and the key players involved. To undertake a proper and robust assessment of the Regional Logistics Location and Regional Logistics Site criteria (as recommended in the Stage 1 study) requires an understanding of the trends and changing market conditions within the logistics/distribution market. It is these changing market conditions which ultimately drive the direction of the market and will determine its requirements over the medium to long term. The locational requirements of the market, the competitiveness of the Region as a logistics location, and land use planning policy at a regional and sub-regional level, each have spatial implications.

To date, the West Midlands region has held a competitive position in the UK as a location for both National Distribution Centres (NDCs) and Regional Distribution Centres (RDCs). As a result a significant logistics sector presence has developed and it is a major employer and generator of wealth in the region. This was demonstrated in the Stage 1 study report, which presented a considerable amount of information and data to support this position.

In the case of NDCs, the region's competitive position has resulted from, among other factors, its central position in relation to the main producing and consuming markets in Britain and its good connectivity to those markets due to its location at the hub of the national motorway network. By locating an NDC in the Midlands, it is possible to round trip by goods vehicle to/from most other regions in Britain within a HGV driver's daily driving time restriction (9/10 hours) i.e. from both deep sea ports and to RDCs in other regions. RDCs are located close to the main conurbations of Britain, and consequently many of the major retailers have established RDCs in the region e.g. Sainsbury's at Hams Hall and Safeway (now Morrisons) at Tamworth. The availability of suitable sites at appropriate locations required by the market has also been a major factor contributing towards the Region's current competitive position.

An interesting point to note is that most retailers have only established one RDC to serve both the West and East Midlands conurbations from the same site (e.g. Asda at Magna Park and Tesco at Hinckley serve both West and East Midlands outlets). This implies that any revision of RSS which leads to a reduction in the region's competitiveness compared to the East Midlands would probably result in new facilities being located in the East Midlands. Conversely a strengthening of the West Midlands position would result in the opposite position. It should also be noted that regions not traditionally associated with national distribution, such as the A1 and M62 corridors, are increasingly becoming popular areas for NDCs.

### 3.1 West Midlands Distribution Centre Trend Analysis

An analysis of the trends in distribution centre location and size has been undertaken for the West Midlands region. The full analysis is presented in Appendix 4 to this report, with the key points summarised below.

The general trend is towards larger warehouses. Between 1996 and 1999, 28 new warehouses were built in the region, but only 5 of these new facilities was over 25,000m<sup>2</sup> in size. This equates to 31% of all new floor space being in units over 25,000m<sup>2</sup>. However since 2000, of the 48 new warehouses which have been built in the West Midlands, 23 were buildings greater than 25,000m<sup>2</sup>. This equates to 76% of all new floor space since 2000 being in units over 25,000m<sup>2</sup>. Sections 3.2 to 3.5 below considers the changes within the logistics market which is driving this demand for larger buildings.

Demand for distribution space in excess of 10,000 m<sup>2</sup> is concentrated in the three areas of:

- M42/A5 Tamworth & Atherstone (which includes Hams Hall)
- M6/M69 - Nuneaton, Coventry & Rugby; and
- M6 - Birmingham & Solihull

These three areas account for 64% of the total floor area take up in excess of 10,000m<sup>2</sup> and 60% of total floor area take up for units in excess of 25,000m<sup>2</sup> in the period 1996 – 2005. The A38/A5/M6 toll area and M6 North Staffs area are also key regions in terms of take up with 11% and 8% of total new build B8 space in excess of 10,000m<sup>2</sup> and 11% and 7% in excess of 25,000m<sup>2</sup> respectively.

The analysis of the total new build B8 space, counting all distribution space in excess of 10,000m<sup>2</sup>, shows that the M42/A5 Tamworth and Atherstone, M6/M69 Nuneaton, Coventry and Rugby areas continue to dominate with 62% of total take up in excess of 10,000 sq ft. The areas of M40 South Warwickshire; A5 & A49 Shropshire; M5 South Worcestershire and A49 Hereford & North Worcester have seen limited demand; where take up has occurred it has principally been driven by the need to service the local area to which it relates.

The analysis also considers speculatively developed space in excess of 10,000m<sup>2</sup> across the West Midlands region from 1994 – 2005. Prior to 2000, no building above 15,000m<sup>2</sup> had been speculatively developed. The development of speculative space is reactive to demand trends in the B8 markets. The clear trend for larger warehouse space has therefore resulted in larger speculatively developed buildings. Development of speculative buildings of 30,000-40,000m<sup>2</sup> are now more prevalent in and around the West Midlands region. For example, buildings of 28,150m<sup>2</sup> at Prologis Bermuda Park, Nuneaton; 37,160m<sup>2</sup> at Lymedale Park, Newcastle under Lyme; and 28,800m<sup>2</sup> at Prologis Park, Coventry have all been built in 2004/5.

### 3.2 Import Substitution

An increasing proportion of goods consumed in Great Britain are being sourced from international markets, particularly the Far East, rather than being produced domestically. This is a process called import substitution, and has been driven by a number of factors:

- The gradual lowering of international trade barriers
- The emerging fast growing economies of the Far East, such as China, which have been based on a strong manufacturing sector. Such countries are able to manufacture goods in large volumes at a much lower cost (even after shipping has been taken into account) compared to UK manufacturers, due to the availability of low cost labour. Many 'western' manufacturers have established factories in these countries
- In the competitive UK retail environment, many retailers have switched to sourcing goods from cheaper Far Eastern suppliers in order to remain competitive
- The diversification of the main grocery retailers into non-food lines. These non-food lines, which are normally marketed as being low cost or value for money products, are often sourced from the Far East
- Increasing demand in general due to a strong economy and growing levels of disposable incomes

Table A1 in Appendix 1, which shows historic trends in UK retail consumption and domestic manufacturing output indices since 1994, is evidence of this position. Total retail consumption, in terms of volume, has grown by 42% over the time period 1994-2003, representing a mean year on year growth rate of 4%. The position in the non-food sector i.e. clothes, electrical goods etc. is one of even greater growth. Total non-food retail consumption has increased by 57% over this time period, a mean year to year growth rate of 5.1%. However over the same time period, domestic manufacturing output has only grown by 4%, with declining output in 2001 and 2002. Essentially the 'gap' between retail consumption and domestic manufacturing output is being filled by imports.

Further evidence to support this trend is provided by unitised trade volumes through the ports and the Channel Tunnel. Table A2 in Appendix 1 shows container and roll-on roll-off HGV imports from 1994 to 2003. Total lift-on lift-off container imports have grown by over 750,000 units since 1994, a total growth of 55%, and a mean year to year growth rate of 5.1%. Roll-on roll-off HGV imports have grown at a slower rate, by 23% in total since 1994, a mean year to year rate of 3.6%.

### 3.3 Purchasing Trends in the Retail Sector

The traditional approach in logistics has been for the organisation in the supply chain despatching goods to organise and initially pay for the actual movement of goods to the next stage in the supply chain. This can be undertaken in-house or by a contracted logistics operator (see Appendix 3). However the cost of the transport is ultimately paid by the

receiver of the goods, as the purchase price of the goods will include both the cost of the actual goods plus the cost of the transport.

However the emergence and likely continued dominance of large retail chains, such as Tesco and B&Q, is altering this traditional structure. These large volume buyers of goods are increasingly taking over responsibility for managing the inward transport of goods from suppliers' distribution centres/factories to their own RDCs/NDCs. This is a system known as collecting 'ex works' based upon 'factory gate pricing'. Briefly, the producer/supplier of the goods will charge only for the goods and not the delivery costs. The retailer will manage the collection of the goods. This approach can provide a number of benefits, particularly to these large volume retailers:

- It gives the retailer a greater control over the inward flows of goods to their distribution centres, particularly in terms of delivery times and quantities.
- With the retailers' large purchasing power they can negotiate more competitive rates for the transport compared to their producers/suppliers.

At a simple level, road vehicles returning empty to a distribution centre after a delivery to a store can be utilised to collect inward supplies (back load), thus ensuring that HGVs are run 'full' for the majority of trips. In some cases, the process involves consolidating goods collected ex works at 'consolidation centres', before onward trunking to RDCs (undertaken by retailer contracted hauliers). For example, goods ultimately destined for a Scottish store, but originating at suppliers in southern England, are consolidated at a distribution centre in southern England. They are then trunked to an RDC in Scotland or direct to store in Scotland. Some retailers are also collecting goods from ports, with the overseas producer being responsible for shipping to the port from where the retailer takes over responsibility for onward delivery, and from mainland Europe; the transport of fresh produce from Spain to Britain is increasingly undertaken in goods vehicles organised and paid for by retailers.

The large retail chains experienced large growth rates during the 1980s and 1990s, principally driven by the development of 'out of town' retail parks. However, stricter planning regulations over the past few years have resulted in the retailers seeking new revenue streams in order to continue sales growth. One area where this has been achieved is in the grocery sector, where the big grocery retailers have been diversifying their product ranges and expanding into non-food lines. Table A1 in Appendix 1 again is evidence of this trend. These goods are often sourced from international markets, and therefore need to be consolidated at a distribution centre prior to delivery to store.

### **3.4 Increasing Road Transport Costs**

Road haulage is the dominant mode of transport to and from distribution facilities in the general cargo/Fast Moving Consumer Goods (FMCG) markets. The road haulage industry has provided the cost efficiency, quality and flexibility required by the logistics market, primarily a result of road haulage being an open, competitive private sector industry (though

some would argue that a favourable fiscal regime, among other factors, has also aided this). However, a number of EU and Government policy initiatives which will be introduced over the next few years, and increasing levels of congestion, are likely to increase the relative costs of transporting goods by road in the medium to long term. A number of these policies and other factors contributing to this situation are briefly discussed below.

## **Congestion**

Congestion on the highway network is a growing problem for the logistics industry, especially since the adoption of 'just-in-time' delivery systems by manufacturing organisations such as the automotive industries and retailers. Late deliveries can create major problems for deliveries into distribution centres and the freight industry increasingly has to bear the financial penalty for late deliveries. An analysis of vehicle journey times on the West Midlands highway network, undertaken for the West Midlands Regional Freight Study using data from in-vehicle satellite navigation systems, identified a number of key corridors on the Region's highway network which suffer from high levels of congestion on a daily basis.

Although forecasts vary, traffic levels will continue to rise as the country's economy grows and the population increases. Work undertaken by the DfT suggests that traffic might grow by about a quarter between 2000 and 2010. Clearly, increasing congestion will result in higher road transport costs, as operators factor in additional times for journeys.

## **Lorry Road User Charge**

The Government announced in November 2001 its intention to reform the current charging and taxation systems for goods vehicles (vehicle excise duty and fuel duty) operating in the UK. After examining a number of alternatives, the Government opted for a distance based charging scheme, the Lorry Road User Charge (LRUC). The LRUC was intended to involve applying per kilometre charges to all trips made by goods vehicles in the UK, by recording the distance travelled by an individual vehicle using a GPS tracking device (on-board unit) installed in the vehicle. This distance information was to be transmitted to an administration centre on a regular basis, where the charge was to be calculated, and the vehicle's operator billed. Initially there were to have been two rates, for motorways and all other roads. The Government was planning to introduce the LRUC in 2008. This scheme has now been shelved in favour of a more comprehensive scheme of road pricing to be introduced in around 10 years time. Given that new warehouses constructed from now onwards will have to spend much of their lifetime operating under such a scheme, it is worth considering its impact.

A key objective of introducing a reformed charging system was to ensure that all lorry road users in the UK, irrespective of their nationality, contribute on an equal basis towards the costs they impose in the UK. Consequently all goods vehicles, including non-British registered vehicles, were to be required to have an on-board unit fitted and pay the LRUC. However, recognising that the UK haulage industry is already paying towards the cost of

using UK roads, the Government stated it would ensure the LRUC would not increase costs for the UK haulage industry by making off-setting tax reductions at equivalent levels to the LRUC. This was to be achieved by reducing the rate of duty that was levied on diesel used by goods vehicles coming under the scope of the proposed LRUC system. However for non-British registered vehicles operating on cheaper fuel purchased on the Continent, the per-kilometre charges would have imposed additional costs.

While the initial objective was to develop a system which would enable non-British hauliers to be charged for using UK roads, it was clear from a number of policy documents issued that the Government saw the LRUC as a potential means of addressing a number of other key issues. In particular the Government would like to see all road users pay their true 'environmental impact' costs. The Government is also interested in implementing a road charging structure which could help tackle congestion (i.e. using vehicle taxation as a demand management tool). In most other transport sectors where capacity is fixed in the short/medium term, pricing mechanisms are used to curtail demand at peak times and incentivise use during off-peak hours e.g. railways, air travel. Equipment manufacturers had been asked to design the on-board units so that they can distinguish vehicle locations and distances travelled by multiple types of road and different time slots during the day.

In the long term, a scheme similar to the LRUC will be introduced as part of a more comprehensive road pricing strategy. The Government has already stated that such a system will be used to better manage demand for road space and to charge vehicles their true level of environmental impact. This will be achieved through peak pricing and higher charges on congested sections of the road network to curtail demand. It will therefore add to the commercial costs of all UK road transport.

### **Working Time Directive**

In order to improve road safety and maintain a healthy working environment, the amount of time a goods vehicle driver can work is regulated by law. Since 1985, these regulations have been harmonised across the EU. Additional restrictions, in the form of a Working Time Directive specifically covering the drivers of goods vehicles, were introduced in April 2005.

In summary the WTD for Mobile workers operates as follows:

- It applies to all drivers subject to the EU Drivers Hours Regulations employed by EU based companies, regardless of nationality
- Drivers working a daytime shift are limited to a maximum of 48 hours working time per week, taken as an average over a four month period (can be extended to 6 months through local workforce agreements). Drivers can exceed this limit each week, up to an absolute maximum of 60 hours working time per week, provided that the 48 hour average over the 4 month period is maintained. This time limit equates to an average of 9.5 hours working time per shift.
- For night time shift working, a driver cannot work more than 10 hours per shift. Night time is defined as any period of 4 hours worked between 00.00 and 04.00

Working time is defined in the Directive as the time when a driver is at the disposal of their employer (i.e. between reporting for work and 'clocking off' at the end of the day). It therefore includes driving and any other non-driving work such as loading/unloading a vehicle (or assisting with loading/unloading), completing paperwork, and de-briefing time with managers. Any breaks or rest periods taken during a shift are not counted as part of working time and neither are any delays which are known about in advance classed as working time (e.g. waiting to board a ferry)

The impact of the directive is potentially significant, particularly in operations where drivers currently work shifts longer than 10 hours per day for 5 days a week. This includes many NDC/RDC transport operations, where drivers would be expected to drive up to their daily limit of 9/10 hours, or undertake vehicle loading/unloading activities. Consequently many drivers will not be able to complete the same amounts of work that are currently undertaken.

These resulting shortfalls in work could be covered through employing extra drivers. This would, however, increase a haulier's costs through additional wages and possibly a requirement for extra vehicles. Shortages of qualified HGV drivers in some regions could also limit this approach. Minimising other work to maximise driving time is an option which could be pursued by transport providers but this also has the potential to add to costs. Extra warehouse staff would have to be employed to load and unload vehicles (allowing a driver to book a break – not part of working time), and drop trailer operations could also be utilised. However, this would add the extra costs of purchasing and operating additional trailer equipment. Overall any solution is likely to add to a logistics provider's costs, which could ultimately be borne by shippers through higher road haulage rates.

### **Driver Shortages**

There are currently around 500,000 goods vehicle drivers (for vehicles over 3.5 tonnes gvw) employed in the logistics industry in Britain. Surveys undertaken by the FTA report that there is currently a national goods vehicle driver shortage. In a recent survey, 83% of respondents reported that they were experiencing difficulties in recruiting drivers. This shortage is impacting on all sectors of the industry (trunking, multi drop etc..) and affecting all regions. The greatest shortages are in the South East and the Midlands.

The current driver shortage problems are compounded by forecasts for a greater demand in the future for qualified drivers, the current age structure of the industry and a fall in the number of people obtaining driving licences with HGV entitlements. The Government's road haulage forum estimates that the demand for qualified drivers in 2010 will be around 600,000. This is due to traffic growth and the need for more drivers resulting from the Working Time Directive. It also estimates that between 50,000 and 60,000 drivers will need to be recruited to the industry over the next few years to meet this demand. This figure is in addition to the need for more drivers simply to cover natural wastage. Additionally, approximately 200,000 of the current goods vehicle drivers employed in the distribution



industry are in the 45-65 age range. Consequently over the next 10 years, around 40% are likely to leave the industry due to retirement or ill health.

The reasons for the current and future predicted driver shortages is a combination of many factors. However a consequence of these shortages is that many road transport operators are having to increase their wages in order to recruit and retain qualified drivers, as well as recruit abroad. This additional cost will ultimately be borne by shippers through higher road haulage rates.

### 3.5 Consequences of Changing Market Conditions

The impact of these changing market conditions is likely to manifest itself primarily in two areas of the supply chain;

- i) the way operators manage their transport arrangements, and
- ii) the demand for distribution centre floor space over the medium to long term.

These two impacts combined will in turn have consequences in terms of the preferred locations for large scale logistics activity over the medium to long term. Essentially, sites which in the past would have been considered competitive from a logistics and geographic perspective may in the future lose the advantages they once possessed.

#### *Alternative Transport Solutions*

Given the combination of policy initiatives and other factors leading to an increase in road haulage costs over the medium to long term, operators will need to adopt more cost effective transport solutions in order to remain competitive. The availability of genuine modal choice to and from distribution facilities will be a key component in achieving this, and consequently this is increasingly being demanded by the market.

Genuine modal choice requires the availability of more than one mode of transport to and from distribution facilities, each offering a range of competitive transport services. On a practical basis, this means operators continuing to use road haulage as the main mode of transport, as it will remain the most practical and cost effective form of transport for most flows of goods, but with the ability to utilise other modes of transport for some flows to and from the same location, where they can offer practical yet lower cost solutions. In order to remain competitive, operators are increasingly seeking to locate at sites which offer this modal choice. Such sites will be preferred by operators. For the West Midlands, this effectively means locations and sites which have access to the railway network.

