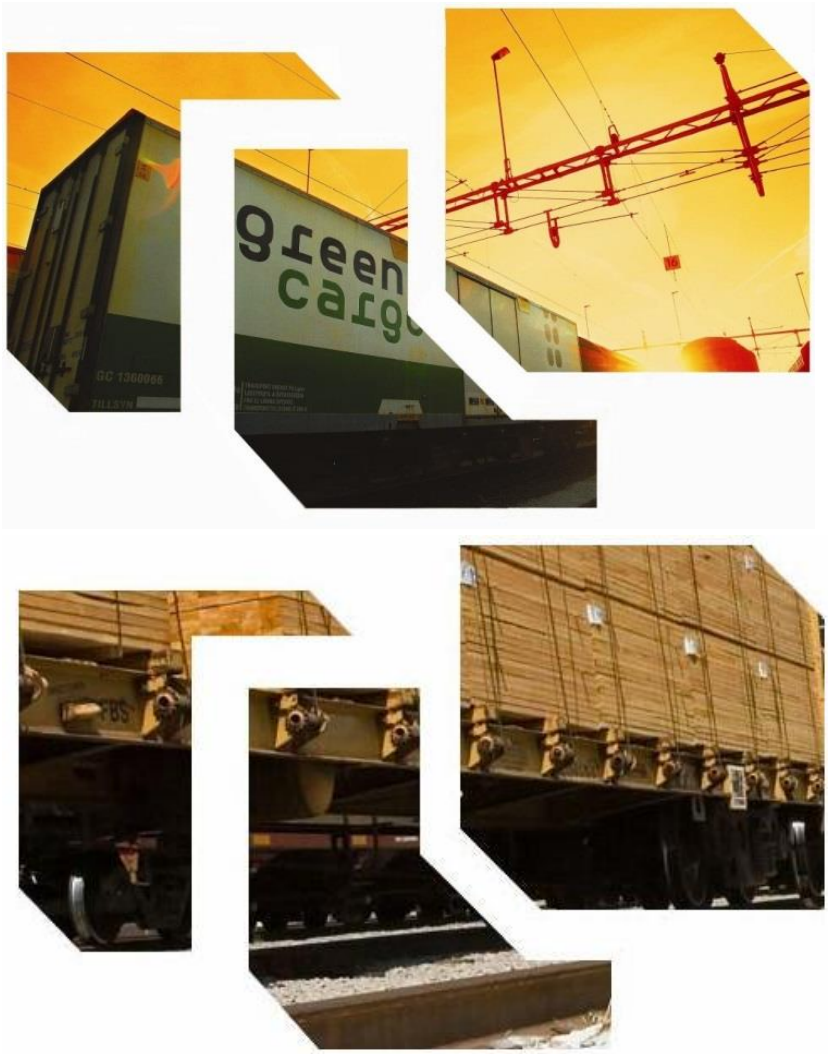


Wider Market Developments: Implications for Leicester and Leicestershire

Final Report

A Technical Report Commissioned by Harborough District Council on Behalf of Authorities in Leicestershire

January 2017

Our ref: 216045r_Part C_Final

MDS Transmodal

GL Hearn
Part of Capita Real Estate

CONTENTS

1. INTRODUCTION

MDS Transmodal and *Savills* were commissioned in December 2013 by the *Leicester and Leicestershire Housing Planning and Infrastructure Group (HPIG)* to undertake the *Leicester and Leicestershire Strategic Distribution Study (SDS*). The main objectives of the study were to enable a better understanding of the strategic distribution sector and objectively determine future need, together with managing change and supporting sustainable economic growth. HPIG represents the county's local planning authorities, *Leicestershire County Council* and the *Leicester and Leicestershire Local Enterprise Partnership (LLEP)* on spatial planning matters.

The study was undertaken in three phases, as follows:

- Part A: Review and Research;
- Part B: Planning for Change and Growth; and
- Part C: Developing a Strategy for the Distribution Sector in Leicestershire[1].

An interim report covering Part A of the study was presented to HPIG in Spring 2014. It essentially presented a 'baseline' position with regards to the distribution sector in Leicestershire. A second interim report covering Part B of the study was presented in early Summer 2014. It concerned planning for change and growth, and included land use forecasts for the strategic distribution sector in Leicestershire and the East Midlands. A Final report (Part C) was agreed in late 2014; taking into account the findings of Parts A and B it developed a recommended strategy designed to maintain and enhance the county's established competitive advantage and enable growth for the strategic distribution sector in Leicestershire.

Since the publication of the Leicester and Leicestershire SDS, *Harborough District Council* have received a number of planning applications or proposals for large scale B8 development, notably from developers IDI Gazeley, ProLogis and DB Symmetry. Further, Harborough DC is in the process of developing a new local plan, and as part of this process has produced a number of option papers and sustainability appraisals. The afore-mentioned developers, amongst others, subsequently produced a number of consultation submissions in relation to the new local plan development. These have included observations and comments on the outputs and conclusions contained in the Leicester and Leicestershire SDS reports.

The combination of the above developments has necessitated an update (re-fresh) of some of the outputs contained in the Leicester and Leicestershire SDS reports, together with a requirement for

[1] The main study area, the county of Leicestershire, is the same as that covered by the LLEP. In local Government terms, the study area comprises the City of Leicester unitary authority along with those parts of the county administered by Leicestershire County Council and the seven district councils. As per the initial study reports, for ease and consistency 'Leicestershire' is the term used throughout this document to refer to the LLEP area and these local authorities on a collective basis.

clarifications on number of the conclusions reached and recommendations. As a result, MDS Transmodal were commissioned in June 2016 by Harborough DC to undertake further consultancy work related to these updates and clarifications. Two separate but inter-linked scopes of work were subsequently drafted by Harborough DC, namely:

- Scope A: Clarifications on conclusions and recommendations;
- Scope B: Update and re-fresh of outputs and conclusions; and

Separate reports have been prepared and presented covering Scopes A and B (in August 2016).

This separate study (Scope C: Wider market developments and implications for Leicestershire) is a subsequent further commission by Harborough District Councils on behalf of the planning authorities in Leicestershire (and will be received by the replacement Strategic Planning Group). It is intended to provide further advice on the logistics and distribution sector required to support the Strategic Growth Plan (SPG) to 2050. It has been prepared in partnership with property specialists *GL Hearn*. The Terms of Reference are presented in the Appendix. It should be considered a 'stand-alone' report, albeit there are references to data or conclusions contained in the Leicester and Leicestershire SDS and the Scope A/B reports.

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

2. EXISTING SUPPLY OF LARGE SCALE WAREHOUSING

This section of the report addresses ***C1*** of the *Terms of Reference*. It aims to quantify the existing supply of large scale logistics and distribution floor space capacity nationally and across the so called *'golden triangle'*. It essentially provides a 'snap shot' of existing logistics and distribution floor space, in terms of quantum and location, at one moment in time.

The *Valuation Office Agency (VOA)* records the amount of floor space by function within commercial properties across England and Wales for Business Rates purposes (non-domestic Rating List). The VOA's website previously allowed the records relating to individual buildings to be viewed on-line, and MDS Transmodal had interrogated this facility and (manually) compiled a database of large scale warehouse floor space by location and occupier for England and Wales. This database was used to provide the warehouse supply data presented in the Leicester and Leicestershire SDS (Part A Report, Section 4).

Since completing the Leicester and Leicestershire SDS, the VOA have supplied to MDS Transmodal a copy of the actual *Rating List* database for England and Wales (up to date at end of November 2015). Given that this is the definitive record of floor space by function within all commercial properties, this database has therefore been interrogated to provide further analysis of the existing supply of large scale warehouse floor space nationally and across the so called 'golden triangle'. Existing floor space greater than or equal to 9,000 square metres[2] within any individual commercial property which is designated as 'warehouse' or a similar designation has been extracted from the VOA Rating List database. For clarification, this includes:

- Floor space designated as 'warehouse' or similar within a building whose primary classification is 'Warehouse and Premises' i.e. a building purposely built to receive, store and distribute cargo (the classic distribution centre); and
- Floor space designated as 'warehouse' or similar within a building that has some other primary classification e.g. a 'Factory and Premises' which contains floor space used to store and distribute goods manufactured at that site.

Other ancillary floor space designations (e.g. offices) within each identified property have been excluded i.e. the total 'headline' size of a commercial property will be greater once these other floor space functions are included. Further, while the total quantum of 'warehouse' or similar floor space within an individual property is greater than 9,000 square metres, the actual floor space may be distributed over two or more different areas (zones) within the individual commercial property. For example, a 'Warehouse and Premises' may record a separate 'cold store' of 10,000 square metres

[2] Approximately 100,000 sq ft, this being the standard recognised definition within the commercial property sector for large scale warehousing

plus an ambient 'warehouse' area of 5,000 square metres. The analysis has recoded this as one building with a total of 15,000 square metres of warehouse floor space.

England and Wales

Based on the above, across England and Wales a total of *1,755 buildings* covering *33 million square metres* of floor space can be identified from the VOA Rating List database (as at November 2015). A breakdown of these figures by Government Office Region are presented in the table below.

Table 2.1: Current Large Scale Warehouse Capacity England and Wales, by Region (November 2015)

Region	Floor Space (000s sq m)	Number Units
North West	6,447	338
East Midlands	6,000	284
Yorkshire and The Humber	4,822	246
West Midlands	4,650	264
East of England	3,222	167
South East	2,260	128
South West	1,879	101
London	1,367	95
Wales	1,266	65
North East	1,172	67
Total	**33,085**	**1,755**

Region	% Floor Space	% Units
North West	19%	19%
East Midlands	18%	16%
Yorkshire and The Humber	15%	14%
West Midlands	14%	15%
East of England	10%	10%
South East	7%	7%
South West	6%	6%
London	4%	5%
Wales	4%	4%
North East	4%	4%

Source: VOA

The table shows that East Midlands region hosts just over *6 million square metres* of floor space across 284 commercial properties. The average floor space per commercial property in the East

Midlands is around 21,000 square metres, compared with the national average of 18,000 square metres.

As previously discussed in the Leicester and Leicestershire SDS (Part A and Final Report), the East Midlands region records around 8% of the population of England and Wales, yet the data above shows that it accommodates 18% of total English and Welsh warehouse capacity. The mean size per unit is also significantly above the national figure. This data analysis therefore confirms the conclusions reached in the Leicester and Leicestershire SDS, namely that the East Midlands region has a distinct competitive advantage in this sector, in that it has attracted a quantum of warehouse floor space significantly above that which its population and wider economy would suggest. Essentially the region 'punches above its weight' in this sector; the total amount of floor space being significantly more than is required to handle the volume of cargo distributed into the East Midlands regional economy. The above analysis would suggest that around 65-70% of the region's floor space is playing a national rather than regional role. The reasons for this position were presented and discussed in the SDS.

Derived from the VOA Rating List as per above, the table below presents the existing supply of large scale logistics and distribution floor space at the various Strategic Rail Freight Interchanges (SRFIs) to have been developed to date and other rail-connected warehousing schemes.

Table 2.2 Current Large Scale Warehouse Capacity at SRFIs and other Rail-connected Sites (November 2015)

Location	Floor Space (000s sqm)
DIRFT	415
Hams Hall	175
BIFT	170
3MG	125
East Midlands DC	100
ProLogis Coventry**	129
SIRFT Sheffield**	60
Wakefield Europort*	350
Doncaster*	90
Teesport*	120
Total	**1,734**

Source: VOA

**Technically not SRFIs as the intermodal terminals were developed separately from the adjacent warehousing. However, the close proximity of the rail terminal and warehousing means that they in practice operate as such.*

*** Warehouses with rail sidings alongside – neither handles regular rail services*

Overall, it would appear that just over 1.7 million square metres of large scale floor space is currently directly rail-served at SRFIs or other sites. This represents around 5% of the national total. Note that there are also significant other warehousing/logistics developments located in close proximity to intermodal terminals (e.g. Magna Park, Trafford Park), albeit they do not benefit from a direct rail-connection. It is important to appreciate that this current position reflects the legacy of a planning system which, until fairly recently, did not actively promote rail-served warehousing. This position has changed, as reflected in the NPS National Networks and NPPF (see SDS Part A Section 7), which now actively promote the development of large scale logistics facilities at rail-served sites (e.g. SRFIs). The national rail freight demand forecasts (SDS Part B and Section 4 below) assumed that 35-40% of all new-build warehousing would be located at a directly rail-served site.

East Midlands

The table below describes the current (November 2015) supply of large scale warehousing in the East Midlands region by county, again derived from the VOA Rating List as per above.

Table 2.3: Current Large Scale Warehouse Capacity in East Midlands by County (November 2015)

County	Floor Space (000s sq m)	Number Units
Northamptonshire	2,373	106
Leicestershire	1,760	80
Nottinghamshire	930	39
Derbyshire	777	48
Lincolnshire	160	11
Total	**6,000**	**284**
County	**% Floor Space**	**% Units**
Northamptonshire	40%	37%
Leicestershire	29%	28%
Nottinghamshire	15%	14%
Derbyshire	13%	17%
Lincolnshire	3%	4%

Source: VOA

The table shows that around 70% of East Midlands floor space capacity is located in Northamptonshire or Leicestershire, again confirming the analysis contained in the Leicester and Leicestershire SDS. In Leicestershire itself, around 1.8 million square metres of floor space across 80 individual commercial properties are identified (implying a mean unit size of 22,000 square metres, significantly above the national average). Based on the data presented in Table 2.2, just over 0.5

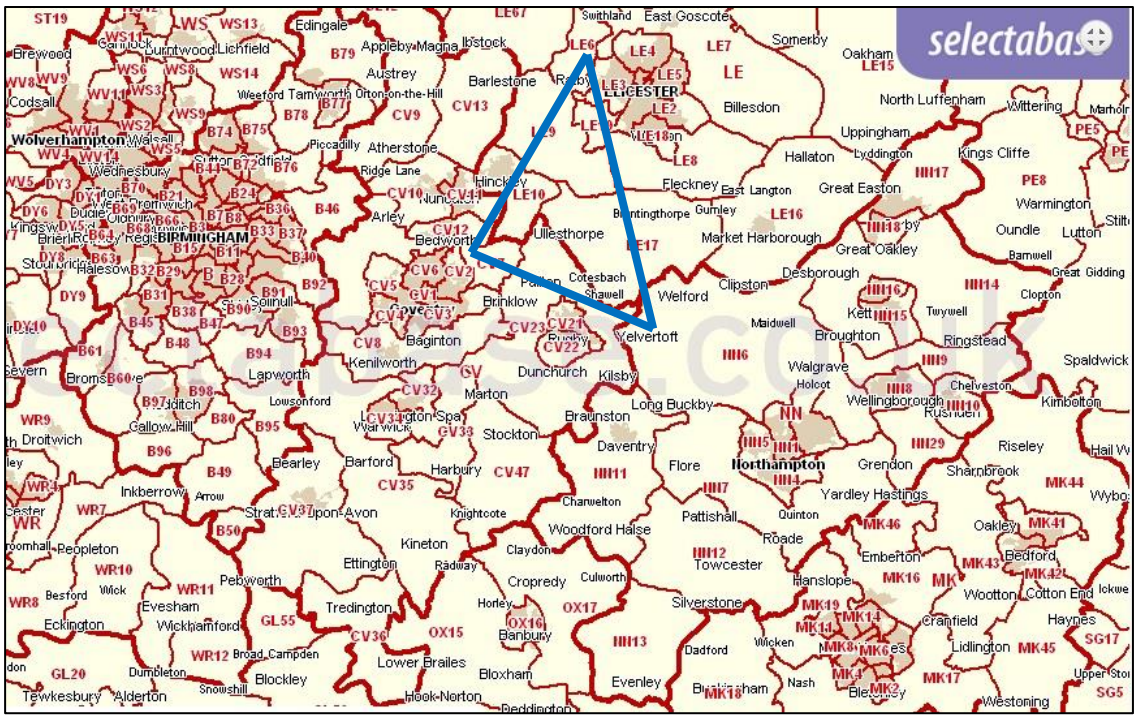
million square metres of floor space in the East Midlands is currently rail-served, representing around 9% of the regional total i.e. above the national average.

The 'Golden Triangle'

A combination of factors resulted in the southern part of the East Midlands region along with neighbouring areas in the West Midlands and South East becoming (from the 1980s) the competitive 'location of choice' in both supply chain cost and performance terms when sourcing and distributing on a national basis. The area became known as the '*golden triangle*', albeit there is no one standard recognised definition of the term. As noted in the Leicester and Leicestershire SDS, it may be referred to as the area bounded by the M1, M6 and M69 motorways, albeit that others consider it to be a larger area broadly running along the M1 corridor from Milton Keynes to north Leicestershire/Nottinghamshire and extending into the West Midlands towards Birmingham along the M6 corridor.

For the purposes of this report, we have taken GL Hearn's definitions of the 'golden triangle', as illustrated in Section 3 (Figure 3.1) below. The so called *'small golden triangle'* is defined as the area bounded by the M1, M6 and M69 motorways alongside land immediately outside but served by junctions on those motorways. The larger area described (termed the *'wider golden triangle'* for the purposes of this report) therefore being the area broadly running along the M1 corridor from Milton Keynes to north Leicestershire/Nottinghamshire and extending into the West Midlands towards Birmingham. Given the above delimitation, the 'small golden triangle' covers the LE3, LE6, LE8, LE9, LE10, LE17, LE19, CV7, CV21, CV23 and NN6 Postcode Areas. This is shown on the map below.

Figure 2.1: Midlands Postcode Areas and Small Golden Triangle



We have therefore examined the VOA Rating List as per above, identifying large scale warehouse floor space within the Postcode Areas noted On that basis, the table below describes the current supply of large scale warehousing in the so called 'small golden triangle'.

Table 2.4: Current Large Scale Warehouse Capacity in the Small Golden Triangle (November 2015)

Postcode Area	Floor Space (000s sq m)	Number Units
CV21	138	9
CV23	183	5
LE10	64	3
LE17	549	28
LE19	44	4
LE3	143	6
LE8	13	1
LE9	301	4
NN6	313	18
Total	**1,748**	**78**
Total East Midlands	*6,000*	*284*
Total England and Wales	*33,085*	*1,755*
% small golden triangle vs East Midlands total	*29%*	*27%*
% small golden triangle vs England and Wales total	*5%*	*4%*

Source: VOA

The table shows that the small golden triangle currently hosts just over 1.7 *million square metres* of floor space across 78 commercial properties (around 29% of the East Midlands regional total). The average floor space per commercial property in the small golden triangle is therefore around 22,400 square metres, compared with the national average of 18,000 square metres.

With respect to the *wider golden triangle*, this has been defined as Leicestershire and Northants along with the neighbouring authorities of Milton Keynes, Coventry, North Warwickshire, Nuneaton & Bedworth and Rugby. As per above, large scale floor space located in these counties/authorities have been extracted from the VOA Ratings List as per above. This is shown in the table below by Local Authority Area.

Table 2.6: Current Large Scale Warehouse Capacity in the Wider Golden Triangle by Local Authority (November 2015)

Local Authority	Floor Space (000s sq m)	Number Units	% Floor Space	% Units
Blaby	98	8	2%	3%
Charnwood	60	4	1%	1%
City Of Leicester	217	10	4%	4%
Harborough	549	28	9%	10%
Hinckley & Bosworth	379	8	7%	3%
Melton	65	3	1%	1%
North West Leicestershire	366	17	6%	6%
Rutland	26	2	0%	1%
Corby	345	18	6%	7%
Daventry	651	24	11%	9%
East Northamptonshire	226	13	4%	5%
Kettering	157	5	3%	2%
Northampton	662	30	11%	11%
South Northamptonshire	99	5	2%	2%
Wellingborough	233	11	4%	4%
Milton Keynes	603	28	10%	10%
Coventry	304	17	5%	6%
North Warwickshire	410	20	7%	7%
Nuneaton & Bedworth	58	3	1%	1%
Rugby	276	15	5%	6%
Oadby and Wigston	0	0		
Total	**5,783**	**269**		
Total – England and Wales	**33,085**	**1,755**		
% Wider Golden Triangle vs England and Wales	***17%***	***15%***		

Source: VOA

The table shows that the wider golden triangle currently hosts just over 5.7 *million square metres* of floor space across 269 commercial properties. The average floor space per commercial property in the wider golden triangle is therefore around 21,500 square metres, compared with the national average of 18,000 square metres. This essentially reflects the existing floor space supply by region data outlined above; the data above shows that the wider golden triangle accommodates 17% of

total English and Welsh warehouse capacity. It would appear to further support the conclusions contained in the Leicester and Leicester SDS, namely that the wider golden triangle has a distinct competitive advantage in this sector, in that it has attracted a quantum of warehouse floor space significantly above that which its population and wider economy would suggest

3. KEY SECTOR TRENDS NATIONALLY

This section of the report addresses **C2** of the *Terms of Reference*. It aims to 'sign post' future long term trends in the sector on a qualitative basis i.e. where future new-build demand can be expected, derived from a quantitative overview of recent trends in the strategic logistics and distribution sector nationally, and how this is likely to affect the golden triangle (including Leicestershire) over the long term. It also summarises the re-freshed demand-land use forecasts from the Scope B report.

Both the Leicester and Leicestershire SDS and the Scope A/B Reports have described how the strategic logistics and distribution sector behaves differently from other commercial sectors with respect to property. In particular, the development of new warehouse property is driven by factors other than employment growth. These include:

- Existing warehousing becoming functionally or physically obsolete;
- Operators requiring additional floor space as a result of traffic growth; this being the result of general economic growth, company mergers/acquisitions and trends in wider society amongst other factors; and
- Changing market conditions resulting in the optimum location for warehousing changing.

Consequently, there is a continual and significant 'churn' when it comes to the property occupied by the strategic logistics and distribution sector (large scale warehousing). New warehousing is built continually at new sites, much of which is simply replacing existing life expired capacity. The life expired capacity is then refurbished or demolished, with the land potentially utilised for other requirements e.g. housing. However, despite the significant annual new build activity, the total stock of warehouse floor space does not alter appreciably.

Key drivers of distribution demand in the East Midlands, currently, include e-commerce and the automotive manufacturing sector. E-commerce or e-retailing has grown substantially since 2010, and the East Midlands is attractive for both Regional and National Distribution Centres. Data reveals that over the last ten years the retail sector has accounted for 43% of all the transacted warehouse space nationally. The shift to online retail is well established and accounts for 14% of current retail sales nationally.

Advanced manufacturing and the automotive sector within this are also important drivers of demand for distribution space. In the Midlands the take-up related to the sector climbed up from 9% in 2011 to 50% in 2014[3] (these figures include the Jaguar Land Rover (JLR) lease at Prologis Park Ryton in May 2014 of 44,000 square metres). Growth in this sector is a demand driver. In particular, the continued investment by JLR will attract more suppliers or will require their existing suppliers to

[3] Data exported from Savills Brexit Briefing|Impact on UK Logistics, July 2016

locate nearby. The distribution market is influenced by wider economic conditions, and it is clear that there has been strong take-up of large-scale warehouse/ distribution space since 2011/12.

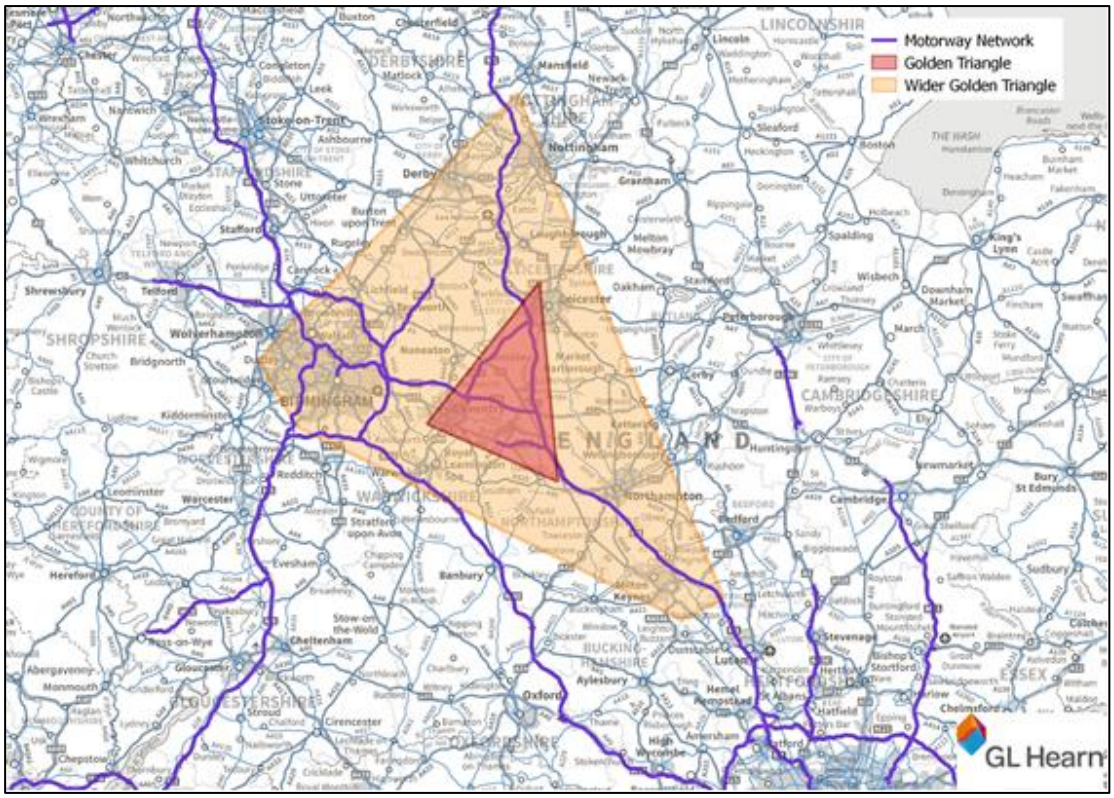
Before considering the main analysis, it is worthwhile considering the definition of the so called 'golden triangle' and the meaning of some key terms used throughout this section.

Golden Triangle

As noted earlier, the golden triangle may be referred to as the area bounded by the M1, M6 and M69 motorways, albeit that others consider it to be a larger area broadly running along the M1 corridor from Milton Keynes to north Leicestershire/Nottinghamshire and extending into the West Midlands towards Birmingham along the M6 corridor. The following map presents GL Hearn's interpretation of the golden triangle boundaries. These boundaries are used for the analysis presented in this section of the report.