The need to adopt more cost effective transport solutions should be aided by the changing nature of the origins of goods. The increasing levels of imports at the expense of domestic production (import substitution) is resulting in greater volumes of goods being concentrated at fewer origins. In terms of imports from the Far East, this essentially means that greater

volumes of goods are being concentrated at the major deep sea ports in the South East (Felixstowe, Tilbury, Thamesport and Southampton). For imports from the EU, this implies Dover, the Channel Tunnel, the Thames, the Haven ports, the Tees and the Humber. Similarly, trends within the retail sector towards greater consolidating of goods collected ex works at 'consolidation centres' should also result in a further concentration of goods at fewer locations. Essentially greater volumes of goods are being handled by fewer organisations at fewer locations.

This trend should provide opportunities for rail freight and hence assist in providing modal choice opportunities demanded by the market. This is because rail freight operates at its most economic when goods are moved in full length trains, and the increasing concentration of imported goods at ports and ex-works collected goods at consolidation centres should generate the required volumes to operate full length train services. As a large proportion of rail freight's costs are fixed, the costs per unit moved are consequently lower on a full length train compared to shorter trains. The ability to operate full length trains therefore enhances the rail mode's cost competitive position compared with road transport. In addition, container traffics are ideally suited to the rail mode (ease of transfer between road, rail and ship), and all the deep sea container ports in the south east are rail connected.

Evidence for these trends is provided by the growth in the numbers of maritime containers moved by rail freight since the mid 1990s. This is shown in the table below.

**Table 3: Maritime Containers by Rail 1995-2003**

	000s tonnes 1995	lifted 2003
Maritime containers by rail	5,000	8,700

#### *Demand for Distribution Centres*

The other main impact of changing market conditions will be on the demand for distribution centre floor space. The analysis of warehouse size and take up rates in the West Midlands (see Appendix 4) demonstrates a clear trend towards larger buildings over the time period considered. This trend has principally been driven by two factors:

- Growth in the retail sector generally, hence there has been a need for additional floor space to accommodate the extra cargo
- The economies of scale that can be gained from operating fewer but larger NDCs/RDCs

The demand for larger distribution centre floor space is likely to continue to grow over the medium to long term, both in terms of the size of floor space per unit and the number of

large units demanded, particularly as a result of import substitution, the emergence of consolidation centres and expansion by grocery retailers into (imported) non-food lines. Domestically produced goods are more likely to be distributed to a retailer's distribution centre (normally a RDC) direct from factory site. However imported goods in a container need to be consolidated at some form of distribution centre, where any 'added value' activities (packaging, labelling) can be undertaken, and ultimately held in storage prior to re-distribution to a retailer. The preference of the importers (or their appointed logistics providers such as the shipping lines) is to move containers to locations inland as soon as possible after importation, where these functions can be undertaken at sites which are less congested and cheaper to operate (see Appendix 3).

By implication therefore, increasing levels of imports (import substitution) will result in increasing demand for warehouse space nationally, which has implications for land use. The trends within the retail sector towards greater use of consolidation centres for goods collected ex works and the expansion into (imported) non-foods lines also implies greater demand for warehouse floor space. Consequently locations and sites which are able to accommodate warehouses of the size and scale demanded by the market in the future will become the preferred sites for operators.

Changing market conditions have consequences for the future needs of the logistics market. In particular, there are implications regarding the preferred locations for large scale logistics activity over the medium to long term. In turn they will also impact on the competitive position of locations and sites from a logistics perspective, and hence the locational choices which operators will take. Taking into account these changing market conditions, Section 4 of this report considers the various factors which, when combined, will render sites competitive over the medium to long term.

In terms of regional competitiveness, the development of commercially attractive logistics sites in other regions (i.e. sites which possess the combination of these various factors), such as the East of England (e.g. Alconbury) or at port locations such as the Thames, Humber or Tees, will potentially mean these regions becoming more competitive locations for distribution, if the West Midlands is unable to bring forward its own competitive logistics sites.

## 4 COMPETITIVE LOGISTICS SITES

Regional Logistics Sites have a key role in meeting the future needs of the logistics market, in accordance with Regional policy, which reflects the need to improve the competitive position of the West Midlands economy. Regional Logistics Sites must therefore be commercially attractive to the market in order that they can enhance the competitiveness of the Region. Taking into account the issues raised in the previous section, this section of the report considers those various factors which are fundamental to sites being competitive over the medium to long term, as follows:

- Modal choice
- Rail connectivity
- Site size
- Highway links
- Labour

### 4.1 Modal Choice and Rail Connectivity

A key factor which will contribute towards the competitive position of a site will be the availability of genuine modal choice to/from that site. Road haulage will maintain its pre-eminent position in the market, but given the need to adopt more cost effective transport solutions there is likely to be increased demand for rail services as operators seek to mitigate road transport cost increases in order to remain competitive. But despite this developing position, importers and their contracted logistics operators are only likely to utilise rail freight if it provides an economic benefit to their business (i.e. it delivers the most cost competitive option). Even though other factors are taken into consideration, such as general practicalities and service reliability, cost is the major factor which will determine modal choice. The crucial factor in rendering rail freight cost competitive against other modes, and thereby providing genuine modal choice, is the availability of terminal capacity and the ability to locate distribution centres on rail linked logistics sites.

This can be demonstrated through a cost modelling exercise, comparing the costs of moving a standard unit load by road and using intermodal rail freight to the West Midlands. The road and rail freight cost models used to undertake this exercise have been validated in a number of previous studies, including developing the Company Neutral Grant scheme for the SRA, and they are incorporated into the GB Freight Model. Table A3 in Appendix 1 summarises the cost components used in the cost models, while Table A4 in Appendix 1 shows the estimated modelled cost of moving a container from Felixstowe to a hypothetical non-rail linked NDC at Tamworth by road compared to intermodal rail freight via a rail terminal e.g. Hams Hall.

The results of this modelling exercise show that the cost of moving a container from Felixstowe to a Tamworth NDC by rail freight is approximately the same as by road transport

(around £220-£230 in our illustration). However the port to intermodal terminal transport cost, including lifting the unit to/from the train, is approximately half of the road transport cost (around £120). Clearly if the local road haul could be removed from the equation, then rail freight would offer a highly competitive transport option to the West Midlands from Felixstowe. This can be achieved by locating distribution centres on the same sites as intermodal terminals i.e. rail linked logistics sites. A container shipped to the intermodal terminal by rail can be transferred to a distribution centre via an internal road shunt. By avoiding the need to use the public highway, the road-rail transfer costs are significantly lower, as non licensed drivers and yard-tractors operating on low duty 'red diesel' can undertake the movement. Also there is no requirement to build in any 'buffer time' for congestion to ensure JIT time slots are made, which further adds to costs, as the goods are already on site. Rail linking logistics sites is thus the crucial factor in rendering rail freight cost competitive against other modes and creating genuine modal choice, and provides the argument behind locating distribution centres on rail linked sites.

As a general rule of thumb, intermodal rail freight moved in full trainload quantities, including grant funding, is cost competitive with road haulage in the following circumstances:

- For flows from a non rail connected origin to a non rail connected distribution centre (a road haul is required at both ends of the journey), without any grants that may be available, rail freight becomes cost competitive at distances over 400km
- For flows from a rail connected origin e.g. container port, to a non rail connected distribution centre (eliminating one road haul), without any grants that may be available, rail freight becomes cost competitive with road transport at distances over 300km (around 200km with grant funding)
- For flows from a rail connected origin e.g. container port, to a rail connected distribution centre (no road hauls), rail freight generally is always cost competitive compared to road transport over any given distance given adequate volume to fill a daily train.

As the costs of road haulage increase, there is likely to be increased demand by occupiers of NDCs and RDCs to locate their operations on locations and sites which offer rail access in order to take advantage of the genuine modal choice and the subsequent lower transport costs such sites will offer for some flows of goods. Locations and sites which offer access to the railway network will become more competitive commercially compared to non-rail linked facilities, as they will offer the genuine modal choice demanded by the market. The development of rail linked distribution parks will gradually increase the opportunities to connect two rail linked sites and thereby further foster viable rail freight opportunities.

There is also a policy need to locate NDCs and RDCs on rail linked sites; policy T10 in RSS11 which promotes the use of rail for freight in the Region and encourages the development of new rail freight terminals and developments that generate significant amounts of freight in locations that have good access to the rail network.

## 4.2 Rail Connectivity and Regional Competitiveness

There is a direct link between the logistics competitiveness of the West Midlands and the future provision of Regional Logistics Sites offering modal choice. In this respect the West Midlands is in direct competition with other regions where large rail connected logistics sites are emerging (e.g. Alconbury, Shellhaven). In order to maintain the competitive position the region has gained to date, and improve upon it, the West Midlands region will need to develop its own suitable rail linked logistics sites. The provision of additional large scale rail connected logistics sites in the West Midlands is a means of addressing the competitive threat from other regions.

The competitive threat can be demonstrated through a cost modelling exercise which compares the costs of moving a standard unit load by road and intermodal rail freight to competing regions for national distribution. In this example, the costs of moving a container from Felixstowe to a hypothetical non-rail linked NDC at Tamworth have been compared to moving a container to a hypothetical rail linked logistics site near Peterborough, using rail for the trunk haul in each case. The results are shown in Table A5 in Appendix 1.

The analysis shows that the costs of moving a container from Felixstowe to the non-rail linked NDC at Tamworth is in the region of **£220 per load** by road and rail. However delivery cost from Felixstowe to a rail linked logistics site near Peterborough is around **£95 per unit** by rail. While the A1 corridor in the East of England and East Midlands to date has not been the location of choice for national distribution, it can be seen from this exercise that the availability of sites linked to the East Coast Mainline (with a generous W9 loading gauge), potentially makes these regions more attractive in future.

While use of a Peterborough NDC clearly adds to the cost of delivering by road to a West Midlands receiver, the extra road distance of 145km (315km-170km) would involve an incremental extra cost of only around £90. This is less than the saving (£133) made in trunk haulage, provided that at least 50% of return trips win a backload. A rail linked NDC at Peterborough is therefore competitive with a non rail linked site at Tamworth, even for deliveries into the West Midlands. The cost of re-distributing from a site on the A1 corridor to the South East and the M62 corridor would be approximately the same compared to a site in the West Midlands. This threat is being addressed through the RSS review, and in particular the Regional Logistics Sites site selection criteria.

## 4.3 Rail Connectivity Issues

Logistics sites in the medium to long term with the greatest competitive advantage will be those which offer modal choice i.e. both road and rail access. However, simple access to the railway network is only part of the equation, and there are a number of other rail connectivity issues to consider which will impact on the competitiveness and viability of individual sites. Essentially not all sites with a rail connection will be appropriate i.e. competitive.

Competitive rail linked sites will be those which provide:

- Intermodal terminal facilities
- Access to a route which offers a generous loading gauge. The W8 loading gauge is the minimum gauge which should be considered for rail linked logistics sites, however sites with rail access at W9, W10 and W12 will be more attractive commercially
- Access to a route with available freight train capacity
- Direct rail access, without the need to reverse or use a circuitous route

Appendix 3 provides background information covering railway connectivity, and discusses the rationale behind the necessary characteristics of a competitive rail linked site.

#### 4.4 Site Size and Regional Competitiveness

The size of a site is an important factor for two main reasons:

- i) It contributes towards the viability of rail freight services to and from that site.
- ii) Sites need to be big enough to accommodate the large scale distribution centres that are required by the market, together with a number of other support activities.

#### Site Size and Rail Freight Viability

In addition to the cost of rail freight compared to road haulage, rail as a mode will only be attractive to the occupiers of the distribution buildings on a logistics site if the site is able to attract frequent full length rail freight services to and from a wide range of locations. As a minimum, this means at least a daily train service to and from 4-5 different locations. Essentially a 'critical mass' in terms of site size exists; it should be sufficient to generate the requisite number of daily train services. This is demonstrated in Tables A6 and A7 in Appendix 1. Table A6 shows generally accepted figures in terms of the relationships that exist between site size and floor space, and between floor space, warehouse throughput and road and rail modal splits (high bay type warehousing). These relationships form the basis upon which the calculations in Table A7 were undertaken, which demonstrates the relationship between site size and the number of train services.

In Table A7, Site 1 is an example of a site 10 hectares in size. This equates to around 40,000m<sup>2</sup> of floor space, divided equally between an NDC and RDC. The calculation shows that it will probably generate less than 2 inbound train services per day, and less than 1 daily outbound train service. Site 2 is 50 hectares in size and is able to accommodate around 200,000m<sup>2</sup> of distribution centre floor space, again divided equally between NDCs and RDCs. The calculation shows that on this 50 hectare site, the distribution centres alone would be able to generate 8 inbound trains per day. While the former site could not offer a comprehensive range of rail fed destinations, the latter could.

## Site Size and Accommodation of Large Distribution Centres and Support Activities

Logistics sites require a site size which is sufficiently large and flexible in its configuration to provide:

- Plots with the ability to accommodate very large warehouses up to 100,000m<sup>2</sup> in size
- An Intermodal terminal
- Internal reception siding rail facilities
- An appropriate estate road layout together with parking facilities to accommodate visiting HGVs

Appendix 4 examines the demand for distribution centre floor space across the West Midlands region. It clearly shows that the trend is towards very large warehouses up to 100,000m<sup>2</sup> in size being required by the market. Logistics sites will need to be large enough to accommodate such facilities.

Locating distribution centres on rail linked sites can be achieved in two ways. Firstly, locating distribution centres on the same site an intermodal terminal, and secondly by directly rail linking through the provision of a siding along one side of the warehouse. Intermodal terminal facilities are the more important form of rail connectivity, due to the factors discussed in Sections 3.2, 4.2 and the associated text in Appendix 3. Consequently, competitive sites will in future be those which are able to accommodate intermodal terminal facilities in addition to distribution centre floor space.

The ability to accommodate *reception sidings* is also an important feature of a competitive logistics site. Reception sidings effectively act as a place to 'park' trains off the mainline before and after cargo handling at an intermodal terminal or rail connected warehouse. Reception sidings are required at a rail freight terminal for four main reasons:

- Due to pathing and timetabling constraints, trains will normally arrive at a rail freight terminal well before they are required for cargo handling. Hence they require somewhere to 'park' while they await their turn in the actual cargo handling part of the rail terminal.
- Once a train has been loaded/unloaded and is ready for departure, it requires somewhere to await the arrival of a mainline locomotive. Completion of cargo handling can be well before the mainline locomotive arrives,
- The cargo handling sidings, either at the intermodal terminal or rail connected warehouse, are unlikely to be long enough to accommodate the whole train. The emerging standard on the rail network for intermodal trains is 30 wagons x 20.3 to 20.6m per wagon. This results in a trailing train length of between 609m and 618m. In the longer term, the aspiration is for 750m trailing length intermodal trains. Trains will therefore need to be 'sectioned' at some point before they can be accommodated



in cargo handling sidings if the intermodal terminal sidings are less than 609-618m long.

- As a reception siding would not normally belong to Network Rail, the terminal operator is not reliant on mainline locomotive traction providers to undertake shunting or sectioning of trains, and can undertake these operations themselves by employing the use of their own 'off mainline' shunting equipment. This improves the efficiency and throughput capacity of a terminal.

Distribution centres generally operate 'time window' systems for the inward delivery of goods. A vehicle delivering to such a facility will be allocated a time slot during which the goods must be delivered, and in many cases the time slot can be as tight as plus or minus 10 minutes. If a haulier misses the allocated time slot, deliveries can be rejected or the vehicle may have to wait a considerable period of time before the load will be handled. In view of journey time un-reliability issues, many hauliers consequently allocate additional time into their operating schedules in order to ensure that vehicles do arrive on time and meet the allotted time slot. As a result, vehicles often arrive early for deliveries. Consequently there is a need for drivers to park their vehicles and wait until allotted delivery times. Competitive logistics sites will therefore be sites which are designed with an appropriate road layout and parking facilities so that they can handle all generated HGV traffic in an environmentally sensitive manner (i.e. avoid the need for HGVs to park on the internal road network, causing possible congestion or queuing onto the public road network).

In our view, a competitive site is one which is at least 50 hectares in size. Scale is material to competitiveness; achieving a critical mass is crucial. This analysis clearly shows that there is a relationship between the size of a site and the competitiveness of that site. It therefore follows that if other regions are able to offer large rail linked sites above this 'critical mass' they will potentially become more attractive locations for national distribution, given that the West Midlands can only offer smaller sites. There is therefore a direct link between the competitiveness of the West Midlands compared to other regions and the size of rail linked logistics sites the region is able to deliver. In order to maintain the competitive position the region has gained to date, this implies that the West Midlands region will need to bring forward rail linked logistics sites which are at least 50 hectares in size. The provision of large scale logistics sites in the West Midlands is a means of addressing the possible threat from other regions.

In many ways 'the bigger the better', and 50 hectares should be seen as the absolute minimum, rather than a target average size or a maximum size. It is for this reason that a region is best served by a handful of large sites instead of a larger number of small sites. There are a number of good reasons for this:

- The accommodation of a series of very large warehouses (up to 100,000m<sup>2</sup>)
- The flexibility to provide expansion opportunities to existing occupiers

- Planning efficiency – approximately the same amount of effort, time and expense may be incurred in trying to seek planning permission for a 50 hectare site and a 150 hectare site.
- Infrastructure costs – economies of scale can be gained from any infrastructure which is required
- Infrastructure efficiency – maximising the usage of investment in road, rail and utilities infrastructure
- The generation of full length train services
- The overall environmental impact may well be less

#### **4.5 Highway Links and Regional Competitiveness**

Road transport will remain the dominant mode as for most goods flows it will remain the most practical and cost effective form of transport. The majority of cargo arriving and departing distribution centres located on rail connected logistics sites will be by road transport (see Table A7 in Appendix 1). At a rail linked NDC, if rail freight services work to their full potential, around 50% of inbound goods can be expected to arrive by rail (balance by road), and around 25% depart by rail. At an RDC, the comparative figures are 25% of inbound goods arrive by rail (balance by road), and all departing goods leave by road. For a rail connected logistics site comprising 200,000m<sup>2</sup> of floor space, this would equate to around 1,500 inbound and outbound road trips per day. In addition to this, any intermodal terminal facility will also be serving manufacturers and distribution activities located off site by road.