The *'small golden triangle'* is defined as the area bounded by the M1, M6 and M69 motorways alongside land immediately outside but served by junctions on those motorways. The *'wider golden triangle'* is the area that lies from Kirby in Ashfield, Nottinghamshire to Flitwick and Toddington in Bedfordshire as well as to the Junction M5/M42 (near Bromsgrove) in the West Midlands (Figure 3.1).

Figure 3.1: Golden Triangle (Source: ONS Open Geography & GL Hearn)



Key Terminology

Key terms used in this section are as follows*:*

AVAILABILITY refers to the advertised sites on 7 September 2016 that were available for sale or rent at that time. This includes existing vacant units, refurbished, new build; and build to suit opportunities. It is a measure of supply.

BUILT-TO-SUIT refers to a way of developing property, usually for commercial purposes, in which the developer or landlord builds a unit to a tenant's specifications.

FREEHOLD TRANSACTION refers to the sale of land or premises. The owner of a freehold generally controls and owns all the property including the land itself and any buildings/structures on it.

LEASEHOLD TRANSACTION refers to a time limited interest for the property to the length of the lease. The lease is the principal document which sets out the details of the contractual relationship between the owner of a property (the Landlord) and the occupier (the Tenant).

PRIME RENT refers to the rental value of new units.

SECONDARY RENT refers to the rental value second-hand units, such as those built during the early 1990s.

TAKE-UP refers to the gross measurement of property activity (i.e. freehold & leasehold transactions) for a given period of time, mainly a year, for the purposes of this report. It is a measure of demand.

Also note that some of the charts below refer to the *'prime golden triangle'* or '*PGT*'. This term is interchangeable with the *'small golden triangle'*

3.1 Take-up trends nationally

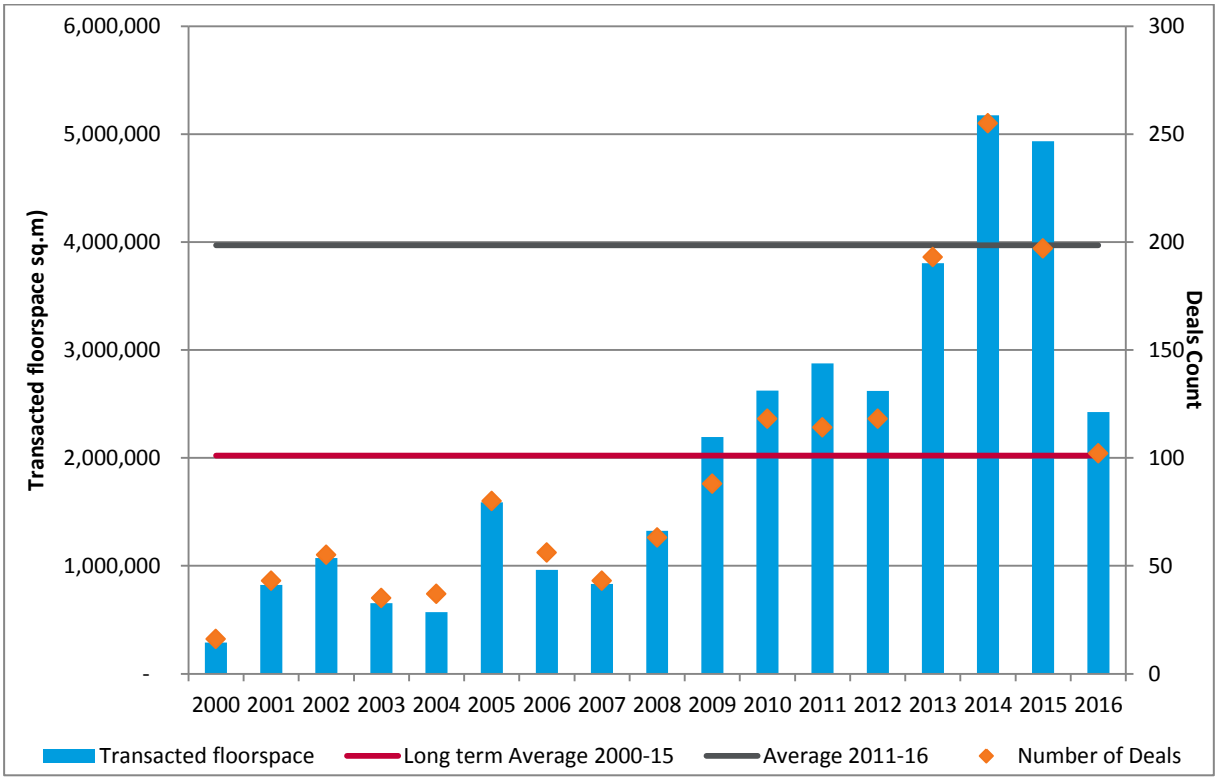
An assessment was undertaken of commercial warehouse floor space take-up (greater than 9,000 square metres) recorded by Estates Gazette Interactive (EGi) and the CoStar commercial property databases. These are expected to record the majority of floor space transactions. Investment deals were excluded. Although both databases include some pre-2000 data, more robust take-up data exists for the period post-2000 and this has therefore formed the starting point of the analysis.

Demand remains strong; 2.4 million square metres was transacted (including freehold and leasehold transactions) in the first half of 2016 . This is already more than half of the annual average take-up between 2011-16 which equates around to 4 million square metres per annum.

Nationally there were 1,613 recorded transactions relating to distribution units above 9,000 square metres between January 2000 and June 2016 according to the CoStar and EGi databases. The total transacted floor space for the same period was around 35 million square metres. The total transacted floor space since 2011 equates to 61% of the total transacted space (in part reflecting better quality data).

The figure below summarises take-up trends across Britain. The highest take-up was recorded in 2014 when 218 deals were completed related to 5.2 million square metres of floor space, followed by 4.9 million square metres transacted space in 2015. The data highlights strong and growing demand for warehouse/distribution space in recent years.

Figure 3.2: Take-up 2000-H1 2016*

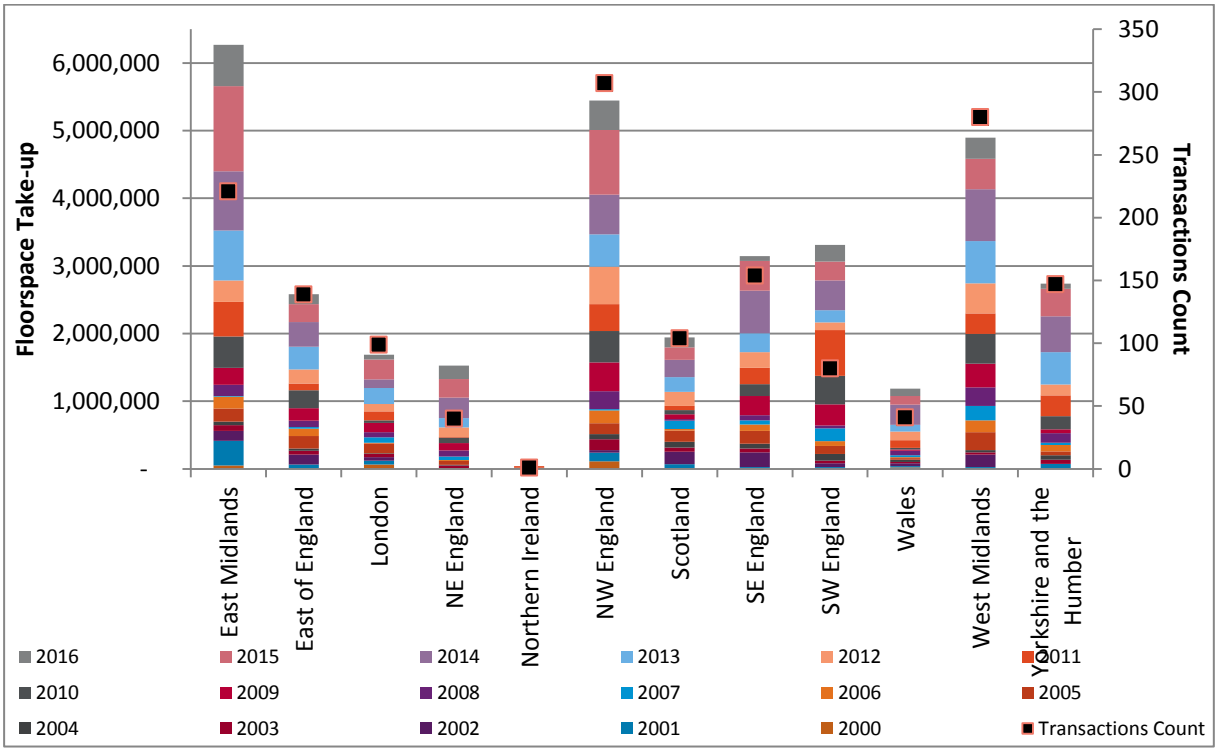


**2016 H1 – Data for 2016 available only for half year*

Source: CoStar, EGi – Analysis by GL Hearn

Take-up differs between regions. The Midlands witnesses strong take-up for strategic scale warehouses because of its central location within Great Britain and the comprehensive motorway network. Figure 3.3 below clearly shows that the highest level of freehold take-up since 2000 has been recorded in East Midlands, with a total of 6.3 million square metres of transacted space, followed by the North West (5.4 million square metres) and the West Midlands (4.9 million square metres).

Figure 3.3: Freehold Take-up by region and year

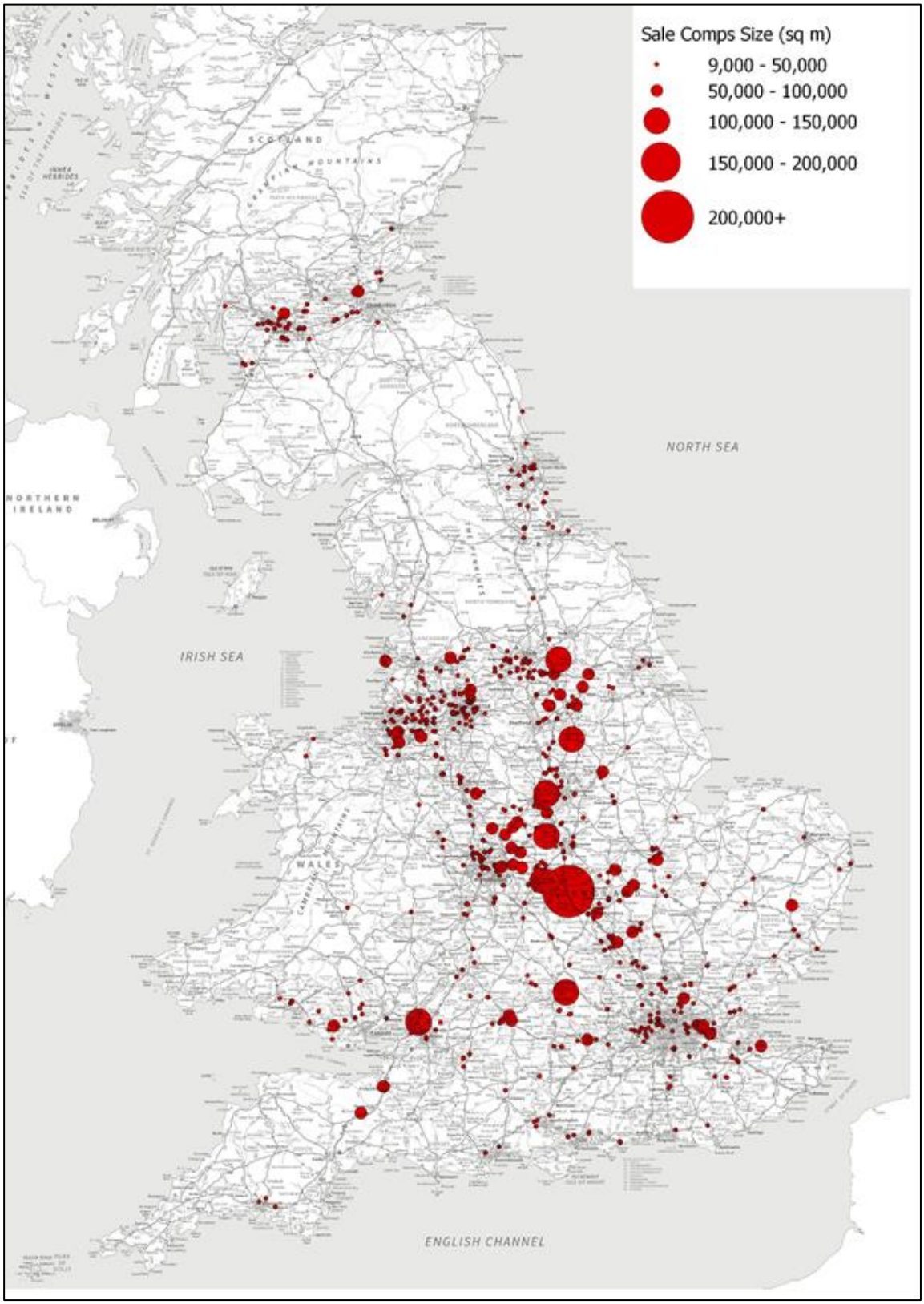


Source: CoStar, EGi – Analysis by GL Hearn

Figure 3.4 below presents the spatial distribution of freehold transactions by size across Britain. As illustrated, the greatest concentration of activity, and some of the largest deals, have been in the East and West Midlands, and in particular in the wider golden triangle area. The data clearly re-enforces the picture which emerged from the analysis in Section 2 above and in the original Leicester and Leicestershire SDS.

The largest individual transaction took place at DIRFT (Daventry International Rail Freight Terminal) at Daventry/Crick in Northamptonshire in January 2015 and was a scheme to provide two sheds of 130,000 square metres each (263,050 square metres. total floor space).

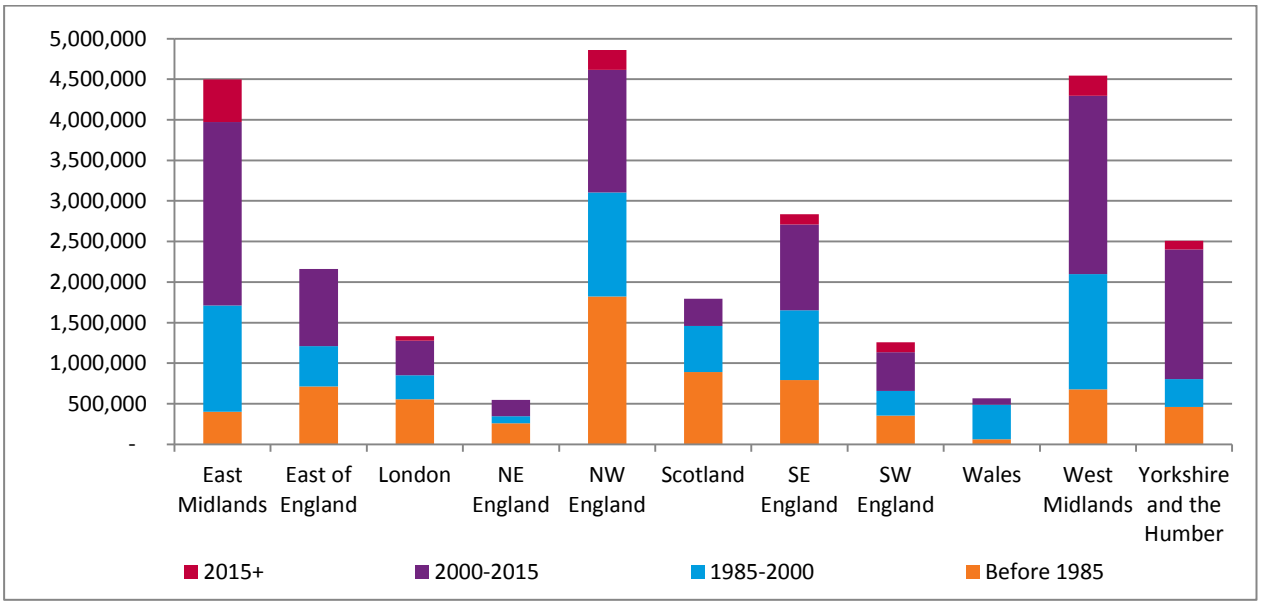
Figure 3.4: Transactions 2000-2016



Source: ONS Open Geography, CoStar, EGi & GL Hearn

The figure below shows the age of transacted space by region. In the East Midlands, 62% of stock was built post-2000. The equivalent in West Midlands is 54% and in North West 36%.

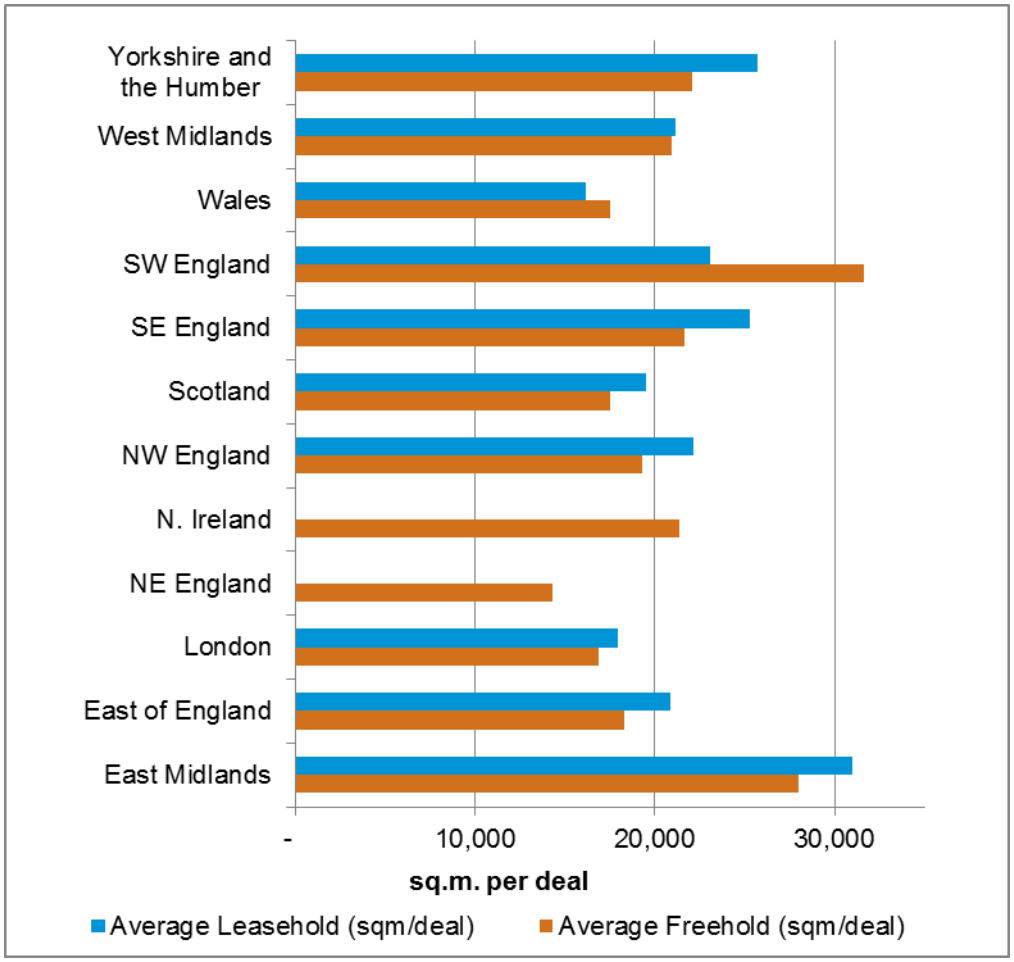
Figure 3.5: The age of the transacted stock in years of built by region



Source: ONS Open Geography, CoStar, EGi & GL Hearn

The highest average space per transaction across Britain since 2000 is recorded in East Midlands, pointing to the region seeing some of the largest deals. This is shown in Figure 3.6 below. This again reflects the analysis of existing supply presented in Section 2; the East Midlands and golden triangle both recording mean floor space per unit significantly above the national average. The key conclusion to be drawn; the market has been developing very large warehouses in the Midlands (East and West) North West and Yorkshire/Humber regions.

Figure 3.6: Transacted and leased floor space per deal (Average figure)

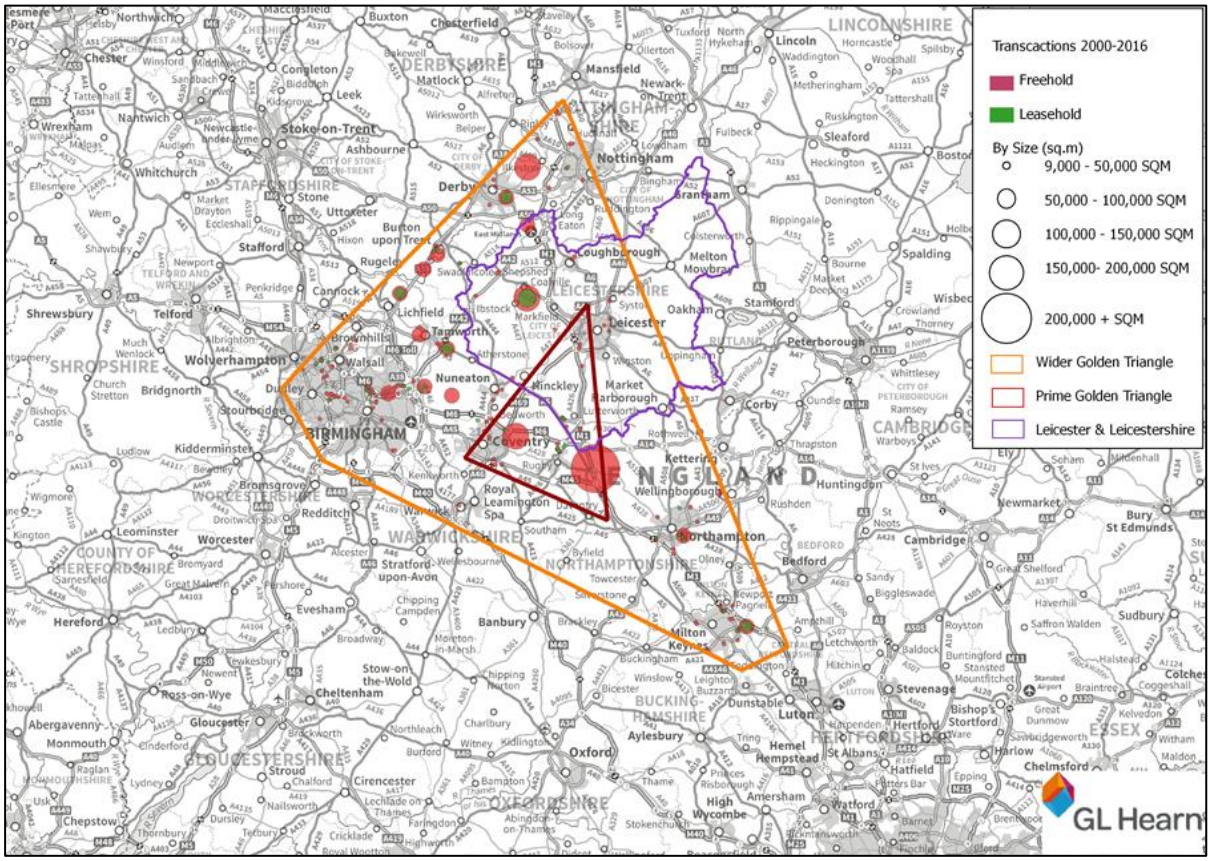


3.2 Take-up trends in Wider and Small Golden Triangle

Around a quarter of the recorded transacted floor space of strategic warehouses (above 9,000 square metres) nationally took place within the wider golden triangle highlighting that this is **the prime market** for strategic distribution demand nationally. GL Hearn's analysis highlights there are a greater proportion of larger deals for larger units within the Golden Triangle area. In particular, there have been 351 transactions accommodating 8.5 million square metres since 2000 in the wider golden triangle.

Whilst the small golden triangle covers just 0.4% of the total UK area, it equates to 5% of the transacted large warehouse space (reflecting the analysis in Section 2). In particular 1.7 million square metres have been transacted since 2000. The figure below presents the geographic distribution of the deals for the wider and small golden triangles between 2000 and 2016.

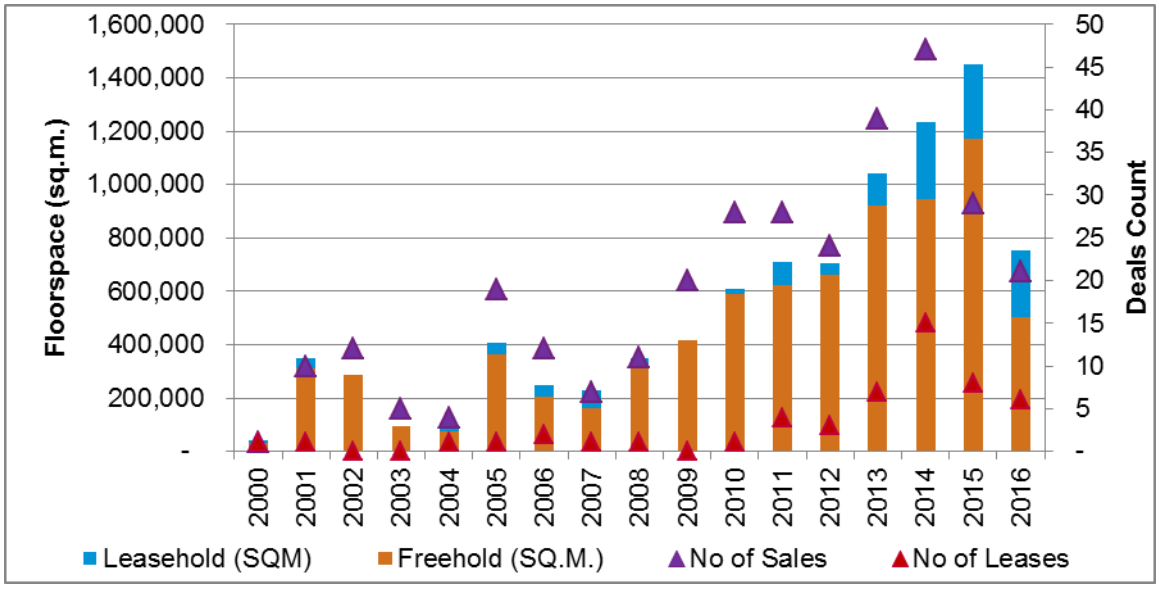
Figure 3.7: Deals in Golden Triangle 2000-2016



Source: ONS Open Geography, CoStar, EGi & GL Hearn

Consistent with the national trend, there has been increasing activity in "big shed" transactions since 2011 (albeit that the trend shown below is partly related to the recording of data). This can be attributed to occupiers seeking economies of scale, including increased demand from retailers adapting to on-line shopping which has driven demand for strategic warehouses particularly in very accessible areas like the golden triangle from which a national market can be served. It should be noted again that the 2016 figures are incomplete and include records only for the half of 2016.