A competitive logistics site must have good access to the highway network. However simply being served by good quality motorway or trunk roads is only part of the equation. Highway congestion, particularly during the off-peak hours, is an important issue for the logistics industry. Good quality road access should therefore be also seen in terms of the level of highway congestion, in addition to the type of road serving a location.

#### **4.6 Neighbouring Land Uses**

Distribution activity needs to operate 24 hours per day, seven days per week. However there are noise and visual impacts associated with distribution. Where possible, deliveries by HGV are normally undertaken during the night when traffic congestion is minimal. Distribution centres therefore need to be accessed during night time hours. Rail freight facilities, parking areas for road trailers or areas where containers are stacked need to be illuminated during the hours of darkness for both practical and safety reasons. Large flood lights therefore need to be erected. Many freight trains also run at night when conflicts with passenger services are minimised. Rail freight facilities at a logistics site will therefore need to receive, despatch and handle trains at night time. All of these activities, and others which occur, cause noise and visual pollution. Competitive logistics sites are therefore located

away from residential areas, for the above given reasons, so that 24 hour operation is possible.

#### 4.7 Labour Market Issues

Distribution activity is labour intensive. Despite the automation of many logistics functions, most distribution warehouses still rely on manual labour for many of their activities. These include:

- Using a forklift truck to move pallets of cargo from an inbound HGV/railway wagon to pallet racks in the correct storage area in the warehouse
- Inputting data covering inbound cargo into the warehouse's inventory management systems (often undertaken using hand held barcode reading devices)
- Picking goods from storage to the correct order and consolidating them with other goods ready for loading to outbound HGVs/railway wagons
- Recording the outbound movement of goods on the inventory management system
- Loading pallets onto outbound HGVs/railway wagons

In addition to these tasks, there are the usual administrative jobs associated with large labour intensive industries e.g. Payroll, Human Resources. Drivers for the delivery HGVs based at the warehouse will also be required. Intermodal terminals require gantry crane operators, yard tractor drivers, HGV drivers and security staff. As a general rule of thumb, a NDC normally requires 10 staff per 1,000 square metres of floor space. Therefore a logistics site incorporating 200,000m<sup>2</sup> of distribution floor space will require up to 2,000 staff just for the warehousing, plus HGV drivers and employees for the intermodal terminal.

Consequently a competitive logistics site will be one which is located with a good quality labour supply within a reasonable 'travel to work' distance. Ideally, sites should be located:

- In or near areas of 'employment need'
- In areas with below average wage rates
- Where labour is available with the required qualifications
- Fairly short travel to work distances

#### 4.8 Summary

The following is a brief summary of the changing market conditions and their spatial and land use implications:

1. The 'hub' of most medium to large scale logistics supply chains is a distribution centre, of which there are essentially two types; National Distribution Centres (NDC) and Regional Distribution Centres (RDC). The ability to consolidate, store and re-distribute goods in

'truck size' loads from a NDC/RDC is the most efficient method of organising supply chains, hence the development of distribution centres of both types.

2. The West Midlands region to date has held a competitive position in the UK as a location for both NDCs and RDCs, and as a result a significant logistics sector presence has developed in the region. In the case of NDCs, this position has largely resulted from its central location in relation to the national motorway network. RDCs are located close to major conurbations, hence the establishment of RDCs in the West Midlands region. However changing market conditions in the logistics industry potentially pose a threat to the competitiveness of the West Midlands region as a logistics location.
3. A number of policy initiatives due to be implemented over the next few years, together with other factors, will result in higher road haulage costs.
4. An increasing proportion of goods consumed in Great Britain are being sourced from international markets, particularly the Far East (import substitution). As a result, increasing volumes of goods are being landed in containers at congested ports in the South East. As imported goods need to be held in storage (and potentially for other 'added value' processes) before re-distribution to the next stage in the supply chain, they are normally destined initially for a distribution centre. Conversely, domestically manufactured goods are more likely to be stored and distributed direct from factory site to their customers e.g. retailer's RDCs. Import substitution therefore implies increasing demand for NDC warehouse space. Additionally increasing imports could result in sites near ports becoming preferred NDC locations at the expense of central UK sites in the West Midlands (i.e. a threat to competitiveness of the West Midlands region as a logistics location).
5. Congestion at ports and a lack of suitable space means that there is a growing demand for distribution centres handling imported goods to be located at less congested sites inland, which are cheaper to operate. Port congestion and increasing road haulage costs are in turn driving demand for more cost competitive alternative transport solutions for moving containers away from the congested ports speedily to inland distribution centres. For the West Midlands, this implies rail freight.
6. Rail freight can be cost competitive compared to road transport, given sufficient volumes to operate full length daily train services. The concentration of container traffics at the South East ports provides the required volumes for such train services. However for medium distance flows, such as the South East to the Midlands, rail freight will only offer a genuine cost competitive alternative to road haulage when the inland destination is also rail linked. This can be achieved by locating NDCs/RDCs on large rail linked logistics sites.
7. The major retailers are increasingly taking over responsibility for managing the inward transport of goods to their distribution centres from suppliers' distribution centres and

factories, (both in UK and Europe) and from ports. This is a system known as collecting ex works or 'factory gate pricing'. In many cases this involves consolidating goods collected 'ex works' at 'consolidation centres' before onward trucking to RDCs. This again potentially generates the required volumes for full length train services, and given road haulage cost increases retailers will increasingly seek alternative transport solutions for the trunk hauls, particularly to peripheral regions (e.g. Scotland). However rail freight will only provide a cost competitive solution if at least one end of the trip is rail linked. This can be achieved by locating consolidation centres on large rail linked logistics sites.

8. Occupiers of distribution centres will gain a competitive advantage by locating to large rail linked sites, if available, in order to benefit from the lower transport costs such sites will offer. Consequently, over the medium to long term, large rail connected logistics sites will be preferred to smaller non-rail linked facilities. Large rail linked developments in other regions, including large rail linked sites near ports, will pose a threat to the competitive position the West Midlands has held to date, unless the region can also bring forward and develop a number of large rail linked sites.
9. This position has implications in terms of land use requirements at a strategic level. To maintain its competitive position, this effectively means that the West Midlands will have to bring forward large sites which have access to railway lines with available capacity and a generous loading gauge and are located close to motorway junctions and trunk routes with sufficient off-peak capacity, and are accessible to an appropriate labour supply.

## 5. RECOMMENDED REVISED LOCATION AND SITE CRITERIA

A Regional Logistics Site is described in Policy PA9 (RSS11) as a concentrated development of warehousing and distribution uses on a single site. However the policy did not define where Regional Logistics Sites should be, except by reference to broad criteria. Additionally, Policy PA9 does not include the concept of *Regional Logistics Locations*, which was introduced by King Sturge in their Stage 1 report.

Selecting sites for competitive logistics facilities is essentially a two stage process.

- Firstly, identifying general broad locations which are appropriate for hosting large scale distribution activity; and
- Secondly, identifying appropriate individual sites within these broad locations.

Consequently the criteria must reflect this two stage process. It is therefore important that an initial set of criteria is developed which can be used to identify appropriate general broad locations, and that a second set of criteria is then developed which is concerned with identifying suitable individual sites within these broad locations.

The concept of *Regional Logistics Locations* is therefore a valid approach in line with this two stage process, and this study seeks to define the necessary selection criteria. Taking this into account and discussions held to date, a Regional Logistics Location can be defined as a sub-regional area of the West Midlands which is appropriate for supporting at least one Regional Logistics Site i.e. a broad location which ‘works’. The King Sturge Stage 1 report recommended a set of criteria for identifying Regional Logistics Locations. These have been assessed against the background of public policy (Appendix 2) and of the changing market conditions described in Section 3, together with their implications in terms of competitive locations for logistics activity (Section 4).

The King Sturge Stage 1 report also examined the broad criteria, as contained in Policy PA9, for identifying and selecting *Regional Logistics Sites*, and recommended revisions to them. These criteria have also been assessed against the same background. The key themes pervading both assessments is the need to protect and develop the competitive position of the Region (due to changing market conditions and developments in other Regions), and the requirement to assist in the delivery of wider regional and national policy objectives, such as opportunities to develop a sustainable transport strategy for the region. Where appropriate, we have recommended revisions and additions to both sets of criteria.

In line with the study brief, we have subsequently used the recommended revised Regional Logistics Locations criteria to identify sub-regional locations which are appropriate for hosting Regional Logistics Sites. This is undertaken in Section 7 of this report.

## 5.1 Regional Logistics Locations – Assessment and Revision of Criteria

King Sturge in their Stage 1 report recommended the following criteria for identifying Regional Logistics Locations:

- be located to minimise drive times to suppliers and customers (i.e. 360 degrees catchment);
- have good access to the national motorway network or major trunk roads;
- have access to the rail network;
- have access to International Gateways, particularly the ports;
- benefit from good access to labour;
- be capable of providing a choice of suitable sites to meet large-scale requirements in terms of size, configuration and height;
- be capable of offering suitable sites away from incompatible neighbours, such as housing, so that occupiers are able to benefit from no restrictions on hours of operations and no restrictions on vehicle movements;
- be capable of offering suitable sites over an extended period, (i.e. the location should have a potential pipeline of sites that can be brought forward over the short, medium and longer terms).

Given the above understanding of the concept of a Regional Logistics Location, in our view the criteria should essentially be concerned with identifying sub-regional areas which are suitable for accommodating at least one Regional Logistics Site. Consequently the criteria must set out the basic qualities/characteristics those locations must possess. They are not concerned with assessing the quality and suitability of individual sites within the sub-regional area, which are covered by the further set of criteria for Regional Logistics Sites. Each Regional Logistics Location criteria has been assessed individually, and recommendations made.

### ***Be located to minimise drive times to suppliers and customers (i.e. 360 degrees catchment)***

It is important that logistics facilities are well located in relation to the markets they are intending to serve. We therefore do not have any major concerns over this particular location criteria. However the wording of the phrase implies that road haulage will be the only mode of transport to serve a Regional Logistics Location. We would therefore suggest the wording is changed to ensure that it is 'mode neutral', simply stating that it is well located in relation to the origins and destinations of cargo.

The main concern is that there is no reference to market need within the King Sturge recommended location criteria, and this should be addressed within the revised criteria. As new logistics facilities will ultimately be funded by the private sector, it is important that any proposed development is commercially viable, will attract a sufficient volume of traffic to

justify the development and does not become a 'white elephant'. In order to qualify as a Regional Logistics Location, each broad sub-region should have to demonstrate that:

- There is a need for logistics facilities of a scale provided by a Regional Logistics Site (i.e. in excess of supply provided by lower order sites) as a result of demand from the logistics market; and
- This demand cannot be met in the medium to long term by existing capacity, and hence new Regional Logistics Sites will need to be brought forward.

Given that new logistics developments are likely to be located on the edge of Major Urban Areas (Policy PA9 states that Regional Logistics Sites will be discouraged within Major Urban Areas), it is important to demonstrate that future demand cannot be met on a satisfactory basis from existing facilities. Taking these factors into account, it is recommended that a Regional Logistics Location is defined as a broad sub-regional area within the West Midlands where there is a need for logistics facilities as a result of demand from the logistics market which cannot be met in the medium to long term by existing capacity.

#### ***Have good access to the national motorway network or major trunk roads***

Whilst genuine modal choice to and from logistics facilities will be an important factor in maintaining and enhancing competitiveness, road transport will remain the dominant mode, as for most goods flows it will remain the most practical and cost effective form of transport. The analysis undertaken described how the majority of cargo arriving and departing distribution centres located on rail connected logistics sites will be by road transport (Section 4.5 and Table A7 in Appendix 1).

Regional Logistics Locations, and specific sites, should have good quality access to the strategic highway network. Whilst this particular location criteria is important, simply being served by good quality motorway or trunk roads is only part of the equation. Highway congestion, particularly during the off-peak hours, is an important issue for the logistics industry. Good quality road access should therefore be seen in terms of the level of highway congestion, in addition to the type of road serving a location. We believe that it is important that the criteria define more precisely the type and quality of road access a Regional Logistics Location should have access to and from.

In addition, highway authorities use the term 'trunk road' to refer to a major non-motorway route which is managed by the Highways Agency. There are many high quality non-motorway routes which are also managed by local authority highway departments. We would therefore suggest the wording is changed to 'a major non-motorway route'.



It is therefore recommended that the criteria for Regional Logistics Locations specifies:

‘Has good access to the highway network. Good quality access is defined as being served by the national motorway network or major non-motorway routes which exhibit low levels of network stress (congestion) and allow reasonable vehicle operating speeds.’

### ***Have access to the rail network***

Rail linkage is important in creating genuine modal choice to and from logistics facilities. Sections 3 and 4 showed that locations which offered modal choice would be more commercially attractive. A Regional Logistics Locations should therefore have good quality access to the railway network. We would therefore recommend that for Regional Logistics Locations, the specification of access to the railway network is included as part of the selection criteria.

The analysis in Section 4 and Appendix 3 also clearly shows that there are a number of other issues and factors associated with rail connectivity which will affect the competitiveness of individual sites. In particular that:

- The rail access has a reasonably generous loading gauge, at least W8 but preferably W9 or W10.
- Freight train services can gain direct access without the need to use long diversionary or circuitous routes
- There is sufficient freight train path availability

Again it follows that a Regional Logistics Locations will also have access to the railway network of the same quality. On this basis, we believe that it is important that the criteria define more precisely the type and quality of rail access a Regional Logistics Location should have access to. It is therefore recommended that the criteria for Regional Logistics Locations specifies:

‘Good quality access to the railway network. Good quality access is defined in terms of a generous loading gauge which is capable of accommodating intermodal units on standard platform wagons, the ability to handle full length trains, available capacity to run freight train services and permitting full operational flexibility.’

### ***Have access to International Gateways, particularly the ports***

Given that a Regional Logistics Location will have good access to the strategic highway network and the national railway network, then by definition a Regional Logistics Location will have access to international gateways, particularly ports. We would therefore consider there to be no requirement for this particular criteria.

***Benefit from good access to labour***

There are a number of issues and factors associated with the quality of the available labour market. Regional Logistics Locations will also have access to the same labour market. On this basis, we believe that it is important that the criteria define more precisely the type and quality of labour market to which a Regional Logistics Location has access to. Good access to labour in the context of regional logistics locations should therefore be defined as:

- Being a sub-region of employment need
- Having reasonable levels of qualification at NVQ Level 1 and 2 and opportunity to improve qualification levels
- Being a net exporter of lower order labour
- Having a competitive wage rate for relevant lower order occupations

***Be capable of providing a choice of suitable sites to meet large-scale requirements in terms of size, configuration and height***

The Regional Logistics Location criteria are essentially concerned with identifying broad sub-regional areas where there is an overall demand for logistics facilities, and defining a number of basic qualities and characteristics each location must possess. They are not concerned with assessing the quality and suitability of individual sites within the broad sub-regional areas. Given this position, it would appear more appropriate to remove this particular criteria from the set of Regional Logistics Location criteria. The Regional Logistics Sites site selection criteria should then define and assess the suitability of individual sites.

***Be capable of offering suitable sites away from incompatible neighbours, such as housing, so that occupiers are able to benefit from no restrictions on hours of operations and no restrictions on vehicle movements***

Again this criteria appears to concern the quality and suitability of individual sites rather than broad locational issues. It would appear more appropriate to remove this particular criteria from the set of Regional Logistics Location criteria. The Regional Logistics Sites site selection criteria should then define and assess the suitability of individual sites.

***Be capable of offering suitable sites over an extended period, i.e. the location should have a potential pipeline of sites that can be brought forward over the short, medium and longer terms.***

Again this criteria appears to concern the quality and suitability of individual sites rather than broad locational issues. As stated above, it would appear more appropriate to simply state that a Regional Logistics Location should provide a choice of suitable sites which satisfy the criteria for selecting Regional Logistics Sites.

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## Summary: Recommended Criteria for Regional Logistics Locations

A Regional Logistics Location is defined as a broad sub-regional area within the West Midlands which is appropriate for supporting at least one Regional Logistics Site, and where there is:

- i) A need for logistics facilities of the scale provided by a Regional Logistics Site as a result of demand from the logistics market which cannot be met in the medium to long term by existing capacity, and is well located in relation to the origins and destinations of cargo.
- ii) Good quality access to the railway network. 'Good quality access' is defined in terms of a generous loading gauge which is capable of accommodating intermodal units on standard platform wagons, the ability to handle full length trains, available capacity to run freight train services and permits full operational flexibility.
- iii) Good quality access to the highway network. Good quality access is defined as being served by the national motorway network or major non-motorway routes which exhibit low levels of network stress (congestion) and allow reasonable vehicle operating speeds.
- iv) Good access to labour. Good access to labour is defined as being a sub region of employment need, having reasonable levels of qualification at NVQ Level 1 and 2 and opportunity to improve qualification levels, being a net exporter of lower order labour, and having a competitive wage rate for relevant lower order occupations.

This recommended set of criteria will be used during Stage B of this report to identify and select Regional Logistics Locations.

### 4.2 Regional Logistics Sites

King Sturge in their Stage 1 report recommended the following criteria for identifying Regional Logistics Sites:

- i) have good access to a motorway junction or main trunk road;
- ii) benefit from good access to labour with actual or potential links for public transport;
- iii) provide a minimum of 10 ha (25 acres) with an appropriate configuration to satisfy large-scale requirements (of 24,000 m<sup>2</sup> or over);
- iv) be capable of providing sites that can offer very high bay warehousing, e.g. up to say 35 metres;
- v) be situated away from incompatible neighbours, such as housing, so that occupiers are able to benefit from no restrictions on hours of operations and no restrictions on vehicle movements;

- vi) be fully serviced with planning secured so that they are capable of delivering suitable buildings quickly.