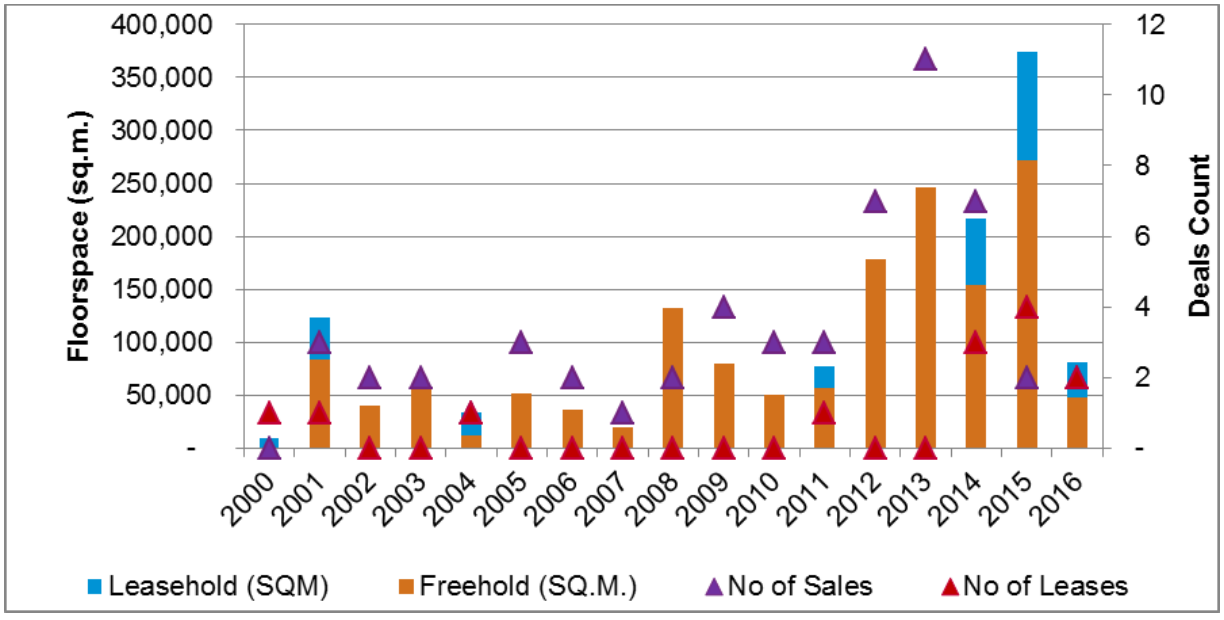
Figure 3.8: Take-up trend in Wider Golden Triangle



Source: CoStar, EGi & GL Hearn

In both areas the take-up has increased significantly since 2011, to a peak in 2015 when a third of the national transactions took place within the wider golden triangle. In particular, more than 1.4 million square metres were transacted through 27 deals in the wider golden triangle and 375,000 square metres across 6 deals in small golden triangle in 2015.

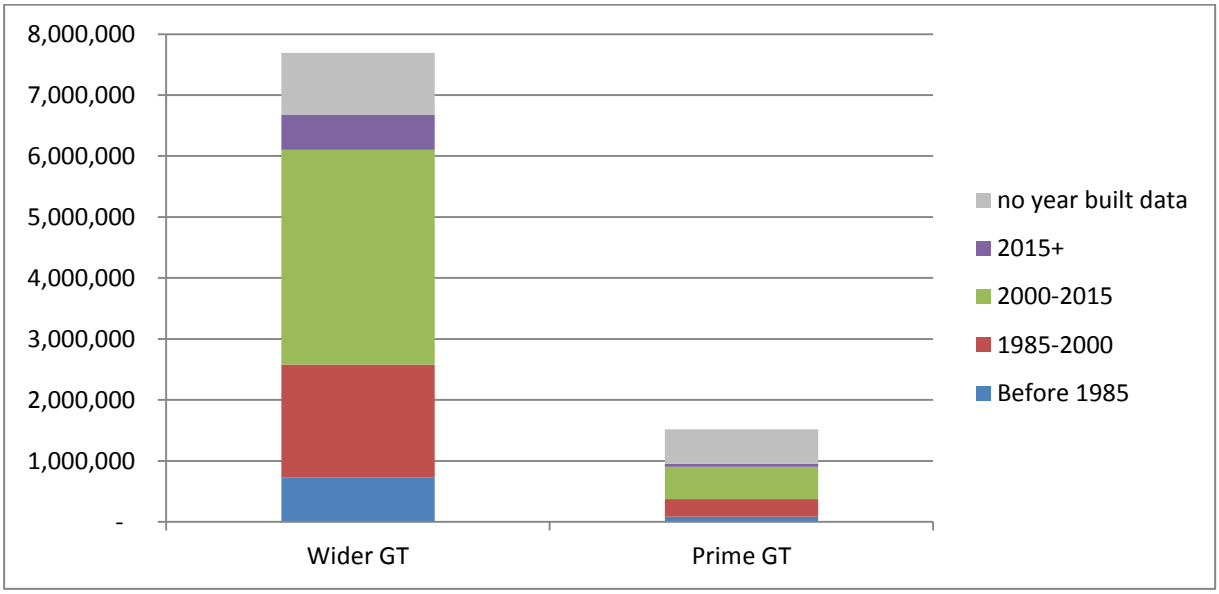
Figure 3.9: Take-up trend in Small Golden Triangle



Source: CoStar, EGi & GL Hearn

Around 60% of the transacted stock in wider golden triangle and small golden triangle was built post-2000. The figure below breaks down the age of the transacted stock. Demand is principally for modern floor space.

Figure 3.10: Transacted and leased stock by year of built



Source: CoStar, EGi & GL Hearn

3.3 Rents and Rental Trends

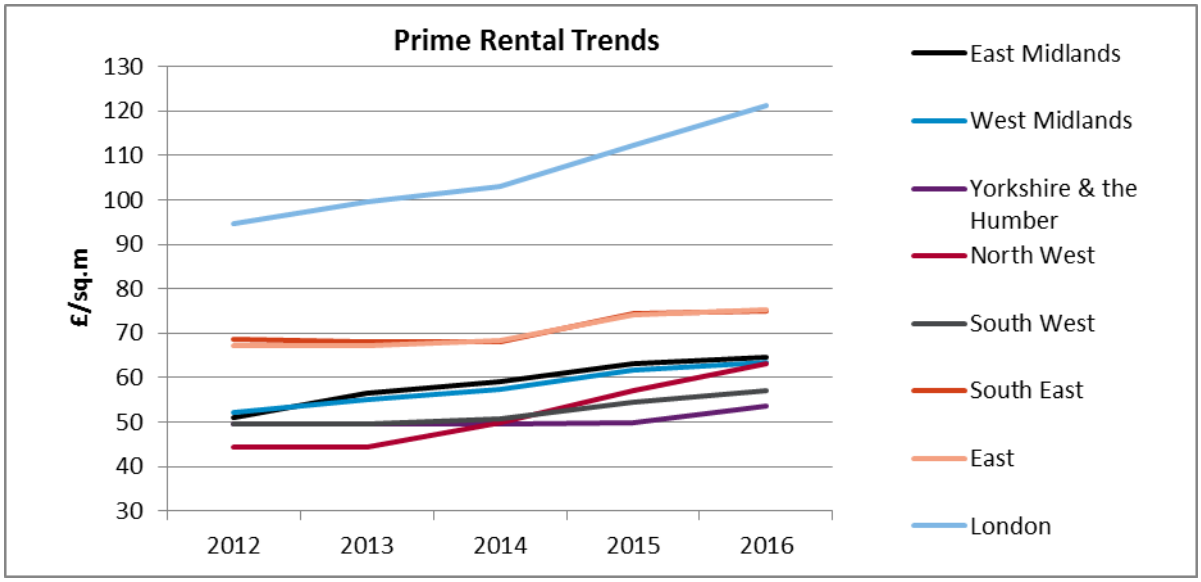
Rental values for commercial property in 2016 have been analysed. Prime rental values of large warehouses have been increasing, rising by 4% since 2015. For the purpose of the rental analysis GL Hearn has used the Colliers International database[4] and interactive mapping tools with regards the rents of large warehouses (greater than 9,000 square metres). The available information relates to the period between 2012 and 2016.

There are a number of influences on rental costs including location, quality, condition and specifications. The figure below illustrates the prime rental trends over the last four years at a regional level. Greater London has typically seen the highest rents followed by the East of England and the South East influenced in part by land supply constraints.

In East Midlands, prime rents have increased from around £51 in 2012 to just under £65 per square metre in 2016 (c26%). This is above the national average of 20%.

[4] Because of the lack of rent information in CoStar and EGi, we preferred to use a more updated data source for the rental analysis

Figure 3.11: Prime Rental Trends - Average Prices per sqm per annum



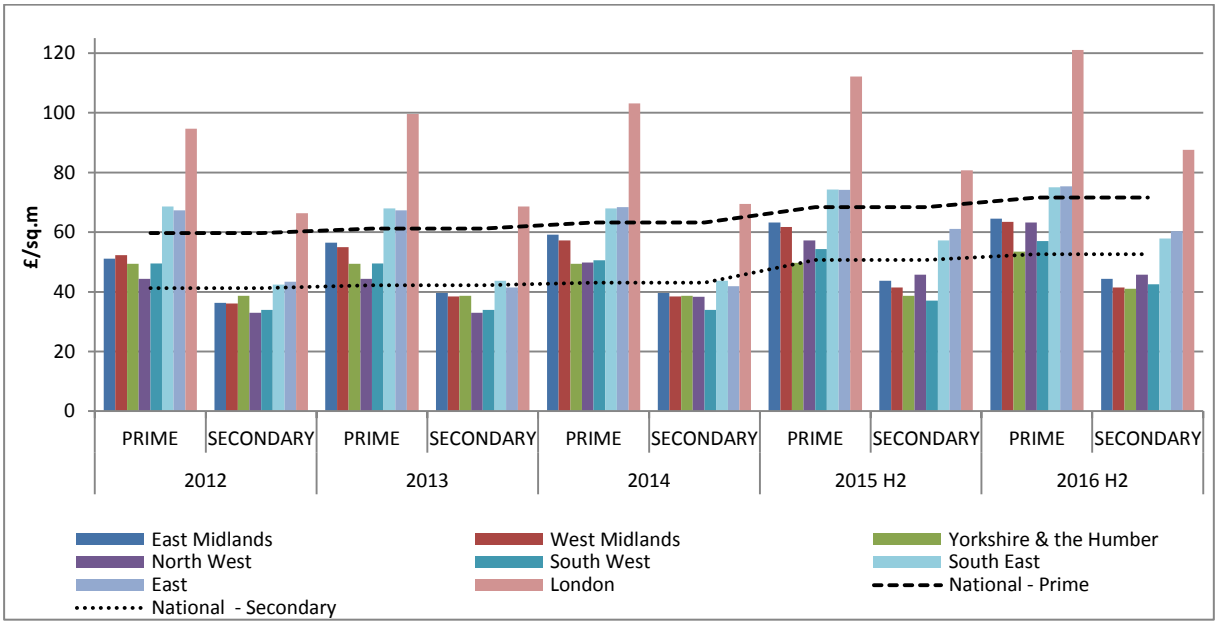
Source: CoStar, EGi & GL Hearn

Rental values across Great Britain have increased substantially the last two years. The figure below presents the prime and secondary rental price per square metre per annum for each region for the period 2012-2016. There has been an increase in prime (20%) and secondary rents across all the regions since 2012.

The secondary rents have increased by 2% since 2015 and 22% since 2012 in East Midlands, while the national equivalent is 4% and 27% respectively. In 2016 (H1) the secondary rents in the region reached the price of £44.4 per square metre while the national equivalent was £52.62.

In Leicestershire there has been an increase of 4% in prime rents over the last year. Since 2012 the prime rents in the area have increased by 39% and the secondary by 31% pointing to a supply/demand imbalance.

Figure 3.12: Prime & Secondary Rents per square metre per annum, 2012-2016



Source: Colliers International Industrial Rent Map - web page

3.4 Availability

This sub-section reviews the availability of large warehousing units as taken from the EGI and Co-star databases. Available sites include both bricks and mortar accommodation, as well as opportunities to build new property (build to suit opportunities).

National Availability

The following figures present the availability of large warehousing units (above 9,000 square metres) as recorded on 7 September 2016. There are 556 available properties nationally relating to 14.2 million square metres of floor space. The large warehouse's availability was down by 36% nationally and the supply of large warehouses has fallen by 14% between January and July 2016.

Even given the recent increases in speculative delivery, at a national level availability is still skewed towards poorer quality stock. Of the units currently on the market around 36% are listed as Grade A while 50% of these are second handed.

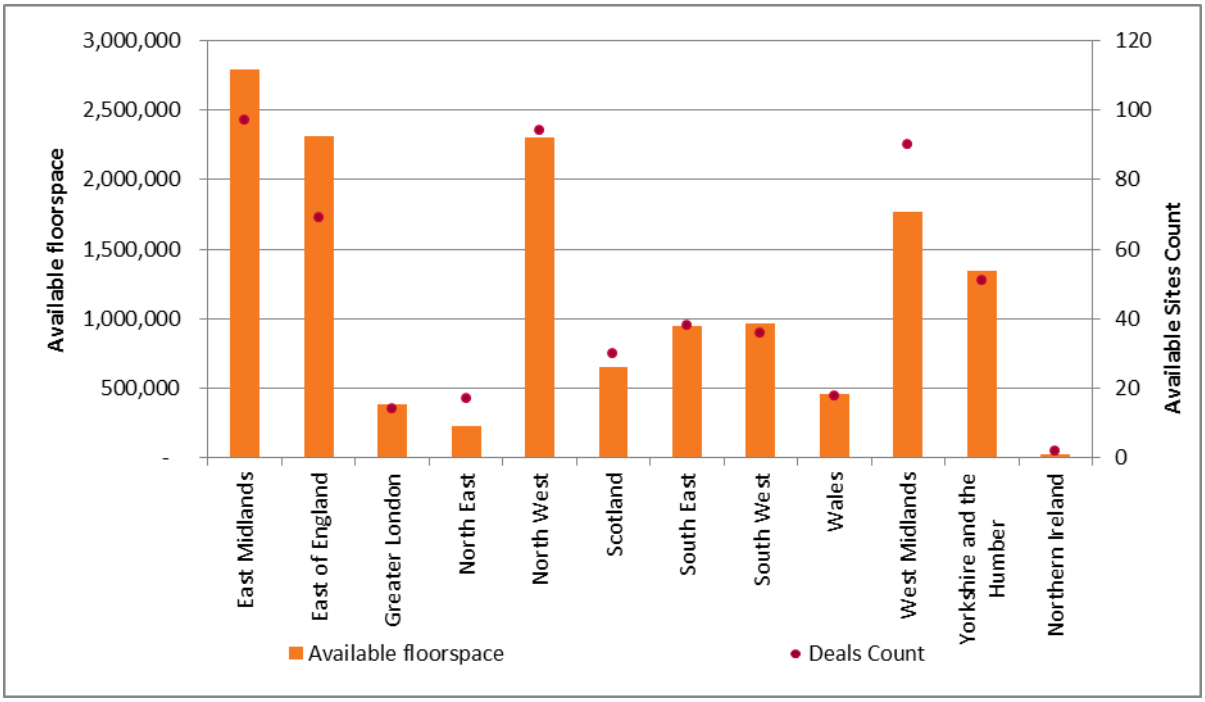
Total supply in September 2016 (including build to suit opportunities) was 14.2 million square metres. The national vacancy rate is currently at 7.1%, significantly lower the long term averages pointing to a shortage of supply at the current time.

The figure below shows that the majority of the available floor space is in the East Midlands (20%) followed by the North West and the East of England (16%) and the West Midlands (12%). This is in part a reflection of the sizes of units.

While the available supply appears to include a large percentage of the total stock (as set out in Table 2.1), the available figure also includes sites which are under construction or have not yet been built, but have planning permission and are being marketed. It is thus partly a reflection of market strength.

The average advertised unit size is highest in the East of England (32,800 square metres) followed by 28,000 square metres in the East Midlands and 27,100 square metres in the West Midlands.

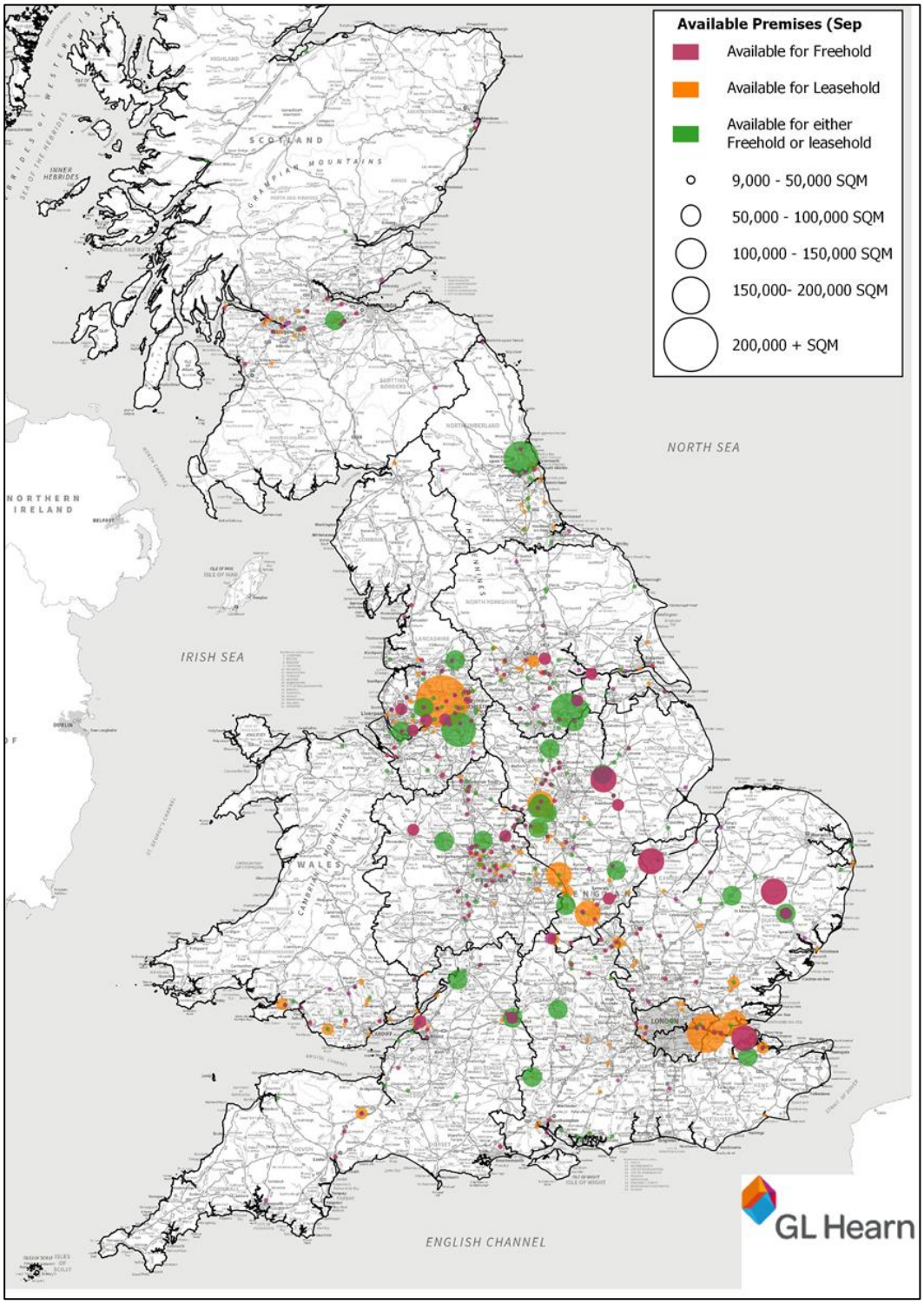
Figure 3.13: Available Take-up nationally



Source: CoStar, EGi & GL Hearn

The map below illustrates the spatial distribution of the available sites.

Figure 3.14: National Availability of Large Warehouses (Sept 2016)

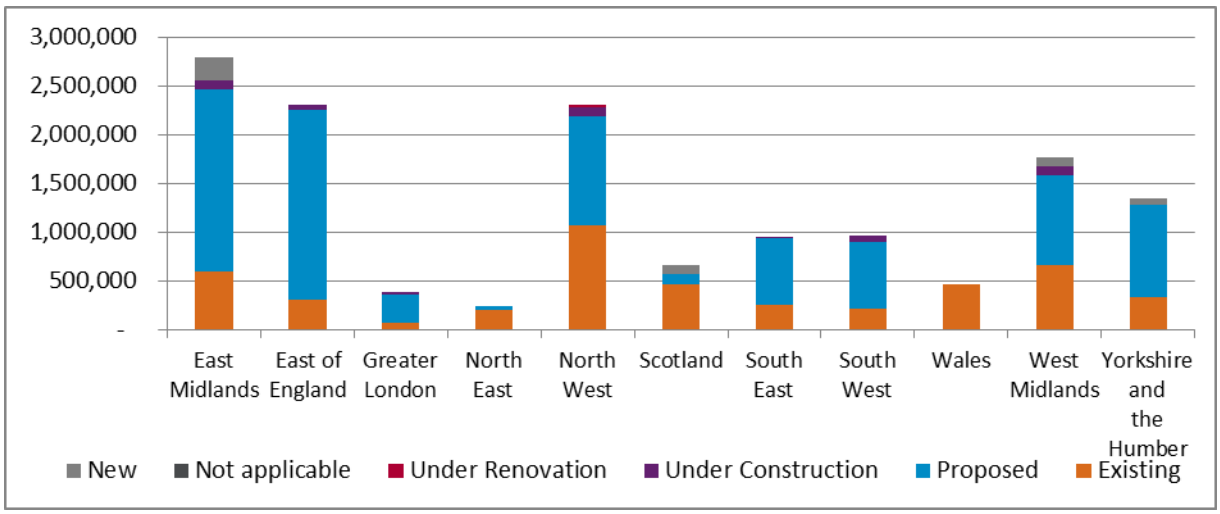


Source: ONS Open Geography, CoStar, EGi & GL Hearn

The figure below presents the status of the currently available premises/ development opportunities in each region. It should be noted that almost 61% of the available floor space is either proposed or represents built-to-suit opportunities (plots with planning permission but not commenced).

Existing and second-handed premises equal 33% of the advertised floor space. New stock comprises 3% of available property and similarly 3% is the stock currently under construction.

Figure 3.15: Status of available stock

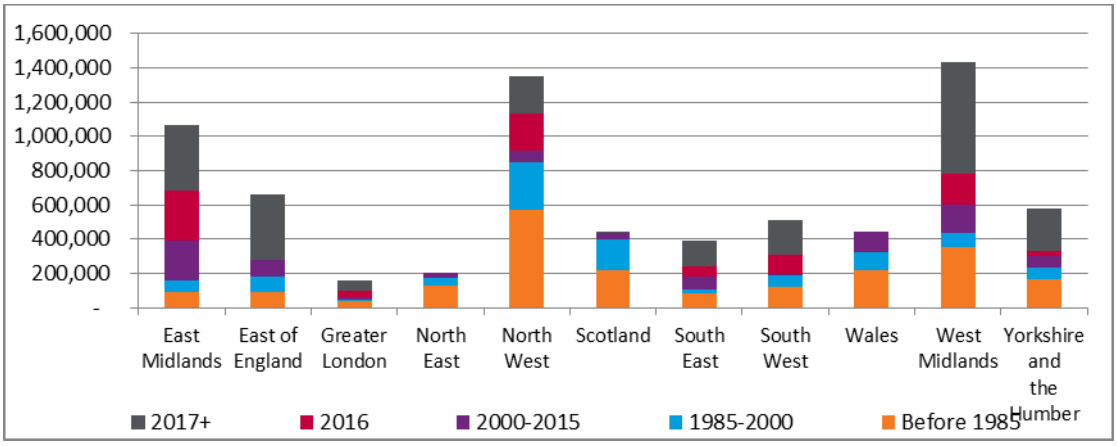


Source: CoStar, EGi & GL Hearn

Due to the limited supply of large warehouse units, a range of development opportunities are being promoted. At a regional level, 67% the East Midlands' availability is available on a build to suit basis, 21% is existing stock, 8% is newly built stock and 3% is under construction.

Half of the advertised stock includes information with regards the building's completion date. The figure below summarises the findings. With recent speculative development having re-enforced, 32% of the advertised stock will be or is planned for delivery during or after 2017 (and before 2021) across all the regions. The equivalent percentage for East Midlands is 36%.