The analysis in Section 4 identified the various factors which make specific sites competitive, which are as follows:

- i) Rail access is available, and is able to offer a generous loading gauge which is capable of accommodating intermodal units on standard platform wagons, has the ability to handle full length trains, has available capacity to run freight train services and permits full operational flexibility (Sections 4.1, 4.2 and 4.3)
- ii) Is at least 50 hectares in size (Section 4.4)
- iii) Has good road access, in terms of road type and congestion levels (Sections 4.5)
- iv) Has a suitable configuration which allows large warehouse units, intermodal terminal facilities and reception sidings (Section 4.4)
- v) Where there is demand from the market for such facilities (Section 5.1)
- vi) Is located away from incompatible neighbours, thereby allowing 24 hour operation (Section 4.6)
- vii) There is available labour (Section 4.7)

From the analysis, it is possible to identify where revisions are required to the criteria recommended by King Sturge in the Stage 1 study. In particular:

- There was no requirement for rail access
- The minimum site size recommended was 10 Hectares
- An aim to minimise the impact on the local environment was not included (as required by Policy PA1 in RSS11)

Our revised set of criteria for identifying and selecting a Regional Logistics Site therefore are:

A Regional Logistics Site, defined as a concentrated development of warehousing and distribution uses, must have:

- i) At least 50 Hectares of development land available
- ii) Good rail access. Good quality access is defined in terms of a generous loading gauge which is capable of accommodating intermodal units on standard platform wagons, the ability to handle full length trains, available capacity to run freight train services and permits full operational flexibility.
- iii) Has good quality access to the highway network. Good quality access is defined as being served by the national motorway network or major non-motorway routes which exhibit low levels of network stress (congestion) and allow reasonable vehicle operating speeds.

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- iv) A suitable configuration which allows large scale high bay warehousing, intermodal terminal facilities, appropriate railway wagon reception facilities and parking facilities for all goods vehicles both those based on the site and visiting the site
  - v) A need for such facilities due to demand from the logistics market which cannot be met in the medium to long term by existing capacity
  - vi) Located away from incompatible neighbours, thereby allowing 24 hour operations and no restrictions on vehicle movements, and minimising the impact on the local environment
  - vii) Has good access to labour. Good access to labour is defined as being a sub region of employment need, having reasonable levels of qualification at NVQ Level 1 and 2 and opportunity to improve qualification levels, being a net exporter of lower order labour, and having a competitive wage rate for relevant lower order occupations.

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## **STAGE B – ANALYSIS OF NUMBER AND LOCATION OF REGIONAL LOGISTICS SITES**

The aim of Stage B is to:

- To recommend the number of Regional Logistics Sites likely to be required by the West Midlands up to 2021
- To recommend which broad sub-regions of the West Midlands should be classified as Regional Logistics Locations, identified and assessed using the revised recommended Regional Logistics Location criteria from Stage A

In line with the study brief, this report will not be recommending actual specific sites for development as Regional Logistics Sites. However existing land supply at specific sites across the region is taken into account.

## 6. ANALYSIS OF FUTURE LAND REQUIREMENTS

The main aim of this section of the report is to analyse the land requirement in the West Midlands up to 2021 for distribution warehousing, and the proportion of this future requirement which can be expected to be accommodated on Regional Logistics Sites. The analysis is derived from a modelled forecasting exercise which has been undertaken using the MDS Transmodal Great Britain Freight Model (GBFM) and market data provided by Savills.

### 6.1 Demand for New Warehouse Floor Space

A forecasting exercise has estimated total demand for all new build warehouse floor space and the subsequent land requirement in the West Midlands up to 2021. The full methodology adopted for this exercise, and the consequent calculations undertaken are presented in full in Appendix 5. The tables below summarise the results of this exercise.

**Table 4: Summary of West Midlands Traffic Forecasts 2021**

	Current (2003)	000s Tonnes		
		2021 Scenario 1*	2021 Scenario 2*	2021 Scenario 3*
<b>Total Traffic to a Distribution Centre in West Midlands region</b>				
Road	33,824	38,045	35,153	39,446
Rail	788	4,349	3,101	4,038
Total	34,613	42,394	38,254	43,484
% Rail	2%	10%	8%	9%
<b>Additional tonnes over and above 2003</b>				
Road		4,221	1,328	5,622
Rail		3,560	2,313	3,250
Total		7,781	3,641	8,871
% Growth carried by Rail		46%	64%	37%

Source: MDS Transmodal GBFM

\*Scenario 1 - All regions build new distribution centres in line with current trends and market share, all regions build rail connected warehouses as allocated in SRA SRFI policy, and proportion of goods to distribution centres in all regions same as 2003.

Scenario 2 - West Midlands does not build any rail connected warehouses, other regions build rail connected warehouses as allocated in SRA SRFI policy, fall in total tonnes v Scenario 1 total tonnes equates to volume goods lost from West Midland distribution centres to facilities in other regions.

Scenario 3 - West Midlands builds rail connected warehouses as allocated in SRA SRFI policy, other regions build rail connected sheds at half level allocated in SRA SRFI, increase in total tonnes v Scenario 1 total tonnes equates to volume goods gained by West Midland distribution centres from facilities in other regions

**Table 5: Forecast New Floor Space Demand and Corresponding Land Requirements up to 2021 in West Midlands.**

	New Floor Space (000s sq m)		Total
	Replacement of older buildings	Buildings to Accommodate Growth	
2021 Scenario 1	2,976	381	<b>3,357</b>
2021 Scenario 2	2,976	178	<b>3,154</b>
2021 Scenario 3	2,976	435	<b>3,411</b>

**Corresponding land requirement\***

	Hectares
2021 Scenario 1	839
2021 Scenario 2	789
2021 Scenario 3	853

Source: MDS Transmodal GBFM and Consultants calculations

\* On the basis that all new built warehouses, including replacement of existing capacity, are built on different sites

On this basis, between 3.2 million sq metres and 3.4 million sq metres of new floor space will be required in the West Midlands up to 2021. The forecasting above has effectively modelled demand from the market for all new build warehousing. Theoretically, if all new buildings in the region, regardless of size, cargo origin and destination and operation characteristics etc, were to locate at Regional Logistics Sites of a mean site size of 75 hectares, this would imply a need for between 10 and 12 Regional Logistics Sites between the present and 2021.

However this extreme position, where all new build warehouses are located on Regional Logistics Sites, is unrealistic from both a planning and logistics market perspective. Taking this into consideration, in our view only new distribution centres over 25,000m<sup>2</sup> (approximately 250,000 sq ft) will require the large plot sizes offered at Regional Logistics Sites, and will benefit from or be of a nature to be attracted to the rail terminal facilities offered at Regional Logistics Sites. However a few niche distributors with smaller buildings will have an attraction towards rail (e.g. steel stockholders) and will also need to be catered for at rail linked sites. This view has been arrived at by considering the size of units and types of operations which have to date located at rail linked distribution parks in the West Midlands, namely Hams Hall, Birch Coppice (both in North Warwickshire) and ProLogis Park (Coventry), and on the boundary of the region at DIRFT (Daventry). (West Midlands Distribution Centre Analysis in Appendix 4).

The proportion of the total forecast floor space demand up to 2021 which is likely to be in units over 25,000m<sup>2</sup> in size has therefore been estimated. This has been undertaken by considering the recent trends in the size of new units built in the West Midlands (West Midlands Distribution Centre Analysis in Appendix 4). Table A8 in Appendix 1 shows the results of this exercise. Taking the 1996-2004 time period, around 61% of all new build floor



space in the region was in units over 25,000m<sup>2</sup> (approx 250,000 sq ft). More recently, between 2000-2004, the figure is even higher, with around 76% of all new build floor space in the region being in units over 25,000m<sup>2</sup> (approx 250,000 sq ft). These two percentages have subsequently been applied to the total forecast floor space demand up to 2021. This is shown in the table below.

**Table 6: Forecast Floor Space Demand and Land Requirements for Units > 25,000m<sup>2</sup> up to 2021**

	% New Floor Space in Units >25,000 sq m	
	61%	76%
<b>Floor Space Demand to 2021 in Units &gt;25,000m<sup>2</sup> 000s sq m</b>		
2021 Scenario 1	2,032	2,562
2021 Scenario 2	1,909	2,407
2021 Scenario 3	2,064	2,603
<b>Land Requirement (Hectares)*</b>		
2021 Scenario 1	508	641
2021 Scenario 2	477	602
2021 Scenario 3	516	651

\* On the basis that all new built warehouses, including replacement of existing capacity, are built on different sites  
Source: Savills

On the basis that the data for the overall 1996-2004 period is likely to be a more realistic guide, between 1.9 million sq metres and 2.1 million sq metres of new floor space in units above 25,000m<sup>2</sup> will be required in the West Midlands up to 2021. However, from a planning and logistics market perspective, it is perhaps unrealistic to expect (or force) all future demand for units greater than 25,000m<sup>2</sup> to locate on Regional Logistics Sites, given a supply of existing non-RLS sites with consents.

We have therefore considered three alternative options for Regional Logistics Site provision, as follows:

- i) A continuation of recent market trends in terms of the proportion of new floor space above 25,000m<sup>2</sup> which has been developed on rail linked and non-rail linked sites.
- ii) A 'sustainable distribution' option where by all demand for units in excess of 25,000m<sup>2</sup> is located on Regional Logistics Sites.
- iii) A 'sustainable with existing consents' option whereby a higher proportion of units in excess of 25,000m<sup>2</sup>, compared to existing trends, is located on Regional Logistics Sites, but also takes into account existing planning consents at non-RLS sites to 2021.

### i) Continuation of Existing Trends

This option considers a continuation of recent market trends in terms of the proportion of new floor space which has been developed on rail linked and non-rail linked sites. This takes into account the locational decisions the market has made in the past, given that a limited supply of plots on rail linked sites have been available, but with other non-rail linked sites also being available. Including DIRFT (which whilst being in the East Midlands serves the West Midlands in market terms) in the data, our analysis suggests (see Appendix 4) that 39% of all new units built in the Region above 25,000m<sup>2</sup> have been on rail linked distribution parks. We have subsequently applied this percentage to the forecast demand for warehouses over 25,000m<sup>2</sup> up to 2021 (i.e. 39% of 1.9 million to 2.1 million sq metres). The table below presents the results of this option. On the basis of recent locational behaviour, between 186 and 201 Hectares of land will be required in the West Midlands for Regional Logistics Sites.

**Table 7: Option 1 – Continuation of Existing Trends**

	Floor Space Demand to 2021 at RLS (000s sq m)	Floor Space Demand to 2021 at Non-RLS (000s sq m)
2021 Scenario 1	792	2,565
2021 Scenario 2	744	2,410
2021 Scenario 3	805	2,606
<b>Hectares*</b>		
2021 Scenario 1	198	641
2021 Scenario 2	186	602
2021 Scenario 3	201	651

*Current market trends for distribution centres > 25,000 sq m locating on rail linked sites (39% of all new floor space > 25,000 sq m)*

*\* On the basis that all new built warehouses, including replacement of existing capacity, are built on different sites*

### ii) Sustainable Distribution Option

The Option 1 results should be taken as the minimum 'benchmark' given that there is a need, from both a logistics market and policy perspective, to increase the amount of floor space on rail connected sites.

Sections 3 and 4 of this report discussed the key trends and changing conditions within the logistics market. The ability to locate on suitable sites which offer appropriate access to the railway network is likely to become an important requirement for many medium to large scale logistics operations. Based on market trends alone, we should expect a higher proportion of new warehousing above 25,000m<sup>2</sup> to locate on rail linked sites, compared to recent trends. It should also be noted that recent trends have been influenced by a limited supply of plots on rail linked sites being available.

A key role of Regional Logistics Sites is supporting the delivery of aims and objectives set out in public policy documents, principally the aims and objectives set out in the policies of RSS11. Two key policy objectives which Regional Logistics Sites should support are:

- Enhancing regional competitiveness (Prosperity for all policies), and
- An increase in the amount of freight that is moved by rail (Policy T10)
- Encouraging developments that generate significant amounts of freight in locations that have good access to the rail network (Policy T10).

Enhancing the West Midlands' competitive position as a logistics location can only be achieved through the provision of sites and facilities which address future market need i.e. sites with large plots able to accommodate the next generation of large distribution centres and rail linked sites. Analysis in this report has shown that increasing the amount of freight that is moved by rail (thereby supporting Policy T10) is reliant on increasing the level of warehousing being located at rail linked sites. This implies that the supply of large rail linked sites will need to be increased in order to facilitate a higher proportion of new warehousing above 25,000m<sup>2</sup> locating at rail linked sites, compared to recent trends.

On this basis therefore, we have defined a second option under which a higher proportion of new build units above 25,000m<sup>2</sup> locating on Regional Logistics Sites has been assumed (in order to meet market needs and policy objectives). This has been termed the 'sustainable distribution' option, and is based on all demand for units in excess of 25,000m<sup>2</sup> being located on rail linked Regional Logistics Sites. The table below presents the results of this option. On the basis of all warehouses over 25,000m<sup>2</sup> being located on rail linked sites, between 477 and 516 hectares of land will be required in the West Midlands for Regional Logistics Sites.

**Table 8: Option 2 – Sustainable Distribution Option**

	Floor Space Demand to 2021 at RLS (000s sq m)	Floor Space Demand to 2021 at Non-RLS (000s sq m)
2021 Scenario 1	2,032	1,326
2021 Scenario 2	1,909	1,246
2021 Scenario 3	2,064	1,347
<b>Hectares</b>		
2021 Scenario 1	508	331
2021 Scenario 2	477	311
2021 Scenario 3	516	337

*All new distribution centres > 25,000 sq m being on RLS i.e. 100% of floor space > 25,000 sq m*

*\*On the basis that all new built warehouses, including replacement of existing capacity, are built on different sites*

### iii) Option 3 – Sustainable with Existing Consents

While there is a clear market and policy need to increase the proportion of warehousing on rail linked sites, existing land supply and planning consents also have to be considered. From a planning perspective, a position where all new build warehousing above 25,000m<sup>2</sup> are ‘forced’ to locate at Regional Logistics Sites is unrealistic.

We have therefore considered a third option which takes into account the market and policy need for a higher proportion of warehousing being accommodated on rail linked sites, but also accounts for existing land supply at non-RLS and existing consents to 2021. This has been termed the ‘sustainable with consents’ option, and is based on 70% of all units in excess of 25,000m<sup>2</sup> being located on Regional Logistics Sites i.e. the mid-point between the above two options. It also corresponds approximately with the existing supply of B8 development area (see section 6.2). The table below presents the results of this option. On the basis of 70% of warehouses over 25,000m<sup>2</sup> being located on rail linked sites, between 334 and 361 hectares of land will be required in the West Midlands for Regional Logistics Sites.

**Table 9: Option 3 – Sustainable with Existing Consents**

	Floor Space Demand to 2021 at RLS (000s sq m)	Floor Space Demand to 2021 at Non-RLS (000s sq m)
2021 Scenario 1	1,422	1,935
2021 Scenario 2	1,336	1,818
2021 Scenario 3	1,445	1,966
<b>Hectares*</b>		
2021 Scenario 1	356	484
2021 Scenario 2	334	455
2021 Scenario 3	361	492

*Mid point between 100% >25,000 sq m on RLS and 39% >25,000 sq m on RLS (70% of all new floor space > 25,000 sq m)*

*\* On the basis that all new built warehouses, including replacement of existing capacity, are built on different sites*

## 6.2 Land Supply

The next stage of the analysis has been to examine current land supply, and to consider the land remaining at the existing Regional Logistics Site (Hams Hall) and those sites which, considering their requisite characteristics, could potentially perform a Regional Logistics Sites role.

The Regional Logistics Stage One Study undertaken by King Sturge provided a comprehensive review of:

- i) current land supply (Appendix 8 of the study); and

- ii) land in the pipeline with planning (Appendix 11).

Some simple but important conclusions can be drawn from this existing data. An analysis of the up to date position with the key sites identified is then provided.

### **Current Land Supply (as per Stage 1 study)**

On the basis of information provided in the Stage 1 study, there are no sites which meet the minimum site size criteria, as set out in the revised recommended criteria in Section 5 i.e. 50 hectares.

Two sites between 40 and 50 hectares were identified. These are:

- Prime Point, Stafford: land remaining 40 hectares
- Fradley Park, Lichfield: land remaining 40 hectares

It is important to note that neither of these sites is rail connected.

### **Pipeline Supply with planning consent (as per Stage 1 study)**

There are currently no sites in the pipeline (with planning consent) which fully meet the revised recommended site selection criteria.

One location, when taken as a whole, currently meets the recommended minimum site size criteria, and therefore could contribute potentially as a Regional Logistics Site:

- Hortonwood, Telford: 51.67 hectares

Hortonwood is a collection of contiguous but different sites being marketed by English Partnerships. In addition, Telford and Wrekin Council has secured Transport and Works Act powers to re-establish a rail link over a former track bed, which would reconnect Hortonwood to the mainline network, and therefore allow the provision of rail terminal facilities.

In addition, DIRFT Phase II has 50 hectares of land available. It therefore meets the recommended minimum site size criteria, and could also contribute potentially as a Regional Logistics Site. While DIRFT is technically in the East Midlands region, it effectively serves both a National and West Midlands market.

There are no other sites which meet the minimum site size criteria. One site falls within the 40-50 hectares band:

- Meaford Power Station, Stafford: 43 hectares

There is potential for rail connection of this site, which adjoins the West Coast Main Line.

An overall review of land supply, as undertaken by King Sturge, is important in assessing total quantum and location. However such an approach, which aggregates a variety of smaller sites, will not necessarily meet the requirements of the logistics industry nor fulfil the proper requirements of Policy PA9. Indeed recognition of this basic mismatch between supply and demand is at the root of the need for RLS and is why this Study comes to different conclusions with regard to minimum site size to those of the King Sturge Stage One Study.

It is the case that other sites in the schedule (whether smaller sites or residual plots on larger schemes) are able to respond to a cross-section of general occupational requirements and will absorb a proportion of current and future demand in the logistics sector. However existing supply is unable to properly respond to overall market demand, as analysed and described above (Section 6.1). Neither does current supply conform or respond to the policy requirements of RSS.

In summary, a fragmented approach to provision of logistics sites will not meet those requirements because:

- there is a necessary restriction on the size of plots and the size of buildings
- modal choice (between road and rail) is not offered
- large sites are required to make economic the provision of both road and rail access

### **Further analysis**

In order to better understand the land supply position we have undertaken further analysis to determine:

- i) the up to date position with respect to land supply at the most significant large sites capable of providing large scale warehousing; and
- ii) consideration of the total supply of land potentially suitable for B8 use.

#### **i) Significant large sites**

Our analysis is of:

- Prime Point
- Fradley Park
- Birch Coppice
- Meaford Power Station

together with:

- Hams Hall, which is described in RELS 2003 (para. 21.7) as “the only RLS in the West Midlands”.

Data has been supplied by the landowner/developers or their agents in each case.

Site	Remaining land (ha)	Plots available (ha)	Comments
Prime Point, (J14, M6)	22.3	22.3	Existing consent for two buildings of up to 12m eaves: 550,000 sq ft 260,000 sq ft  Planning application for single building: 750,000 sq ft.  The developer intends to speculatively develop a building of 646,000 sq ft leaving two smaller plots: 69,000 sq ft 128,000 sq ft
Fradley Park, Lichfield (A38)	108.19	B100 3.88 B101 1.31 B105 2.67 D100 1.33  Phase 3 – D104-109 30  Phase 4 – 69	100,000 sq ft 50,000 sq ft 100,000 sq ft 52,500 sq ft  Up to 112,000 sq m (1,205,600 sq ft). Individual buildings up to c.500,000 sq ft, possibly more.  Outline planning permission for 278,000 sq m (2,992,390 sq ft) B1/B2/B8, but works to A38 and Hilliards Cross would be required.
Birch Coppice, North Warwickshire (J10, M42)	12.717  48.6 (without planning)	W1 0.811 E1A ) E1B ) 4.48 E2 3.0 E4 4.426	Site for hi-tech R&D  Adjoining land in same ownership.
Meaford Power Station, Stafford (A34)	34		Relatively poor location and road access.

Site	Remaining land (ha)	Plots (ha)	available	Comments
Hams Hall (J9, M42)	19.75 (12.75 developable)	1	3.55	Restricted by overhead cables – development not possible.
		3b	2.02	
		6 (part) +10	5.18	Restricted to two buildings of 110,000 sq ft and 140,000 sq ft
		9 (part)	4.05	180,000 sq ft developable
			1.10	Occupied by ABP
		3.85	3.45 ha asbestos tip (not developable), 0.4 ha developable	
	20 (without planning)			Brownfield site of former Power Station 'B' – being promoted through Local Plan.

The existing Regional Logistics Site, Hams Hall, now has a severely restricted land supply, with only 12.75 hectares available and developable. The plots available further restrict the maximum building size to 16,722m<sup>2</sup> (180,000 sq ft). This does not match current and predicted market demand. The proposal by Powergen (the landowner) for a further site of 20 hectares to be allocated, which would be capable of accepting buildings of up to c.69,600m<sup>2</sup> (c.750,000 sq ft), would alleviate the supply shortage in the relative short term on the only existing RLS. This is subject to the North Warwickshire Local Plan review. The intermodal terminal is operated by ABP Connect, and is itself restricted in size.

Birch Coppice has a dedicated rail link, and a rail freight terminal, to be operated by RCL, Roadways Containers Ltd, is being developed. It is therefore performing a quasi Regional Logistics Site role. There is limited land remaining (a number of plots being under offer and not available) and available plots restrict the maximum size of single buildings to 11,620m<sup>2</sup>. There is an opportunity to expand to the south east but this land is not allocated.

None of the other sites conform to the revised recommended criteria (as set out in Section 5) in all respects.

The site with the greatest flexibility in total land supply and plot size is Fradley Park, but it does not have a rail connection. The closest rail facility to it is Hams Hall.

## ii) Supply of land available for B8 use

The RELS 2003 database has been interrogated to consider sites with planning permission by use. There are difficulties with this approach because of the nature of the RELS database, which considers the use class at a site level rather than a plot level.



Nonetheless, interpreting the data by using knowledge of individual sites' circumstances, enables sensible and useful conclusions to be drawn. This is useful in considering the total B8 land supply and, particularly, how well the fragmented nature of land supply (with planning permission) is able to meet demand for large-scale distribution warehousing.

If a threshold is used of 5 hectares, representing (on a clear, developable, regular shape of site) a potential build capacity of 22,500 sq m (c.240,000 sq ft) as a single build, the data can be analysed as follows:

- 194 hectares has a pure B8 consent; 8.9% of the total land supply
- of these sites there are only 9 with a supply of 5 hectares or more
- of those sites which are categorised as generally B1/B2/B8 (a total of 1276 hectares; 58.8% of the supply), and after updating from market knowledge, there are 36 sites which are in excess of 5 hectares, which provide an area of 640 hectares
- 12 of these sites, or 133 hectares (21%), are in Telford – this is a significant proportion (statistically and in market terms)

These are gross figures and overall statistics. Many of the sites will be unsuitable for large-scale warehousing. In addition publication of RELS (2004) is likely to show a reduction in land supply overall and on the prime sites. On the basis that half of the sites categorised for B1/B2/B8 could be effective for B8 use (320 hectares), that implies the region can currently offer around 500 hectares of land for non RLS B8 use to 2021.

On this basis therefore, we estimate that there is currently 25.5 hectares of land available on the existing Regional Logistics Site (Hams Hall) and at Birch Coppice, which is performing a quasi RLS role. This is shown in the table below.

**Table 10: Land Supply at Existing Regional Logistics Site and Sites Performing Regional Logistics Sites Role**

Site	Land Available (Ha)	Status
Birch Coppice Phase I	12.7	With planning
Hams Hall	12.8	Developable
<b>TOTAL</b>	<b>25.5</b>	

This figure has consequently been applied to the forecast demand analysis from Section 6.1, and is shown in the tables below. In summary, taking into account the 25.5 hectares of land available on the existing Regional Logistics Site and at Birch Coppice, which is performing a quasi RLS role, the totality of the analysis shows that:

### Option 1: Continuation of existing trends

On the basis of recent locational behaviour (39% of warehouses over 25,000m<sup>2</sup> locating on rail linked sites), between 161 and 176 hectares of land will be required in the West Midlands for Regional Logistics Sites. This implies a need for 3 Regional Logistics Sites, assuming a mean site size of 75 hectares.

### Option 2: Sustainable distribution

On the basis of all warehouses over 25,000m<sup>2</sup> being located on rail linked sites, between 455 and 492 hectares of land will be required in the West Midlands for Regional Logistics Sites. This implies a need for 7 Regional Logistics Sites, assuming a mean site size of 75 hectares.

### Option 3: Sustainable with consents

On the basis of 70% of warehouses over 25,000m<sup>2</sup> being located on rail linked sites, between 309 and 336 hectares of land will be required in the West Midlands for Regional Logistics Sites. This implies a need for 5 Regional Logistics Sites, assuming a mean site size of 75 hectares.

**Table 11 : Regional Logistics Sites Required**

#### Option 1: (historical) 2021 Forecast Floor Space and Land Requirements

*Current market trends for distribution centres > 25,000 sq m  
locating on rail linked sites (39% of new floor space > 25,000 sq m)*

	RLS	Non RLS		
<b>000s sq m</b>				
2021 Scenario 1	792	2,565		
2021 Scenario 2	744	2,410		
2021 Scenario 3	805	2,606		
<b>Hectares</b>				
2021 Scenario 1	198	641		
2021 Scenario 2	186	602		
2021 Scenario 3	201	651		
RLS Land Supply Currently Available	26Ha			
<b>Land Required (Ha)</b>				
2021 Scenario 1	173			
2021 Scenario 2	161			
2021 Scenario 3	176			
<b>Number RLS, mean size (Ha)</b>				
	<b>50</b>	<b>75</b>	<b>100</b>	
2021 Scenario 1	3.45	2.30	1.73	
2021 Scenario 2	3.21	2.14	1.61	
2021 Scenario 3	3.51	2.34	1.76	

**Option 2: (fully sustainable) 2021 Forecast Floor Space and Land Requirements***All new distribution centres > 25,000 sq m being on RLS**i.e. 100% of new floor space > 25,000 sq m*

	RLS	Non RLS	
<b>000s sq m</b>			
2021 Scenario 1	2,032	1,326	
2021 Scenario 2	1,909	1,246	
2021 Scenario 3	2,064	1,347	
<b>Hectares</b>			
2021 Scenario 1	508	331	
2021 Scenario 2	477	311	
2021 Scenario 3	516	337	
RLS Land Supply Currently Available	26Ha		
<b>Land Required (Ha)</b>			
2021 Scenario 1	482		
2021 Scenario 2	452		
2021 Scenario 3	490		
<b>Number RLS, mean size (Ha)</b>	<b>50</b>	<b>75</b>	<b>100</b>
2021 Scenario 1	9.65	6.43	4.82
2021 Scenario 2	9.03	6.02	4.52
2021 Scenario 3	9.81	6.54	4.90

**Option 3: (sustainable with consents) 2021 Forecast Floor Space and Land Requirements***70% of new distribution centres > 25,000 sq m being on RLS**(Mid point between 100% >25,000 sq m on RLS and 39% >25,000 sq m)*

	RLS	Non RLS	
<b>000s sq m</b>			
2021 Scenario 1	1,422	1,935	
2021 Scenario 2	1,336	1,818	
2021 Scenario 3	1,445	1,966	
<b>Hectares</b>			
2021 Scenario 1	356	484	
2021 Scenario 2	334	455	
2021 Scenario 3	361	492	
RLS Land Supply Currently Available	26Ha		
<b>Land Required (Ha)</b>			
2021 Scenario 1	330		
2021 Scenario 2	309		
2021 Scenario 3	336		
<b>Number RLS, mean size (Ha)</b>	<b>50</b>	<b>75</b>	<b>100</b>
2021 Scenario 1	6.60	4.40	3.30
2021 Scenario 2	6.17	4.11	3.09
2021 Scenario 3	6.71	4.48	3.36

### 6.3 Rail Freight Forecasts and Terminal Demand

We have conducted an additional ‘check’ on the analysis in Sections 6.1 (and Appendix 5) and 6.2 above. Given that the Regional Logistics Sites will incorporate intermodal terminal facilities and, in their development, provide the means of procuring regional terminals, it is important that the number of Regional Logistics Sites being recommended will be appropriate for the market, and that neither an ‘under’ or ‘over supply’ in terminal capacity will result. The rail freight forecast volumes, as used to estimate total floor space demand up to 2021, have been represented as forecast daily train numbers. From these figures, intermodal terminal demand in 2021 can be established. The results from this exercise are shown in the table below.

**Table 12: Forecast Non-Bulk Trains to the West Midlands 2021**

	'000s tonnes per annum	trains+ per annum	Trains* arriving per day	Current trains arriving	Additional demand for new terminals
Scenario 1	4,349	10,872	43	13	30
Scenario 2	3,101	7,752	31	13	18
Scenario 3	4,038	10,095	40	13	27

+ Mean train load 400 tonnes

\* 250 Days per annum

No individual inland terminal in Britain currently receives more than 10 trains per day (Daventry). Most receive no more than 6. On that basis and current levels of demand and the capacity available at existing intermodal terminal facilities in the West Midlands, we estimate that between three (Scenario 2) and five (Scenarios 1 or 3) additional intermodal terminals will be required in the West Midlands by 2021. In addition, the Freightliner terminal at Landor Street is believed to be approaching capacity. Its city centre location means there is no spare land to expand the terminal, in addition to its poor road access and location on an intensively used part of the West Midlands railway network. In the fullness of time, Freightliner or its successors may close the terminal and transfer the operation to a larger ‘edge of town’ location which will also be capable of accommodating large scale warehousing (Freightliner has already associated itself with such a transfer from its Trafford Park terminal near Manchester). Given this situation, this would therefore imply a need for four to six additional intermodal terminals required in the West Midlands by 2021. Taking into account the key issues and trends discussed in this report, these new intermodal facilities should be located at Regional Logistics Sites.

## 7. ANALYSIS OF REGIONAL LOGISTICS LOCATIONS

Section 5 of this report noted that selecting sites for competitive logistics facilities is essentially a two stage process:

- Firstly, identifying general broad locations which are appropriate for hosting large scale distribution activity; and
- Secondly, identifying appropriate individual sites within these broad locations.

Consequently our conclusions reflect this two stage process; a recommended initial set of criteria to be used in identifying appropriate general broad locations (i.e. a Regional Logistics Location), and a recommended second set of criteria to identify suitable individual sites within these broad locations. The aim of this section of the report is to analyse broad sub-regional locations within the West Midlands, and recommend which can be designated Regional Logistics Locations.

### 7.1 Identifying Sub-Regions

The first task was to divide the West Midlands region into a number of broad sub-regions. The 15 sub-regions defined for the purposes of this study are displayed in Map 1 in Appendix 1. Where possible the division of the Region into these sub-regions has tried to follow as much as is possible the administrative boundaries of the West Midlands region. However in a number of cases this has not been possible, and the division into the sub-regions also had to take into account a number of other important factors. These were:

- Transport corridors
- Population concentrations
- The nature of industry, and in particular the current location of the distribution market across the region

It needs to be appreciated that the transport networks of the region and the location of industry in the region, in particular the logistics market, have no regard for the administrative boundaries of the region. The administrative boundaries have traditionally followed historical county divisions, but with adjustments to reflect modern population growth and other factors. However transport networks have not generally taken account of these boundaries, and consequently neither has the logistics market which for obvious reasons has been very much driven, in terms of its current locational requirements, by transport networks rather than local administrative divisions. We have, accordingly, defined 15 sub-regions which share broadly similar transport accessibility. The sub-regional map for the purposes of this study reflects the transport network and the subsequent current concentrations of logistics activity in the region. The following is a brief description of each sub-region's delimitation.

1. North Staffordshire – based around the M6, A50/500, the North Staffordshire railway line and the Derby railway line transport corridors. Covers the administrative areas Stoke on Trent, Staffordshire Moorlands, Newcastle under Lyme and the western parts of East Staffordshire (Uttoxeter and the areas bordering Staffordshire Moorlands)
2. Stafford – based around the M6, A34, WCML and North Staffordshire railway line transport corridors. Covers the administrative area of Stafford.
3. North Shropshire – based around the A5, A49, Didcot and Chester line (Shrewsbury to Oswestry) and the Crewe and Shrewsbury railway line transport corridors. Covers the administrative areas of Shrewsbury and Atcham, Oswestry and North Shropshire.
4. Telford – based around the M54 and the Wolverhampton to Shrewsbury railway line transport corridors. Covers the administrative areas of Telford and the northern part of Bridgenorth (the area enclosed by Telford to the west and South Staffordshire to the east)
5. Burton, Lichfield and Sutton Coldfield – based around the M6 Toll, A5, A38, WCML and Derby to Birmingham railway line transport corridors. Covers the administrative areas of the eastern part of East Staffordshire, Lichfield and Birmingham City Council to the north of the M6
6. North Blackcountry and South Staffordshire – based around the M6 Toll, M6, M54, A5, Stour Valley railway line, Cannock Branch railway line and the Wolverhampton to Telford railway line transport corridors. Covers the administrative areas of Wolverhampton, South Staffordshire (except the area to the west of Dudley), Walsall and Cannock Chase
7. South Shropshire – based around the A49, Hereford and Shrewsbury railway line transport corridors. Covers the administrative areas of South Shropshire and Bridgenorth (except area included in Telford sub-region).
8. Tamworth and Atherstone – based around the M6 Toll, A5, M42, WCML, Derby to Birmingham railway line, and Whitacre and Nuneaton railway line transport corridors. Covers the administrative areas of Tamworth and North Warwickshire
9. Birmingham and Solihull – based around the M6, M42, Rugby and Birmingham line, Birmingham and Bushbury line, Derby to Birmingham railway line, and Whitacre and Nuneaton railway line transport corridors. Covers the administrative areas of Solihull and Birmingham City to the south of the M6.
10. South Blackcountry – based around the M5 and Gloucester and Birmingham railway line transport corridors. Covers the administrative areas of Sandwell, Dudley and South Staffordshire (area to the west of Dudley).
11. Herefordshire and North Worcestershire – based around the A49, A449, Hereford and Shrewsbury railway line and Worcester and Hereford railway line transport corridors. Covers the administrative areas of Herefordshire and Malvern Hills enclosed to the north of Herefordshire and to the south of Shropshire
12. Nuneaton, Coventry and Rugby – based around the M6, M69, A5, WCML and Rugby and Birmingham railway line transport corridors. Covers the administrative areas of Nuneaton and Bedworth, Coventry and Rugby.
13. South Warwickshire – based around the M40, A46 and Cherwell Valley railway line transport corridors. Covers the administrative areas of Stratford and Warwick

14. Bromsgrove and Redditch – based around the M5, M42 and Gloucester and Birmingham railway line transport corridors. Covers the administrative areas of Bromsgrove, Redditch and Wyre Forest.
15. South Worcestershire – based around the M5, M42 and Gloucester and Birmingham railway line transport corridors. Covers the administrative areas of Worcester, Malvern Hills (except that included in Herefordshire and North Worcestershire) and Wychavon

## 7.2 Assessment of Sub-Regions – Recommended Regional Logistics Locations

Each identified sub-region has been assessed against the recommended Regional Logistics Location criteria from Stage A (Section 5). The assessment has been undertaken at a fairly high level, using both qualitative and quantitative analysis. Appendix 6 details in full the road and rail access assessments for each sub-region. Appendix 7 presents the full labour market assessment for each sub-region.