Figure 3.16: Completion Year of Available Stock



Source: CoStar, EGi & GL Hearn

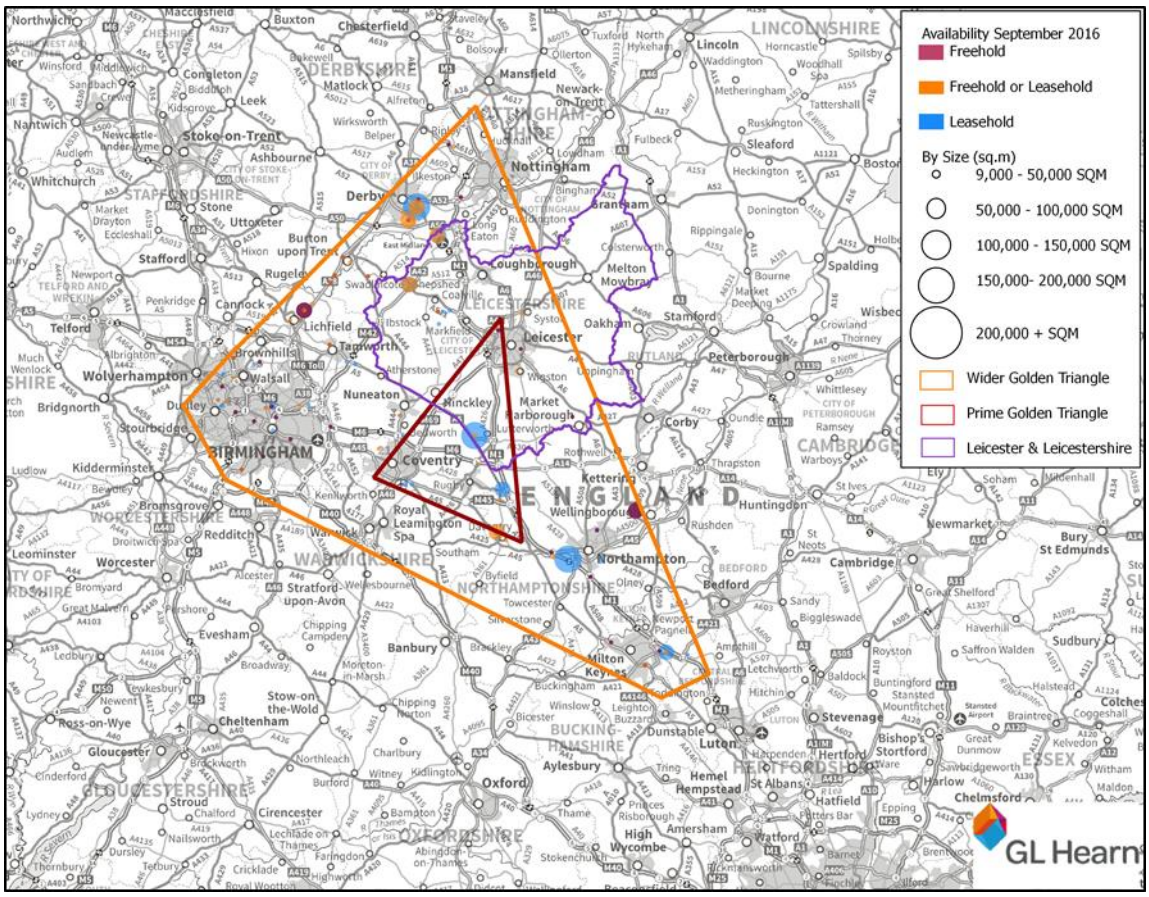
Availability within the Golden Triangle

A third of the availability nationally is located within the wider golden triangle. At September 2016 there were 162 advertised properties[5] within the wider Golden Triangle (including build to suit opportunities). The total available floor space on these sites was 4.4 million square metres.

The total available floor space within the small golden triangle is 1.2 million square metres (or 4% of the national figure) held across 36 available premises. The figure below presents the spatial distribution of available supply within the Golden Triangle.

The largest single unit available within the small golden triangle is at Magna Park, Lutterworth (Harborough) which has an area of more than 111,000 square metres. and was built in 2006. Apart from the Magna Park site the other large advertised space in the wider golden triangle is at Derby Raynesway Park (111,000 square metres) and the proposed unit at Northampton (NN4) (105,000 square metres).

Figure 3.17: Advertised Large Warehouses – 7 September 2016

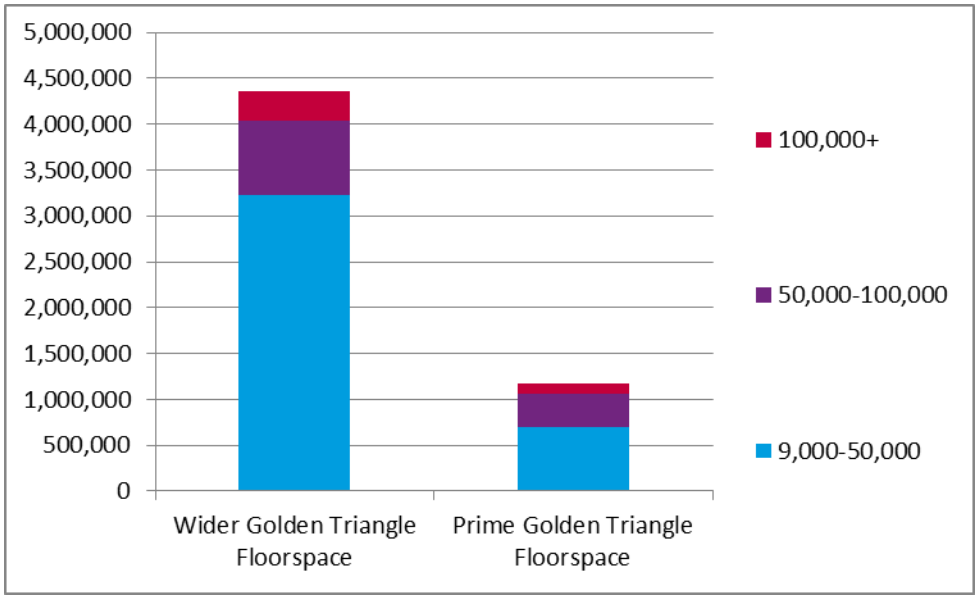


Source: ONS Open Geography, CoStar, EGi & GL Hearn

[5] EGI and Co-start databases on 7 September 2016

Around 25% of the available supply within the wider golden triangle is for units larger than 50,000 square metres while the equivalent figure for the small golden triangle is 41%. Within the wider golden triangle there are three units above 100,000 square metres which equate the 7% of the advertised stock. In the small golden triangle one unit (in Magna Park) is above 100,000 square metres and this equates the 9% of the advertised stock.

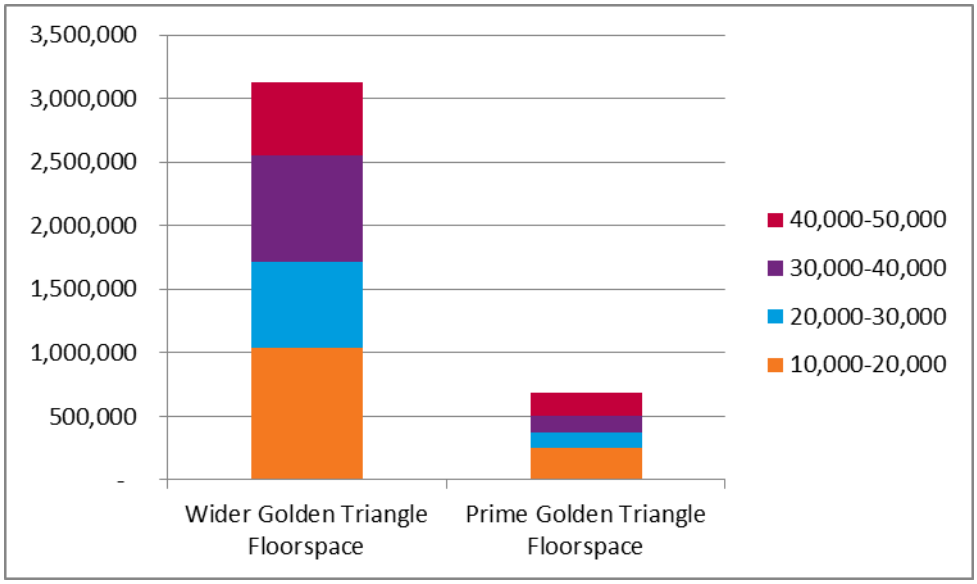
Figure 3.18: Available floor space (square metres) in the Golden Triangle



Source: CoStar, EGi & GL Hearn

The majority of available units in both wider golden triangle (73%) and small golden triangle (58%) are between 10,000 and 50,000 square metres. The graph below presents the breakdown of this size range and shows a relatively even distribution.

Figure 3.19: Available floor space with 10,000-50,000 square metres space



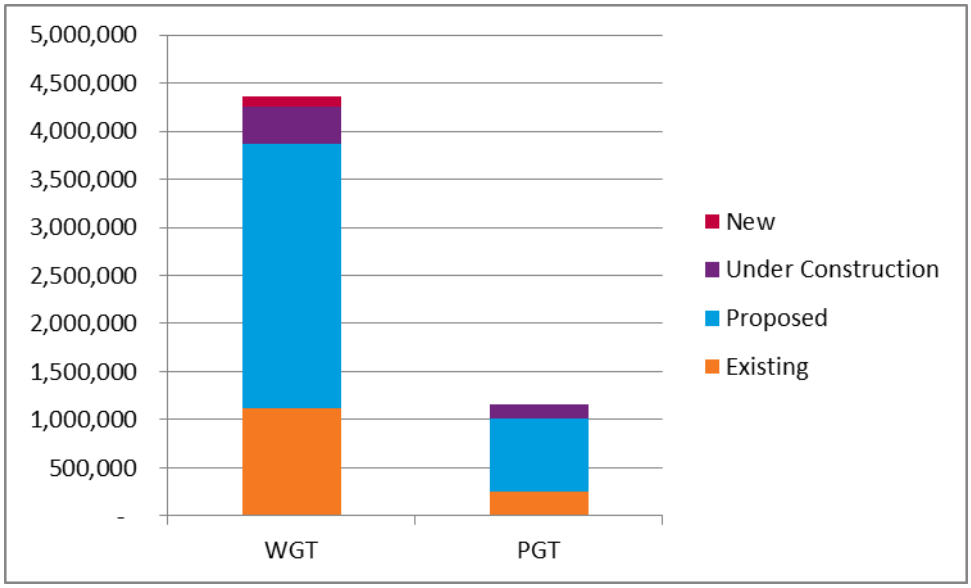
Source: CoStar, EGi & GL Hearn

In particular, 33% of the advertised stock in the wider golden triangle relates to units between 10,000 and 20,000 square metres, followed by 26% of units between 30,000 and 40,000 square metres, 22% of units between 20,000 and 30,000 square metres and 18% of units between 40,000 and 50,000 square metres.

In the small golden triangle, similarly 37% of the units are between 10,000 and 20,000 square metres. However, 26% of the advertised stock relates to units between 40,000 and 50,000 square metres (10% higher than the wider area) and 20% relates to units between 30,000 and 40,000 square metres.

The total proposed stock within the wider golden triangle is 2.75 million square metres. The majority of this is 'Built to Suit' opportunities where plots are ready to accommodate specific requirements. Our conversations with key developers like Prologis reveal that there is a strong belief that the market has recovered and there is demand for new schemes particularly within Golden Triangle areas. However the supply of good quality large units remains at critically low levels, meaning the increased prevalence of the build to suit opportunities.

Figure 3.20: Status of advertised Stock



Source: CoStar, EGi & GL Hearn

3.5 Supply and Demand

Putting together the findings there is a total supply of 14.2 million square metres of advertised floor space and an annual total demand of around 4 million square metres nationally (based on trends since 2011). That equates to a notional 3.6 years of future supply. A similar, and equally modest, level of availability is seen in the East Midlands. This includes both new and second hand space.

Table 3.1: Supply & Demand by region

	Supply: Available floor space (sq m)	Annual Demand: 2011-16 Annual Transacted floor space	Notional Years' Supply
East Midlands	2,786,952	783,941	3.56
East of England	2,310,337	258,160	8.95
Greater London	384,695	177,000	2.17
North East	232,779	193,723	1.20
North West	2,305,972	618,971	3.73
Scotland	653,674	195,470	3.34
South East	952,674	344,243	2.77
South West	967,597	352,091	2.75
Wales	460,291	159,228	2.89
West Midlands	1,769,231	528,117	3.35
Yorkshire and the Humber	1,341,895	355,635	3.77
Great Britain	**14,166,096**	**3,966,581**	**3.57**

Source: CoStar, EGi & GL Hearn

Trends since 2011 have been used for three main reasons. Firstly, data since 2011 is far more reliable; as noted earlier it is drawn from databases which require local agents to input details on transactions. Secondly, The years 2008-2010 were a period of low activity due to the financial recession. Finally, activity before 2008 reflects a retail environment which has/is rapidly changing; it is therefore not representative of the current market.

Available supply is slightly higher in the small golden triangle at 5.63 years, and for 4.13 years in the wider golden triangle. However this is influenced by second hand stock and design and build opportunities, with built Grade A units equating 3% of available supply stock (Figure 3.20) in the wider golden triangle (and 0% in small golden triangle), giving around a month's supply.

Table 3.2: Supply & Demand in Golden Triangle

	Supply: Available floor space (sq m)	Annual Demand: 2011-16 Annual Transacted floor space	Notional Years' Supply
Wider golden triangle	4,365,117	1,057,606	4.13
Small golden triangle	1,175,652	208,751	5.63

Source: CoStar, EGi & GL Hearn

Examining the supply/demand balance for each different size band highlights available supply for different occupier's requirements. There is a supply of 2.4 years in the wider golden triangle, 2.3 years in the small golden triangle and 2 years across the East Midlands for units over 100,000 square metres. The demand for units of 50,000 to 100,000 square metres space can be met in the next 5 years in East Midlands but only for 3.6 years in wider golden triangle. The demand of units below 50,000 square metres (and above 9,000 square metres) can be met for the next 4.8 years in wider golden triangle and 4.3 years in small golden triangle.