The table below summarises the assessment of each sub-region against the four criteria. The following broad sub-regions meet the recommended Regional Logistics Location criteria from Stage A and can therefore be designated as Regional Logistics Locations (in no particular hierarchical order):

1. North Staffordshire
2. Stafford
4. Telford
5. Burton, Lichfield and Sutton Coldfield
6. North Blackcountry and South Staffordshire
8. Tamworth and Atherstone
12. Nuneaton, Coventry and Rugby
13. South Warwickshire

The sub-regions allocated as Regional Logistics Locations are displayed in Map 4 in Appendix 1.

The overall assessment has concluded that the South Blackcountry sub-regional area should not be classified as a Regional Logistics Location. The 'poor quality rail access' assessment (taking into account the existing congested network) contributed heavily to this overall conclusion. However, a number of studies (including the Recommended West Midlands Freight Strategy) have proposed the reinstatement of the former Stourbridge to Walsall railway line as a freight only line. This would effectively create a railway by-pass of the West Midlands conurbation, thereby providing freight trains from the sub-region (and origins/destinations further to the south west) access to a congestion-free route which avoids the congested urban network. Any reinstatement would also be built to modern standards, resulting in a generous loading gauge along the route. Given this proposed reinstatement proceeding, the railway access assessment for the South Blackcountry sub-region could be

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considered 'Good quality rail access'. If this were to be the case, we would recommend that the sub-region be classified as a Regional Logistics Location.

Similarly, the overall assessment has concluded that the Bromsgrove and Redditch sub-regional area should not be classified as a Regional Logistics Location. Again the 'poor quality rail access' assessment (taking into account the existing congested network to the north) was a major factor. However, the reinstatement of the former Stourbridge to Walsall railway line as a freight only line would also provide freight trains from the Bromsgrove and Redditch sub-region access to a congestion free route which avoids the congested urban network. Given this proposed reinstatement proceeding, the railway access assessment could be considered 'Good quality rail access'. If this were to be the case, we would recommend that the sub-region be classified as a Regional Logistics Location.



**Table 13: Assessment of Broad Sub-Regional Locations - Summary**

Broad Sub-Region	Market Demand and Central Location to Markets	Good Quality Rail Access	Good Quality Road Access	Labour Market Conditions	Regional Logistics Location
1. North Staffordshire	Yes (but located to the north of the major areas of market demand)	<i>Good Quality Rail Access:</i> W10 loading gauge Available capacity Full length trains Operational flexibility	<i>Good Quality Road Access:</i> Good network of motorways and dual carriageways Some network stress on inner urban links Low levels of network stress on most of network and good levels of vehicle speed	Good access to labour:	Yes
2. Stafford	Yes (but located to the north of the major areas of market demand)	<i>Good Quality Rail Access:</i> W10 loading gauge Available capacity Full length trains Operational flexibility	<i>Good Quality Road Access:</i> Good network of motorways and dual carriageways Some network stress on inner urban links Low levels of network stress on most of network and good levels of vehicle speed	<i>Good access to labour:</i>	Yes
3. North Shropshire	No	<i>Moderate to Good Quality Rail Access:</i> W8 loading gauge Available capacity Full length trains Operational flexibility	<i>Poor Quality Road Access:</i> Poor quality single carriageway roads with poor topography and alignment. Low levels of vehicle speeds due to poor road quality.	<i>Moderate access to labour:</i>	No

Broad Sub-Region	Market Demand and Central Location to Markets	Good Quality Rail Access	Good Quality Road Access	Labour Market Conditions	Regional Logistics Location
4. Telford	Yes (but located to the north west of the major areas of market demand)	<i>Moderate to Good Quality Rail Access:</i> W8 loading gauge Available capacity Full length trains Operational flexibility	<i>Good Quality Road Access:</i> Good network of motorways and dual carriageways Some network stress on inner urban links Low levels of network stress on most of network and good levels of vehicle speed	<i>Good access to labour:</i>	Yes
5. Burton, Lichfield and Sutton Coldfield	Yes	<i>Good Quality Rail Access:</i> W10 and W8 loading gauge Available capacity Full length trains Operational flexibility	<i>Good Quality Road Access:</i> Good network of motorways and dual carriageways High levels of network stress on inner urban links Lower levels of network stress and good levels of vehicle speed on network outside urban areas	<i>Good access to labour:</i>	Yes
6. North Blackcountry and South Staffordshire	Yes	<i>Good Quality Rail Access:</i> W10 loading gauge Available capacity Full length trains Operational flexibility	<i>Good Quality Road Access:</i> Good network of motorways and dual carriageways High levels of network stress on inner urban links Lower levels of network stress and good levels of vehicle speed on network outside urban areas	<i>Good access to labour:</i>	Yes

Broad Sub-Region	Market Demand and Central Location to Markets	Good Quality Rail Access	Good Quality Road Access	Labour Market Conditions	Regional Logistics Location
7. South Shropshire	No	<i>Moderate to Good Quality Rail Access:</i> W8 loading gauge Available capacity Full length trains Operational flexibility	<i>Poor Quality Road Access:</i> Poor quality single carriageway roads with poor topography and alignment. Low levels of vehicle speeds due to poor road quality.	<i>Poor access to labour:</i>	No
8. Tamworth and Atherstone	Yes	<i>Good Quality Rail Access:</i> W10 loading gauge Available capacity Full length trains Operational flexibility	<i>Good Quality Road Access:</i> Good network of motorways and dual carriageways Low levels of network stress on most of network and good levels of vehicle speed	<i>Good access to labour:</i>	Yes
9. Birmingham and Solihull	Yes	<i>Poor to Moderate Quality Rail Access:</i> W10 and W8 loading gauge Capacity constraints on congested urban network Full length trains Limited operational flexibility	<i>Moderate to Good Quality Road Access:</i> Good network of motorways and dual carriageways High levels of network stress on inner urban links Lower levels of network stress and good levels of vehicle speed on network outside urban areas	<i>Good access to labour:</i>	No

Broad Sub-Region	Market Demand and Central Location to Markets	Good Quality Rail Access	Good Quality Road Access	Labour Market Conditions	Regional Logistics Location
10. South Blackcountry	Yes	<i>Poor Quality Rail Access:</i> W8 loading gauge Capacity constraints on congested urban network Full length trains Limited operational flexibility <u>(If Stourbridge to Walsall line built: Good Quality Rail Access)</u>	<i>Moderate to Good Quality Road Access:</i> Good network of motorways and dual carriageways High levels of network stress on inner urban links Lower levels of network stress and good levels of vehicle speed on network outside urban areas	<i>Good access to labour:</i>	No <u>(Yes – If Stourbridge to Walsall line built)</u>
11. Herefordshire and North Worcestershire	No	<i>Moderate to Good Quality Rail Access:</i> W8 loading gauge Available capacity Full length trains Operational flexibility	<i>Poor Quality Road Access:</i> Poor quality single carriageway roads with poor topography and alignment. Low levels of vehicle speeds due to poor road quality.	<i>Poor access to labour:</i>	No
12. Nuneaton, Coventry and Rugby	Yes	<i>Good Quality Rail Access:</i> W10 loading gauge Available capacity Full length trains Operational flexibility	<i>Good Quality Road Access:</i> Good network of motorways and dual carriageways Low levels of network stress on most of network and good levels of vehicle speed	<i>Good access to labour:</i>	Yes
13. South Warwickshire	Yes	<i>Moderate to Good Quality Rail Access:</i> W8 loading gauge Available capacity Full length trains Operational flexibility	<i>Good Quality Road Access:</i> Good network of motorways and dual carriageways Low levels of network stress on most of network and good levels of vehicle speed	<i>Moderate access to labour:</i>	Yes

Broad Sub-Region	Market Demand and Central Location to Markets	Good Quality Rail Access	Good Quality Road Access	Labour Market Conditions	Regional Logistics Location
14. Bromsgrove and Redditch	Yes	<i>Poor to Moderate Quality Rail Access:</i> W8 loading gauge Potential capacity constraints on congested urban network Full length trains Limited operational flexibility <u>(If Stourbridge to Walsall line built: Moderate to Good Quality Rail Access)</u>	<i>Good Quality Road Access:</i> Good network of motorways and dual carriageways Some network stress on inner urban links Lower levels of network stress on most of network and good levels of vehicle speed	<i>Good access to labour:</i>	No <u>(Yes – If Stourbridge to Walsall line built)</u>
15. South Worcestershire	No	<i>Moderate Quality Rail Access:</i> W8 loading gauge Available capacity Full length trains Operational flexibility	<i>Good Quality Road Access:</i> Good network of motorways and dual carriageways Low levels of network stress on most of network and good levels of vehicle speed	<i>Moderate access to labour:</i>	No

### 7.3 Hierarchical Ranking of Regional Logistics Locations

In total, eight sub-regions meet the criteria and are therefore appropriate for hosting Regional Logistics Sites. Two further sub-regions, given a substantial investment in the railway infrastructure, would also be appropriate for hosting large scale distribution facilities. At this stage of the analysis, it is necessary to consider whether there is a hierarchy of Regional Logistics Locations. Some Regional Logistics Locations may meet the criteria to a higher level than others, and consequently a further analysis of the recommended sub-regions has therefore been conducted.

In order to undertake the hierarchical ranking, the recommended Regional Logistics Location criteria from Stage A were applied to each recommended Regional Logistics Location in a stricter manner than in the previous assessment. In particular:

- In the initial assessment, sub-regions having *'moderate to good quality railway access'* and *'good quality rail access'* were deemed to have met the railway criteria (*'Moderate to good quality railway access'* defined as being served by the rail network with a W8 loading gauge, available capacity and operational flexibility). Essentially, the W8 loading gauge was taken as being the minimum loading gauge which should be considered for rail linked logistics sites. In the hierarchical analysis, only those Regional Logistics Locations with *'good quality rail access'* were considered for inclusion in the higher ranked locations (*'Good quality rail access'* defined as being served by the rail network with a W9 or W10 loading gauge, available capacity and operational flexibility). Terminals with access to a W8 loading gauge are able to handle 8'6" maritime containers on standard platform wagons, however the use of low level wagons for some intermodal units (9'6" containers) is required. The W9 gauge is the minimum gauge which can accommodate the full range of intermodal units on standard platform wagons, and without the need to use cost inefficient and operationally inflexible low deck height wagons in large numbers.
- Only those locations with *'good quality road access'*, defined in terms of low levels of network stress on most of the network and good levels of vehicle speed, were considered.
- Only those locations with *'good quality labour markets'* were considered.
- Only those sub-regions with a central location in terms of the origins and destinations of cargo were considered. Sub-regional areas located towards the periphery of the major areas of market demand were excluded. In order to undertake this assessment, the West Midlands Distribution Centre Analysis in Appendix 4 was subsequently interrogated further to *'draw out'* only those sub-regional areas showing strong demand for large distribution facilities. Essentially, only those sub-regional areas which realistically can serve both a national market (i.e. goods vehicle can

round trip to/from the major origins and destinations of cargo) and the Midlands regional market have been considered for inclusion in the higher ranked sub-regions.

A hierarchy of sub-regions exists, in that four Regional Logistics Locations meet the criteria to a higher degree than the remaining four, and can therefore be regarded as the 'Best Regional Logistics Locations'. The four other sub-regions are classed as 'Good Regional Logistics Locations'. The differences between the 'Best' and 'Good' Regional Logistics Locations are effectively defined by two criteria; the quality of railway access and their location in relation to market demand and cargo origin/destination (all eight recommended sub-regions having good quality road access and good access to labour). The 'Best Regional Logistics Locations' have a higher quality railway access, in that they are served by routes with the more generous W9/W10 loading gauge, compared to the 'Good Regional Logistics Locations' which have the minimum W8 required for intermodal train services.

The other difference between the two groups is likely to be in the markets catered for by different sites at different locations. Taking into account market demand and each sub-region's location in relation to the origin and destination of cargo, a Regional Logistics Site located in a 'Best Regional Logistics Location' will probably serve both national and regional markets. A Regional Logistics Site located in a 'Good Regional Logistics Location' is less likely to serve a national market and would mainly serve a regional need.

However this does not mean that NDCs will only locate at a site within a 'Best Regional Logistics Location'. Nor should RSS/planning policy operate on the basis that NDCs should only locate at sites within a 'Best Regional Logistics Location'. Sites within a 'Good Regional Logistics Location' will be the optimal locations for some NDCs, taking into account individual occupiers' cargo origins and destinations. The fact that different RDC or NDC occupiers have different geographic requirements is an important factor and needs to be recognised in future RSS policy. From a regional competitiveness perspective, this implies that a geographic choice of sites will need to be made available to satisfy individual operator requirements. Complete flexibility in terms of use is also required to satisfy individual operator requirements; Regional Logistics Sites must have the flexibility to attract both NDCs and RDCs, regardless of which sub-region they are located in. On this basis, the hierarchical categorisation should not solely form the basis of any site phasing policy.

The results of the hierarchical ranking analysis are presented in the table below. The order in which each Regional Logistics Location appears within each category does not imply any particular hierarchical ranking within that category. All four 'Best Regional Logistics Locations' can therefore be considered equal, likewise with the 'Good Regional Logistics Locations'.

**Table 14: Hierarchy of Regional Logistics Locations**

Regional Logistics Location	Market Demand and Central Location to Markets	Good Quality Rail Access	Good Quality Road Access	Labour Market Conditions
<b>Best Regional Logistics Locations</b>				
5. Burton, Lichfield and Sutton Coldfield	Yes	Good Quality Rail Access: (W9 and W10)	Good Quality Road Access: Low levels of network stress on most of network and good levels of vehicle speed	Good access to labour
6. North Blackcountry and South Staffordshire	Yes	Good Quality Rail Access: (W9 and W10)	Good Quality Road Access: Low levels of network stress on most of network and good levels of vehicle speed	Good access to labour
8. Tamworth and Atherstone	Yes	Good Quality Rail Access: (W9 and W10)	Good Quality Road Access: Low levels of network stress on most of network and good levels of vehicle speed	Good access to labour
12. Nuneaton, Coventry and Rugby	Yes	Good Quality Rail Access: (W9 and W10)	Good Quality Road Access: Low levels of network stress on most of network and good levels of vehicle speed	Good access to labour



Regional Logistics Location	Market Demand and Central Location to Markets	Good Quality Rail Access	Good Quality Road Access	Labour Market Conditions
<b>Good Regional Logistics Locations</b>				
1. North Staffordshire	Yes (but located between major areas of market demand)	Good Quality Rail Access	Good Quality Road Access	Good access to labour
2. Stafford	Yes (but located between major areas of market demand)	Good Quality Rail Access	Good Quality Road Access	Good access to labour
4. Telford	Yes (but located on the north western edge of the major areas of market demand)	Moderate to Good Quality Rail Access	Good Quality Road Access	Good access to labour
13. South Warwickshire	Yes	Moderate to Good Quality Rail Access	Good Quality Road Access	Moderate access to labour

## 7.4 Identifying Appropriate Areas within Regional Logistics Locations

The recommended Regional Logistics Locations are fairly broad in scale. There are only a limited number of appropriate areas within each recommended location where Regional Logistics Sites can be located and significant areas will not be suitable for large scale logistics activity, due to the geography of transport networks and other factors. For example, there are areas within each recommended Regional Logistics Location which are not served by the railway network, or where the railway network is not of the required standard (e.g. W6 loading gauge or no spare capacity). Likewise, there are parts of each recommended sub-region which do not have access to high quality road links. In order to assist further work which will subsequently follow this study, it is therefore necessary to consider locations at a more detailed scale (but above the site specific scale)

On a similar basis to the initial assessment of the sub-regions, the revised Regional Logistics Location criteria were re-applied to each recommended sub-regional area, but at a smaller scale. The purpose of this exercise was twofold. Firstly, to identify those areas within each recommended Regional Logistics Location which are not appropriate for supporting large scale logistics activity. Secondly, as a result of identifying the inappropriate areas, it has been possible to identify broad locations, at a smaller scale than the sub-regional level but above the site specific level, which have general potential as Regional Logistics Locations. The results of this exercise are presented in the table below. The table should be seen as a list of potential Regional Logistics Locations, therefore enabling policy makers/planners to focus future work in terms of identifying and selecting individual sites. The table should not be taken as implying a preference for any particular area within a Regional Logistics Location above another or suggest any specific sites. No inference should be taken from the order in which areas are listed.

**Table 15: Potential Areas Within Regional Logistics Locations Appropriate for Supporting Regional Logistics Sites**

<b>Regional Logistics Location</b>	<b>Potential Areas Appropriate for Supporting Regional Logistics Sites</b>
<b><i>Best Regional Logistics Locations</i></b>	
5. Burton, Lichfield and Sutton Coldfield	<p><i>Lichfield to Tamworth</i> – The area covering the WCML railway corridor between Lichfield and Tamworth (W10 loading gauge), an area served by the A38 (links to M6 Toll and M42).</p> <p><i>Lichfield to Rugeley</i> – The area covering the WCML railway corridor between Lichfield and Rugeley, an area served by the A51 (links to M6 Toll and M42).</p> <p><i>South west Burton</i> – The area covering the Derby to Birmingham railway line corridor to the south west of Burton (W8 loading gauge), an area served by the A38.</p>
6. North Blackcountry and South Staffordshire	<i>Wolverhampton to Penkridge corridor</i> – The area to the north of Wolverhampton covering the Wolverhampton to Stafford railway line corridor between Wolverhampton and Penkridge (W10 loading gauge), an area served by the M6, M54 and M6 Toll.
8. Tamworth and Atherstone	<p><i>Tamworth to Atherstone</i> – The area between Tamworth and Atherstone covering the WCML railway corridor (W10 loading gauge), an area served by the M42, A5 and M6 Toll.</p> <p><i>Nuneaton to Water Orton</i> – The area between Nuneaton and Water Orton covering the Nuneaton and Whitacre railway line corridor (W10 loading gauge), which also incorporates the existing RLS at Hams Hall, an area served by the M42, A5 and M6 Toll.</p> <p><i>Tamworth to Water Orton</i> – The area between Tamworth and Water Orton covering the Derby to Birmingham railway line corridor (W8 loading gauge), which also incorporates the existing Birch Coppice terminal, an area served by the M42, A5 and M6 Toll.</p>
12. Nuneaton, Coventry and Rugby	<p><i>East of Rugby</i> – The area covering the WCML railway corridor to the east of Rugby (W10 loading gauge), an area served by the M1 Jct 18</p> <p><i>Nuneaton to Rugby</i> – The area covering the WCML railway corridor (W10 loading gauge) between Nuneaton and Rugby, an area served by the M6 and M69.</p> <p><i>Nuneaton to Atherstone</i> – The area covering the WCML railway corridor (W10 loading gauge) between Nuneaton and Atherstone, an area served by the A444 and A5 (links to M6 and M69).</p> <p><i>East of Coventry</i> – The area covering the WCML railway corridor (W10 loading gauge) between Coventry and Rugby, an area served by the A45 and M45 (links to M1).</p>
<b><i>Good Regional Logistics Locations</i></b>	
1. North Staffordshire	<p><i>Northern Potteries</i> – The area to the north of Stoke on Trent (Stoke to Kidsgrove) covering the WCML railway corridor (W10 loading gauge), an area served by the M6 and A500.</p> <p><i>Southern Potteries</i> – The area to the south of Stoke on Trent (Stoke to Stone) covering the WCML railway corridor (W10 loading gauge), an area served by the M6, and A34.</p>
2. Stafford	<p><i>North west of Stafford</i> – The area to the north west of Stafford (Stafford to Norton Bridge) covering the WCML railway corridor, an area served by the M6 Jct 14</p> <p><i>South of Stafford</i> – The area to the south of Stafford (Stafford to Penkridge) covering the WCML railway corridor, an area served by the M6 Jct 13</p>
4. Telford	<i>North of Telford</i> – The area covering the re-instated Wellington to Donnington railway line corridor, an area served by the M54 and A442
13. South Warwickshire	<i>Dorridge to Leamington Spa</i> – The area covering the Cherwell Valley railway line corridor (W8 loading gauge) between Dorridge and Leamington Spa, an area served by the M40, M42 and A46.

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## **STAGE C – REGIONAL LOGISTICS SITES POLICY ADVICE AND IMPACTS**

The aim of Stage C of the study is to provide advice on the drafting of RLS policy for inclusion in Development Plans paying particular attention to how sites can be safeguarded for RLS use, and to assess the impacts of the study conclusions from a economic and sustainability perspective.

## 8. REGIONAL LOGISTICS SITES POLICY ADVICE

### 8.1 Introduction

In order to advise on the drafting of RLS policy it is essential to appreciate the relevant overarching RSS policy background to comply with the broader objectives of RSS. These policies continue to be relevant for all of RLS considerations.

The relevant policy criteria are identified within Section 2 (and Appendix 2) of this report and are summarised below: -

#### *RSS Policy PA1*

- Economic growth focused on the Major Urban Areas (MUA's)
- Any development proposed on the edge of MUA's or on Greenfield sites should meet the following criteria
  - No suitable alternatives on previously developed land
  - Capable of being served by rail or high quality public transport
  - The development respects the natural environment

#### *RSS Policy PA9*

- Within a portfolio of employment sites, Regional Logistics Sites (RLS) should be identified to provide opportunities for the concentrated development of warehousing and distribution uses.
- RLS will be identified within development plans and generally be
  - 50 hectares or larger
  - access to the regional rail and highway networks
  - capable of being served by multi-modal transport facilities
  - easy access to an appropriate labour supply
  - minimise compromise to the local environment
- Recognises that the development of large distribution facilities will be problematic within MUAs. RLS will therefore be discouraged within urban areas.
- The region should have a choice of RLS available and priority given to previously developed sites in North Staffordshire and Telford

### *RSS Policy T10 (Freight)*

- Encouragement of a greater use of rail freight and the development of new logistics/distribution facilities at locations with good access to the railway network

There is a need for a robust policy in order that the most suitable RLS sites can be identified and safeguarded in accordance with the anticipated demand profile within section 6. This section seeks to explore the objectives for RLS policy and then provides commentary on the key considerations, including:

- Identification of sites
- Safeguarding sites
- Control of RLS sites

## **8.2 Policy Objectives**

Providing a concise RSS/LDF policy framework for the identification, delivery, safeguard and control of RLS within the region.

It is particularly important that the positive emphasis within PA9 for the creation of RLS to maintain and enhance the competitive position of the warehouse and distribution sectors, is not lost within more detail policies at a local level.

## **8.3 RLS Site Identification Policy**

Based upon the conclusions within Section 5, RLS must have: -

- At least 50 hectares of development land available
- Good rail access. Good quality access is defined in terms of a generous loading gauge which is capable of accommodating intermodal units on standard platform wagons, the ability to handle full length trains, available capacity to run freight train services and permits full operational flexibility.
- Has good quality access to the highway network. Good quality access is defined as being served by the national motorway network or a major non-motorway route which exhibit low levels of network stress (congestion) and allow reasonable vehicle operating speeds.
- A suitable configuration which allows large scale high bay warehousing, intermodal terminal facilities, appropriate railway wagon reception facilities and parking facilities for all goods vehicles both those based on the site and visiting the site
- A need for such facilities due to demand from the logistics market which cannot be met in the medium to long term by existing capacity

- Located away from incompatible neighbours, thereby allowing 24 hour operations and no restrictions on vehicle movements, and minimising the impact on the local environment
- Has good access to labour. Good access to labour is defined as being a sub-region of employment need, having reasonable levels of qualification at NVQ Level 1 and 2 and opportunity to improve qualification levels, being a net exporter of lower order labour, and having a competitive wage rate for relevant lower order occupations.

### 8.3.1 Supply and Phasing

The conclusions within this study relating the quantum of land required for RLS (Section 6) should be used as a precursor to any policy. Estimates on the supply and take-up must be considered as minimums to insure that there is a choice of suitable sites, but not to the detriment of RLS failing to achieve a critical mass for intermodal facilities. In identifying suitable locations of RLS, it may be beneficial to phase the supply to ensure that the best sites can be progressed first and to enable a geographic choice of sites to satisfy individual operator locational requirements. It would therefore seem beneficial to address these scenarios within the relevant policies to inform future development.

In addition to issues associated with the quantum of supply, it will also be necessary within policy to address a scenario of two adjoining local authorities promoting competing sites within a Regional Logistics Location which both meet the criteria for RLS. It should be the responsibility of an RLS steering group to identify and discuss RLS opportunities to determine the most suitable site for development. The Regional Logistics Locations hierarchy, the RLS criteria, the need to provide geographic choice and the application of other relevant policies would provide a sound platform to determine which sites to promote first. Key considerations would include previously developed land, infrastructure phasing and delivery and the ability to meet RLS objectives with the minimal amount of impact on the surrounding area.

In order to ensure that there is a sufficient pipeline of RLS sites it will be necessary to consider, in priority order: -

- The extension of existing RLS (and those sites performing a quasi RLS role), where there is spare capacity available at the existing rail freight terminal;
- In circumstances where sites cannot be extended, RLS Steering Group/Local authorities should consider satellite sites (which shall be located close to the RLS/quasi RLS) which meet the size criteria and could utilise the existing rail freight infrastructure at the core site. A prerequisite for satellite sites to be considered should be spare capacity being available at the core site terminal; and
- Identifying suitable new RLS sites to provide supply a number of years hence to allow for infrastructure lead-in periods. As part of this process, sites within the MUAs should be considered before greenfield opportunities outside of the MUAs in

accordance with Policy PA1. In considering new RLS sites the assessment of the site against the criteria herewith should be a material consideration to determining proposals.

Satellite sites should not be afforded the same expansion opportunities as RLS.

Accordingly, it is recommended that policies should identify a hierarchy for the location/type of sites that should be developed first, to avoid an over supply of RLS land and make best use of existing rail terminals. When considering the extension of existing sites, it should be a prerequisite that all existing suitable plots have been taken up, but that the existing rail terminal has spare capacity available. The extension of sites without a rail terminal should not be considered in a similar way and would be contrary to Policy PA1, in any event.

The hierarchy of the recommended Regional Logistics Location was identified in Section 7, namely:

- Best RLS Sub-regions
  - Burton, Lichfield and Sutton Coldfield (5 on Map 1)
  - North Blackcountry/South Staffordshire (6 on Map 1)
  - Tamworth and Atherstone (8 on Map 1)
  - Nuneaton, Rugby and Coventry (12 on Map 1)
  
- Good RLS Sub-regions
  - North Staffordshire (1 on Map 1)
  - Stafford (2 on Map 1)
  - Telford (4 on Map 1)
  - South Warwickshire (13 on Map 1)

In general, the RLS steering group (to inform the RSS review) should consider any existing RLS sites (and those sites performing a quasi RLS role) and the potential for new RLS within each of the sub-regions within the 'Best' category before considering locations in the 'Good' category. However, flexibility will be important so that suitable RLS in the 'Good' locations can come forward ahead of new RLS within the 'Best' locations (see below).

Existing RLS and those sites performing a quasi RLS role that could be considered for extension/satellite sites (subject to available rail terminal capacity and conformity with policy PA1) could include sites similar to:

- DIRFT
- Hams Hall
- Birch Coppice



It is important that policy provides clarity on the circumstances when RLS can come forward for development within the life of the RSS/LDF. Policy should therefore dictate which of the locations should be saved for the second and subsequent phases of the plan. It is likely that around 100 hectares of land, with a geographical spread and variety of plot size, will need to be available for development in any one year to ensure that the region is able to offer a choice of RLS for occupiers as prescribed within Policy PA9. The conclusions in Section 6 suggest that at least 23 hectares of new RLS land, again with a geographical spread and variety of plot size, will need to be brought forward each year to replace land as it is developed and therefore maintain 100 hectares of availability.

The RLS Steering Group/Councils should be aware of lead-in time and infrastructure delivery for sites when including them as supply for a particular timeframe. From the outset it will be essential to undertake an assessment of existing RLS (or quasi RLS) expansion opportunities and suitable satellite sites that could utilise rail freight capacity on nearby intermodal facilities. These will provide the supply of RLS in the initial period of the RSS review. Thereafter it will be necessary to identify new RLS to be progressed at an appropriate time to be capable of development (with completed infrastructure) in time to meet anticipated shortfalls in RLS land supply (as the expanded existing and satellite sites are developed). It will be more important to consider the geographical spread of supply across the region, rather than whether the sub-region lies within the 'Best' or 'Good' category of sub-region. This would ensure that there is a geographical spread of sites available to satisfy individual operator locational requirements. New RLS infrastructure requirements should be identified within RSS transportation policies.

It is vital that there is flexibility within the policies to allow for suitable RLS in the 'Good' locations to come forward ahead of new RLS within the 'Best' locations. This flexibility could be defined against a series of criteria, which might include:

- 1) The need to maintain a geographical spread of available sites across the region. From a regional competitiveness perspective, it is important that a geographic choice of sites is made available to satisfy individual operator requirements. In order to ensure geographical choice, it will be important to consider where the 'gaps' in provision exist rather than whether the sub-region lies within the 'Best' or 'Good' category of sub-region; or
- 2) A significant occupier deal. Significant would be deemed to include those requirements in excess of c.50,000m<sup>2</sup> for a single user:
  - Enabling the delivery of the major infrastructure;
  - Will require the use of the rail terminal;
  - That has confirmed the RLS as its preferred location;
  - The site meets the RLS criteria in all respects;
  - The site is the most suitable within the sub-region (RLS preferred location);

- The site has been assembled by a single party/JV/consortium with a development agreement in place;
- 3) The delivery of an international facility and rail freight handling capabilities.

Sites identified outside of the sub-regional hierarchy (previously developed land only) should only be considered as part of an RSS review in consultation with an RLS steering group. These sites and the suitability of their sub-regions should have regard to the conclusions of this report. It is considered that additional sites in less favourable areas are unlikely to accord as well with the criteria herewith and would not be able to fulfil the objectives of an RLS. These sites would also have to be considered against the remaining availability of land on the core RLS (plus suitable expansion) before being considered.

As part of this process, Local Authorities should work together through a regular steering group to ensure a co-ordinated approach to RLS continues.

### **Supply and Phasing Summary**

More detailed policies for the supply of RLS sites should consider:-

- 1) A hierarchy for the phased supply of land;
- 2) Providing sufficient supply to allow geographic choice;
- 3) Being aware of lead-in times for sites when reviewing availability.
- 4) In general, promoting sites within the 'Best' sub-regional locations before considering sites in 'Good' locations.
- 5) Flexibility to allow for suitable RLS in the 'Good' locations ahead of opportunities in the 'Best' sub-regional locations, where there is a need to maintain a geographical spread of available sites, there is a significant occupier deal and/or the guaranteed delivery of rail infrastructure;
- 6) Considering the expansion of existing sites with rail capacity and/or the identification of satellite sites;
- 7) In identifying new RLS, councils should have regard to the lead-in requirements for new sites to enable the completion of necessary infrastructure, including rail/freight facilities;
- 8) Sites outside the sub-region hierarchy could only be progressed in consultation with the steering group, as part of an RSS review. The criteria approach and the availability of land within the sub-region hierarchy should be used to determine the suitability of such sites;
- 9) These guidelines do not prevent non-RLS employment opportunities on large sites being progressed in the normal way but large footprint buildings in particular would be encouraged, (where possible) to locate on RLS.

## 8.2.2 Safeguarding

### Use

To enable the potential of RLS sites to be realised and in order to meet the overriding objectives for the region, it will be necessary to safeguard RLS against their use for:

- B1 uses (unless ancillary)
- B2 General industrial
- Un-related smaller units.

B1 (a) uses will not be acceptable on RLS, however, ancillary offices to a warehouse should not be precluded. There are also likely to be more suitable sites available for the location B1 (b), B1 (c) and some B2 uses, in addition to other policy conflicts.

It is acknowledged that the principal use of RLS will be for B8 uses. However, 'just in time' production and processing units with substantial elements of storage and distribution should be considered. It is also relevant that there are many more large units which have B2 and B8 activities being undertaken within a single building which also offer a significant number of employment opportunities. There can also be significant benefits for this type of use to utilise rail freight. It is recommended that only those B2 units in excess of 10,000m<sup>2</sup> should normally be considered to be located at RLS. Other uses will not be acceptable on RLS where they would conflict with RLS objectives.

### Size

One of the functions of RLS will be the ability to offer larger plot sizes to be able to accommodate large footprint buildings. It would therefore conflict with the RLS objectives if smaller units were developed which compromised the size of available plots. It is therefore recommended that a minimum unit size of 10,000m<sup>2</sup> be imposed to address this.

There may be exceptional circumstances when some flexibility is required but this should only be considered for cases can demonstrate significant potential for rail freight, or as below. These units should also only be accommodated, where possible, on smaller plots or as infills following other larger development and where plots have been completed. It is unlikely that units less than 4,500m<sup>2</sup> would be suitable on RLS sites.

### Related Expansion

There may be occasions when the existing occupants of an RLS need to expand in order to stay at the site, which might not always be possible within the curtilage or as an extension of their existing premises. In circumstances where it can be demonstrated that additional space is required and relates/relies upon the proximity of the existing facility, then there should be flexibility for these to be accommodated particularly if they are close to 10,000m<sup>2</sup>

in size or can utilise rail freight. It would also be beneficial if the siting of these types of units could be located to minimise the impact upon the remaining plots and the RLS site objectives.

### Safeguarding Summary

Policies safeguarding RLS should consider:

- A presumption against B1 uses (unless ancillary).
- Only accepting B2 uses for units in excess of 10,000m<sup>2</sup>, with either rail potential of significant elements of B8 uses within the same building.
- Sites would not normally be acceptable for warehouse less than 10,000m<sup>2</sup> in size.
- Units for B8 use between 4,500-10,000m<sup>2</sup> would only acceptable as:
  - Infill plots after much larger development has been completed.
  - Represent a use that is closely related to an existing use and needs to be located nearby.
  - Can demonstrate significant rail freight potential which serves to underpin the success of the RLS.
  - Accords with the wider objectives of RLS.

### 8.3.3 Control

In order to complement the safeguarding policies above and work towards the RLS objectives, it would be beneficial for policy to identify the characteristics and expectations for RLS sites to inform developers/occupiers. These should include references to peripheral landscaping, infrastructure requirements etc but should also identify the flexibility offered by the RLS. This should avoid uncertainty for developer/occupiers about the suitability of RLS, by identifying: -

- 24/7 unrestricted operating hours;
- Good road and rail freight access;
- Acceptable internal heights of buildings up to 15m;
- Consider higher bay plots for part automated warehouses (25-30m in height) available in less sensitive parts of the site where there is an occupier specific requirement;
- Acceptable plot and building sizes;
- Stance on renewable energy generation;
- Servicing requirements and parking standards;
- Phasing of infrastructure and periphery landscaping requirements;
- S106 expectations;
- Green transport initiatives;
- Public transport expectations; and
- Noise/lighting expectations.

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## Conclusion

There is clearly significant potential for RLS to be promoted by more detailed policies at a regional and local level. If the region is to maintain/enhance its market share as a leading location for logistics warehousing it is imperative that a transparent detailed policy framework, which balances policy and market objectives is in place to realise the potential for the foreseeable future.

## 9. ECONOMIC IMPACT ASSESSMENT

This report concludes that a future demand for up to five regional logistics sites will be required to maintain the competitive position of the West Midlands, which equates to a net additional land area of around 330 hectares. This section details our approach to modelling the potential economic impact and underlying assumptions. The principle indicator which has been used to assess impact is full time equivalent employment.

### Assumptions – Site size and location

The approach we have taken to modelling the potential economic impact of the creation of net additional regional logistics sites is based on the 2021 'Scenario 1' prediction of gross demand of 839 hectares, which equates to 356 net additional hectares of land (of which 26 hectares are already allocated within the region). In addition, we have also estimated the employment impact arising from:

- A stand alone 75 hectare site
- Five 75 hectare sites (totalling 375 hectares).

In estimating the employment impact, we have assumed the following:

- Floorspace occupies 40% of the plot footprint of a RLS, so for a standard RLS of 75Ha, this would equate to available floorspace of 300,000m<sup>2</sup>.
- Employment is calculated on the basis of full time equivalent.
- For RLS employees we assume 10 employees per 1,000m<sup>2</sup>. This includes warehouse operatives, technicians, administrative and professional staff. The majority of site staff at a RLS will be NVQ level 2 qualified operatives and technical support staff. Logistics operators tend to centralise higher order occupations.
- In terms of drivers, we have assumed that a RLS would employ 1.3 drivers per 1,000m<sup>2</sup>. This relates to drivers based at the RLS – in practice the number of drivers accessing each RLS will be higher, but many will deliver to the site from a base outside the region.
- As for rail terminal staff, we have assumed that employment would be in the order of 50 staff working at the intermodal terminal, split over two shifts. Functions would include loading/unloading containers from trains and stacking them in the hard standing storage areas (using either gantry cranes or reach stackers), loading/unloading boxes from HGVs (cranes or reach stackers), marshalling railway wagons and inputting box throughput into site IT systems.

In assessing any economic impact we need to distinguish between the so-called gross and net impacts. Net impact takes into account potential deadweight and displacement effects, whereby some of the economic activity at an RLS displaces activity that occurs at other sites or would have occurred anyway. It is standard practice when estimating the employment impact of a new development to calculate net additional jobs using assumptions to consider

likely leakage, displacement and deadweight. In addition, it is necessary to take account of the so called multiplier effects, which arise through the spending of the wages of those whose employment is supported directly or indirectly by the RLS and supports further employment in the economy. These are considered in turn in the context of regional logistics sites.

### *Deadweight*

Deadweight arises where an activity on the proposed RLS would have occurred anyway. This could arise where a distributor simply relocated from a neighbouring site and hence is not additional to the local area or the region. The employment is not therefore additional (although the firm could have expanded through relocating and hence some additional employment could be created).

In estimating the local employment impact, we have drawn on English Partnership's guide to additionality<sup>1</sup> in reaching a view on the potential extent of deadweight. This suggests a deadweight factor of 35% of gross jobs for large regional projects involving B2/B8. However, we have downscaled this to 30%, which we believe is appropriate in this instance.

In terms of the estimate of the regional impact, deadweight is assumed to be zero. The reason for this is that the estimate of the floorspace is based on a net additional regional requirement. If a firm does relocate from an existing site to a new RLS, the analysis of demand and supply suggests that the freed up space would still be required as a part of overall regional demand and hence it would be taken up by another operator.

### *Displacement*

Displacement occurs where an operator on a new RLS displaces the activity of an operator on another site and which will ultimately result in the displacement of employment as well. Again, it is appropriate to account for this type of displacement which arises from a site at the local level. However, in terms of the employment impact at a regional level, no account is taken of displacement within the region as the estimate of the floorspace requirement is based on the net additional requirement.

Another form of displacement could occur where activity on a new RLS draws workers in from other existing sites in the region. This effect will arise irrespective of whether the employment impact is assessed at the local or regional level.

The EP displacement ready reckoner for large B2/B8 development assumed 17% employment displacement at the local level, and 25% at the regional level. Trade displacement will occur at the local level, with activity being diverted to logistics at the expense of other sectors, but only labour displacement is likely to follow through at the regional

<sup>1</sup> EP Additionality Full Guide, September 2004

level. It therefore follows that for additional RLS develop the regional displacement rate should be set lower than that of the local rate. We have assumed a local displacement rate of 17%, and a regional rate of 10%.

### *Leakage*

The level of leakage from RLS development will be driven by two factors:

- *The majority of employment at RLS developments will be lower order occupations, and the labour market analysis contained elsewhere in this report suggests that such occupational groups have a low propensity to commute significant distances. Therefore it is reasonable to expect that the majority of employment of any new development will be sourced in its locality.*
- *Consideration needs to be given to the geographic location of the RLS sites – the short listed logistics site areas cover the eastern length of the region, so it is reasonable to assume a degree of leakage into Cheshire, Derbyshire, Leicestershire and Northamptonshire.*

We have assumed a leakage rate of 10%, which is based on the EP ready reckoner for a B2/B8 development of the size and the scale of a 75 hectare RLS.

### *Multiplier effects*

The final aspect of assessing the net employment impact of the development of RLSs in the West Midlands concerns indirect and induced employment created. This will involve supply chain services, ancillary services to the site and also the effect of the local spending patterns created as employees spend their income in the local economy.

We are able to assess these multiplier effects in principle by taking the EP additionality ready reckoner for sites of this type – which suggests a composite multiplier for B2/B8 of 1.29 for the local area and 1.44 at the regional level. Based on our experience of the region, we believe these are a little high for this type of development in the West Midlands and we have therefore adjusted them to 1.25 and 1.4.

### **Net direct, indirect and induced employment at Regional Logistics Sites**

For each variant to be modelled we have calculated the indicative employment impact. The following tables show our analysis on a step by step basis taking gross jobs, netting off in turn displacement, deadweight and leakage, and then using a multiplier to calculate induced and indirect employment.

Table 16 shows the gross and net employment impact of a single 75 hectare RLS. It takes Gross Permanent FTE jobs (including drivers) and calculates Net Additional Jobs by netting leakage, deadweight and displacement in turn.



**Table 16: Employment Impact of 70 hectare Regional Logistics Site**

	<b>Local</b>	<b>Regional</b>
Floorspace (000s sq m)	300,000	300,000
Gross permanent jobs created	<b>3,390</b>	<b>3,390</b>
Less leakage	3,051	3,051
Less deadweight	2,136	3,051
Less displacement	1,773	2,746
<b>Net additional jobs before multiplier effects</b>	<b>1,773</b>	<b>2,746</b>
Plus supply and income multipliers	2,216	3,844
Rail Terminal Jobs	50	50
<b>Total Net Additional Jobs</b>	<b>2,266</b>	<b>3,894</b>

At the local level a 75 hectares RLS could indicatively be expected to create in the order of 2,300 local jobs (i.e. jobs in local Logistics Areas as defined by the MDS Transmodal analysis) and 3,900 regional jobs.

The disparity between regional and local net additional job creation is a factor of local deadweight and displacement effects that become marginal at the regional level. This is because the recommended RLS development is net additional capacity over and above that which is already situated in the West Midlands. This local / regional dynamic is repeated for the other two variants.

**Table17: Employment Impact of Five 75 hectares Regional Logistics Sites**

	Local	Regional
Floorspace	1,500,000	1,500,000
Gross permanent jobs created	16,950	16,950
Minus leakage	15,255	15,255
Minus deadweight	10,679	15,255
Minus displacement	8,863	13,730
<b>Net additional jobs before multiplier effects</b>	<b>8,863</b>	<b>13,730</b>
Plus supply and income multipliers	11,079	19221
Rail Terminal Jobs	250	250
<b>Total Net Additional Jobs</b>	<b>11,329</b>	<b>19,471</b>

Table 17 shows the employment effect of 5 Regional Logistics Sites. This takes the local and regional assumptions that drive Table 16, and factors in 50 intermodal terminal jobs per site. Again the local – regional net employment differential is driven by deadweight and displacement effects that are significant at the local level but marginal at the regional level. For five 75 hectares regional logistics sites, the net additional employment at the local level is in the order of 11,500 jobs, and 19,500 at the regional level.

It is important to note that this variant is illustrative of the employment effect created by 5 sites – but to meet the projected Scenario 1 demand for net additional site capacity would require between 4 and 5 RLS developments. The third variant takes the net additional hectareage of 330 hectares as projected under Scenario 1 at the regional level (but excluding the 30 hectares which are already allocated).

**Table18: Employment Impact of 330 hectares Net Additional Regional Logistics Site Development**

	Local	Regional
Floorspace	1,320,000	1,320,000
Gross permanent jobs created	14,916	14,916
Minus leakage	13,424	13,424
Minus deadweight	9,397	13,424
Minus displacement	7,800	12,082
<b>Net additional jobs before multiplier effects</b>	<b>7,800</b>	<b>12,082</b>
Plus supply and income multipliers	9,749	16,915
Rail Terminal Jobs	250	250
<b>Total Net Additional Jobs</b>	<b>9,999</b>	<b>17,165</b>

Table 18 shows that for a net additional increase in RLS capacity of 330 hectare across the West Midlands by 2021 it would be reasonable to expect net additional employment in the order of 10,000 jobs at the local level, and 17,000 at the regional level. The marginal levels of deadweight and displacement at the regional level again apply to this variant.

The majority of the jobs created will fall in the categories of employment described in the labour market analysis contained in Appendix 9. Essentially the jobs will be HGV drivers, rail terminal staff and operatives, administrative and technical staff at the RLS.

## 10. SUSTAINABILITY APPRAISAL

In line with the requirements of the study brief, we have undertaken a ‘general appraisal’ of the conclusions reached in this study. The approach adopted is based on that suggested in the recent document published by the Office of the Deputy Prime Minister – Sustainability Appraisals of RSSs. The document provides draft guidance on how to carry out Sustainability Appraisals during the process of preparing Regional Spatial Strategies and Local Development Frameworks. As the conclusions reached in this study concern general broad locations, rather than site specific recommendations, it has not been possible to undertake a full sustainability appraisal. Instead, a ‘high level’ broad and general assessment of the recommendations has been undertaken.

The recommendations emerging from this study have been appraised against a series of high level objectives. Each objective is derived primarily from policies stated in West Midlands regional policy documents and plans, such as Regional Spatial Strategy, but also from externally imposed objectives originating from either law or policy. Each objective falls under three main category headings; namely Environmental, Economic and Social. While most of the analysis is of a qualitative nature, in some cases the appraisal has been able to adopt a quantitative approach and produce estimated values. The table below shows the results of the sustainability appraisal.

**Table 19: High Level Sustainability Appraisal of Study Recommendations**

Objective	Assessment of Recommendations
<b>Environmental</b>	
Encouraging the use of rail for freight (Policy T10, RSS11 and national policy)	<p>The recommendations emerging from this study, if adopted, are clearly designed to encourage a greater use of rail freight to/from the West Midlands region.</p> <p>The study has demonstrated that the crucial factor in rendering rail freight cost competitive against other modes, and thereby encouraging its use, is the availability of terminal capacity and distribution centres located on large rail linked sites. As a result, the study recommends that a significant proportion of future demand for large new build warehousing in the region should be located on rail linked RLS. Consequently, the recommended Regional Logistics Sites site selection criteria includes the requirement for RLS to be rail connected, through the provision of intermodal terminal facilities.</p> <p>The study has also showed that another key factor which will encourage the use of rail for freight is the ability of a site to attract frequent full length rail services to/from a wide range of locations. The study concluded that a minimum site size of 50 hectares is required in order to attract the requisite number of train services. Consequently, the recommended Regional Logistics Sites site selection criteria includes the requirement for RLS to be at least 50 hectares in size.</p> <p>The study recommendations suggest that a significant proportion of future traffic growth to distribution centres in the West Midlands will be by rail freight. The forecast modelling undertaken for the study suggests that by 2021, an additional 3.5 million tonnes of traffic will be carried by rail freight (out of a total traffic growth of 7.7 million tonnes, or 46%), on the basis that all regions build additional warehouse capacity on rail linked sites. Rail freight's market share is forecast to increase from 2% currently to 10% by 2021.</p>
Encouraging the development of new rail freight terminals (Policy T10, RSS11 and national policy)	<p>The study conclusions supports the development of additional rail terminal capacity in the region. The study has concluded that there is a need for additional intermodal terminal facilities in the region, and that this need should be accommodated on future RLS. Consequently, the recommended Regional Logistics Sites site selection criteria includes the requirement for RLS to be rail connected, through the provision of intermodal terminal facilities.</p> <p>The study has concluded that five Regional Logistics Sites, including intermodal terminal facilities, will be required in the region up to 2021.</p>

Objective	Assessment of Recommendations
Encouraging developments that generate significant amounts of freight in locations that have good access to the rail network (Policy T10, RSS11 and national policy)	The study conclusions encourage the development of new warehousing on sites that have good access to the rail network. The study recommends that a significant proportion of future demand for large new build warehousing in the region should be located on rail linked RLS. Consequently, the recommended Regional Logistics Sites site selection criteria includes the requirement for RLS to be rail connected, through the provision of intermodal terminal facilities. The recommended Regional Logistics Sites site selection criteria include the requirement for RLS to have good quality rail access. Good quality rail access is defined in terms of a generous loading gauge which is capable of accommodating intermodal units on standard platform wagons, the ability to handle full length trains, available capacity to run freight train services and permits full operational flexibility.
Encouraging those developments which generate significant freight movements to locate close to suitable intermodal freight terminals or roads designed and managed as traffic distributors (Policy T2)	The study recommends that a significant proportion of future demand for large new build warehousing in the region should be located on rail linked RLS, and that future RLS include intermodal terminal facilities. Consequently, the recommended Regional Logistics Sites site selection criteria includes the requirement for RLS to be rail connected, through the provision of intermodal terminal facilities. The recommended Regional Logistics Sites site selection criteria includes the requirement for RLS to have good quality road access. Good quality access is defined as being served by the national motorway network or major non-motorway routes which exhibit low levels of network stress (congestion) and allow reasonable vehicle operating speeds.
The development of large distribution facilities will be problematic within Major Urban Areas. Regional Logistics Sites will therefore be discouraged within urban areas (Policy PA9)	The recommended Regional Logistics Sites site selection criteria include the requirement for RLS to be located away from incompatible land uses
Development proposed on the edge of MUAs or on greenfield sites should meet the following criteria: i) there are no suitable alternatives available on previously developed land and buildings within built up areas ii) the development should be capable of being served by rail (Policy PA1)	The study conclusions include policy recommendations to ensure that there is a sufficient pipeline of RLS sites. The study suggests that it will be necessary to consider, in priority order: 1. The development of brownfield sites ahead of greenfield locations 2. The extension of existing sites, where there is rail freight capacity; 3. In circumstances where sites cannot be extended, satellite sites should be considered (which shall be PDL close to the RLS), which meet the size criteria and could utilise existing rail freight infrastructure with capacity. This must be a prerequisite for them to be considered; and 4. Identifying suitable new RLS sites to provide supply a number of years hence to allow for infrastructure lead-in periods. The recommended Regional Logistics Sites site selection criteria include the requirement for RLS to be rail connected, through the provision of intermodal terminal facilities.
<b>Economic</b>	

<b>Objective</b>	<b>Assessment of Recommendations</b>
Future performance of the Regional economy - enhancement of the West Midlands competitive position as a logistics location (Prosperity for all)	<p>The recommendations emerging from this study, if adopted, are clearly designed to enhance the West Midlands competitive position as a logistics location.</p> <p>The study has demonstrated that enhancing the West Midlands' competitive position as a logistics location can only be achieved through the provision of sites and facilities which address future market need. The study set out the key trends and issues which are affecting the future needs of the market, and subsequently how they translate into commercially attractive sites which will address future market need i.e. sites with large plots able to accommodate the next generation of large distribution centres and rail linked sites with good road access. The recommended Regional Logistics Sites site selection criteria have consequently taken into account the future needs of the market by including the requirement for RLS to:</p> <ol style="list-style-type: none"> <li>1. Be rail connected, through the provision of intermodal terminal facilities</li> <li>2. Have good road access</li> <li>3. Be at least 50 hectares in size</li> <li>4. Have a suitable configuration which allows large scale high bay warehousing</li> <li>5. Located away from incompatible land uses</li> </ol>
Encourage sustained economic growth and the generation of additional jobs (Prosperity for all)	<p>The recommendations emerging from the study are clearly designed to counter the threat, from other regions, to the competitive position the West Midlands has held to date. The recommended Regional Logistics Sites site selection criteria have taken into account the future needs of the logistics market (see above), and they should result in the supply of sites commercially attractive to the market.</p> <p>The economic impact assessment shows that for a net additional increase in RLS capacity of 350 hectares across the West Midlands by 2021, it would be reasonable to expect net additional employment in the order of 10,000 jobs at the local level, and 17,000 at the regional level.</p>
Encourage efficient patterns of movement in support of economic growth (Prosperity for all)	<p>The study has demonstrated that a number of EU and Government policy initiatives which will be introduced over the next few years, along with a number of other factors, are likely to increase the relative costs of transporting goods by road in the medium to long term. As a result, the study encourages a greater use of rail freight to/from the West Midlands region together with the economic/spatial conditions which are required in order to support efficient rail freight services:-</p> <ol style="list-style-type: none"> <li>1. The recommended Regional Logistics Sites site selection criteria includes the requirement for RLS to be rail connected, through the provision of intermodal terminal facilities.</li> <li>2. The recommended Regional Logistics Sites site selection criteria includes the requirement for RLS to be at least 50 hectares in size.</li> </ol>
Maintain a portfolio of sustainably located sites attractive to developers and operators and appropriate to market needs. (Prosperity for all)	<p>The recommended Regional Logistics Sites site selection criteria have taken into account the future needs of the logistics market in order that they are commercially attractive to the market.</p>
<b>Social</b>	
Improving the education and skills of the West Midlands workforce	<p>The provision of additional employment which will require skill levels in line with NVQ level 2, including literacy, numeracy and IT skills.</p>

<b>Objective</b>	<b>Assessment of Recommendations</b>
The provision of rewarding and satisfying employment	<p>The economic impact assessment shows that for a net additional increase in RLS capacity of 330 hectares across the West Midlands by 2021, it would be reasonable to expect net additional employment in the order of 10,000 jobs at the local level, and 17,000 at the regional level.</p> <p>The study demonstrated that the wage rates enjoyed by logistics sector employees are similar to wages rates in the manufacturing sector and in many cases are higher than wages rates in the service sector</p>