Table 3.3: Supply & Demand by size band

	GB			EM		
Size Band (sq m)	Supply	Annual Demand	Years of Supply left	Supply	Annual Demand	Years of Supply left
9,000-50,000	9,690,107	2, 891,390	3.35	1,745,002	483,861	3.61
50,000-100,000	3,034,435	861,537	3.52	724,148	146,430	4.95
100,000+	1,470,263	214,272	6.86	317,802	153,650	2.07

	Wider Golden Triangle			Small Golden Triangle		
Size Band (sq m)	Supply	Annual Demand	Years of Supply left	Supply	Annual Demand	Years of Supply left
9,000-50,000	3,306,739	697,719	4.74	691,295	160,925	4.30
50,000-100,000	807,438	224,482	3.60	373,006	N/A	N/A
100,000+	326,859	135,406	2.41	111,351	47,827	2.33

3.6 Summary points

Recent trends clearly demonstrate there is strong demand for strategic distribution space in the Golden Triangle (both wider and small) which is a prime market nationally, driven by demand for

Regional and National Distribution Centres and a range of sectors, including retail and advanced manufacturing. Availability of good quality space has fallen and is at relatively low levels, particularly for built space. Recent rental growth points to the need to increase supply.

The analysis undertaken points to:

- Increasing take-up of larger warehousing units nationally. In particular 2014 saw a peak of more than 5 million square metres transacted, and annual average take-up between 2011-16 equated around to 4 million square metres per annum. The data highlights strong and growing demand for warehouse/distribution space in recent years;
- The highest level of freehold take-up since 2000 has been recorded in East Midlands, with a total of 6.3 million square metres of transacted space, followed by the North West (5.4 million square metres) and the West Midlands (4.9 million square metres);
- One quarter of the recorded transacted floor space nationally took place within the wider golden triangle, highlighting that this is the prime market for strategic distribution demand nationally. There have been 351 transactions accommodating 8.5 million square metres since 2000 in the wider golden triangle;
- Around 60% of the transacted stock in wider golden triangle and small golden triangle was built post-2000;
- The highest average space per transaction across Britain since 2000 is recorded in East Midlands, pointing to the region seeing some of the largest deals; and
- Build-to-Suit is an important component of supply within the regional market.

As noted above, overall total supply in September 2016 (including build to suit opportunities) was 14.2 million square metres. The national vacancy rate is currently at 7.1%, significantly lower the long term averages. Existing and second-handed premises equal 33% of the advertised floor space. New stock comprises 3% of available property and similarly 3% is the stock currently under construction. Almost 61% of the available floor space is either proposed or represents built-to-suit opportunities (plots with planning permission but not commenced). Overall, therefore, this suggests a shortage of supply at the current time, albeit the picture is better once buildings proposed and build-to-suit opportunities are included in the equation.

Post Brexit – Note

Since the result of the referendum there has not been data available to estimate the demand or to provide an indication of how the logistic sector has been impacted following the results for Brexit. In the coming months and once the political scenery and outlook stabilises, a clearer view can be formed. Currently there is significant uncertainty.

Key drivers of warehouse demand in the Midlands include the Retail (including E-Commerce) and Advanced Manufacturing sectors. The impacts on these key industries will have significant consequences in strategic warehousing demand and occupancy.

Manufacturing could be boosted in the short-term from a weaker pound; however uncertainty regarding trade barriers (and free trade with the EU) is clearly influencing long-term investment decisions, which in turn could influence warehouse demand. For the retail sector, wider economic performance and confidence are critical; whilst inflationary pressures could impact on disposable income and spending. Fundamentally however the outlook is for heightened uncertainty.

Post-referendum activity has not however halted. The Rigby Group has confirmed a speculative development of 55,000 square metres across three units in Coventry and Amazon have committed to a further 50,000 square metres. JLL anticipate rental growth in 2017 and that the "distribution heartland in East Midlands remains in demand for 2017". CBRE suggested that the occupier sentiment in the East Midlands is steady and post referendum activity still showing strength while the Midlands market continues unchanged. This is consistent with our own understanding of market conditions.

3.7 Land Use Forecasts and Site Supply

The Scope B report (Section 2) undertook a review and refresh the land-use forecasts undertaken for the Leicester and Leicestershire SDS. This concluded that the demand outputs from that exercise still represented a robust forecast of expected future new-build rates and gross land requirements across Leicestershire to 2036. In terms of site supply, the review concluded that the expected supply of rail-served sites in Leicestershire and the East Midlands had not changed between the production of the Leicester and Leicestershire SDS and the Scope B report. Savills were asked to provide an update and re-fresh with respect to the supply of non rail-served sites in Leicestershire (existing sites with B8 consents or sites in the planning pipeline), adding any appropriate new sites which since the production of the SDS had been granted B8 consent or were being considered by the planning system. This review produced a number of changes with respect to future site supply.

The re-freshed land use demand and site supply forecasts, as presented in the Scope B report, are re-produced below.

Table 3.4: Forecast Demand and Supply to 2036 for Leicestershire – Rail-served Sites

Year	ha 2021	2026	2031	2036
Rail Served Leicestershire				
Supply - Land planned for rail-served sites	159	159	159	159
Forecast demand - high	111	150	209	274
Shortfall - high	48	9	-50	-115

Source: Leicester and Leicestershire SDS 2014 (MDST and Savills)

Table 3.5: Forecast Demand and Supply to 2036 for Leicestershire – Non Rail-served Sites

Year	ha 2021	2026	2031	2036
Non Rail Served Leicestershire				
Total Supply - Available at current sites	104	104	104	104
Forecast Demand - high	80	109	152	198
Shortfall – high	24	-5	-48	-95

Source: Leicester and Leicestershire SDS 2014 (MDST and Savills)

To reiterate the clarification presented in the Scope A report (Section 3), these demand forecast figures should be viewed as minimum requirements going forward in order that a geographical spread of commercially attractive sites is always available. In practical terms, the quantum of land allocated to strategic distribution should always exceed the expected demand in order to maintain a competitive market; multiple strategic sites with vacant plots at different geographic locations should always be available. The demand figures should therefore not be viewed as 'targets' or maximum levels of provision which should not be exceeded.

Also, the demand figure relates to the minimum quantum of land that needs to be made available from the current period up to the year shown in the table; it represents a progression to the year indicated and it is not a cumulative total (and do not sum across the rows). For example, the demand forecasts indicate a minimum of 152ha of land for non rail-served B8 will need to be brought forward by 2031. As 104ha with B8 consents effectively already exists, at least 48ha of 'new' land will need to be allocated for B8 developments by 2031.

By way of a reminder, the forecast demand figures resulted from an exercise which considered the requirement to continually replace existing warehouse capacity as it become physically or functionally obsolete over time together with an estimation of the additional floor space required to handle forecast traffic growth (which was derived from the GB Freight Model). The supply data was

based on an assessment of existing suitable sites with vacant plots which already have B8 consents or those likely to come forward through the planning system up to 2036.

For these reasons presented immediately above, unlike other land-use forecasts there is no 'margin' factored into the figures.

4. LEICESTERSHIRE AND THE LOGISTICS MARKET – KEY ISSUES

This section of the report addresses ***C3 and C4*** of the *Terms of Reference*. It addresses the following issues alongside their likely impact on Leicestershire and its competitive position:

- Rail network and freight developments;
- The position of East Midlands airport;
- Government policy; and
- Changes in the industry and technology

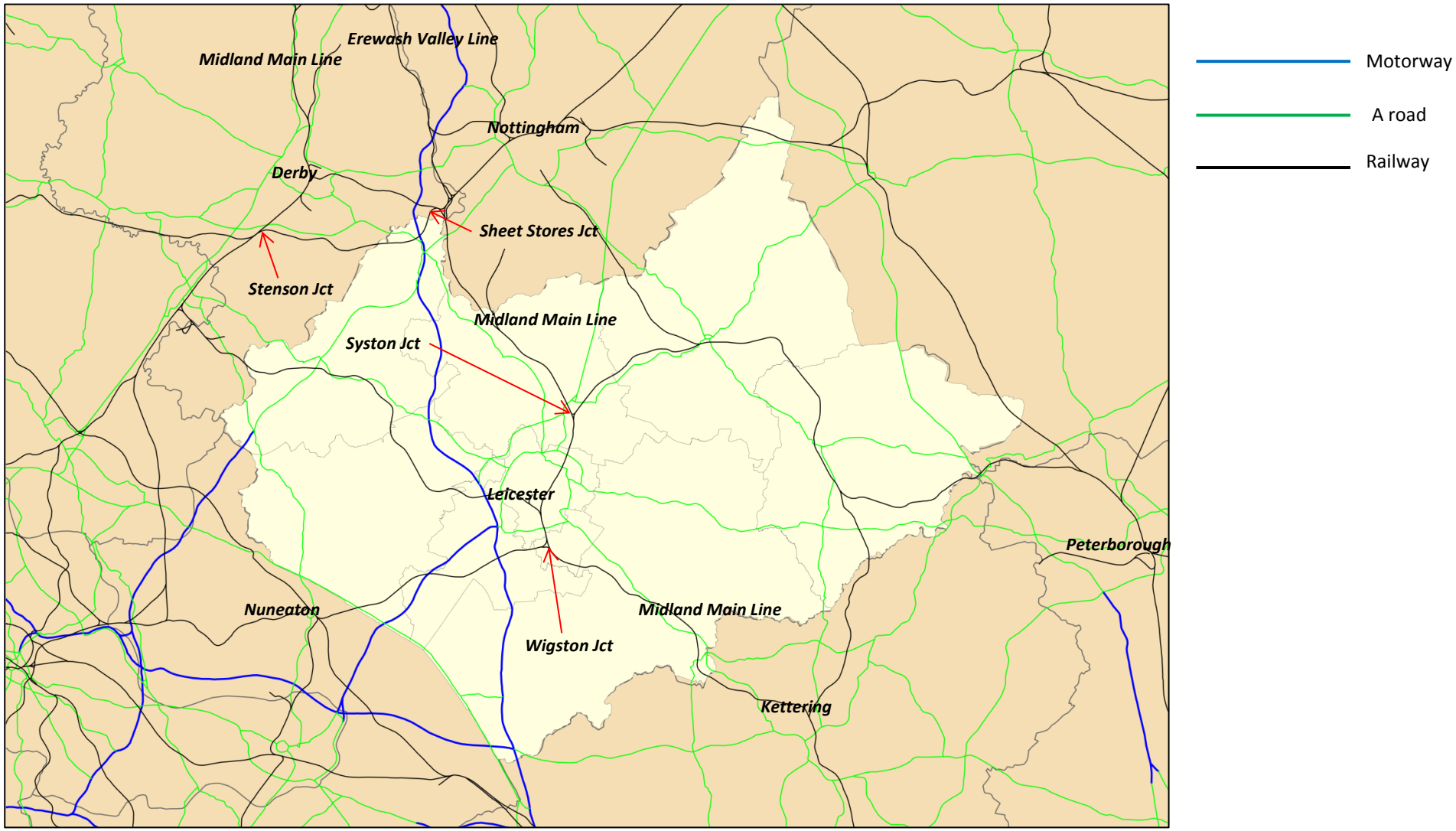
4.1 Rail Network and Freight Developments

The map below, re-produced from the Leicester and Leicestershire SDS Part B Report, illustrates the railway network of Leicestershire and the surrounding parts of both East and West Midlands regions. Three key nationally important strategic routes can be identified, namely:

- The Midland Main Line (MML), via Kettering, Leicester and Derby to Sheffield (and the branches to Corby and Nottingham). In addition to accommodating express passenger services from the East Midlands/South Yorkshire to London, the MML provides the main route for moving aggregates by rail from the Peak District quarries to the South East of England;
- The combination of lines connecting Peterborough to the West Coast Main Line (WCML) at Nuneaton via Syston, Leicester and Wigston (Syston to Wigston section being part of the MML). This is now a key route for moving maritime containers from the Port of Felixstowe to the West Midlands and North West England (often called the 'cross country' route from Felixstowe to the Midlands; and
- The combination of lines running from Birmingham to South Yorkshire via Stenson Junction, Sheet Stores Junction and the Erewash Valley line. This is also a key route for moving maritime containers from Southampton to Yorkshire and the North East of England.

All three routes are considered to be part of the Strategic Freight Network (SFN). The SFN is a core network of trunk freight routes, capable of accommodating more and longer freight trains, with a selective ability to handle wagons with a greater loading gauge, integrated with and complementing the existing mixed traffic network (see Leicester and Leicestershire SDS Part A Report Section 7).

Map 4.1: Leicestershire and East Midlands Railway Network



The Leicester and Leicestershire SDS (Part B Report, Section 2.4) described a series of rail infrastructure upgrades which would deliver capacity and capability improvements for rail freight services passing to, from and through the East Midlands. These subsequently influenced where future rail-served new-build should be located (Key Areas of Opportunity).

As a monopoly infrastructure provider, Network Rail is subject to economic regulation by the *Office of Rail and Road (ORR).* The ORR determines the level of track access charges paid by train operators (freight and passenger), what Network Rail is permitted to spend on day-to-day operations, asset maintenance and renewals and enhancements, and the return it can make on investment. Key financial and operational performance indicators are also defined. Each determination (funding and performance settlement) lasts for a period of five years and is known as a *Control Period*. The current Control Period, *CP5*, runs from April 2014 to March 2019. The ORR has recently launched the process for determining *CP6* (April 2019 to March 2024), while *CP4* ran for the five years to March 2014.

Two Department for Transport documents, the *High Level Output Statement (HLOS)* and *Statement of Funds Available (SoFA)*, sets out at a strategic level the capacity and capability enhancements (outputs) the Government requires Network Rail to deliver over the following Control Period. They therefore form an important input informing each Control Period determination. The HLOS and SoFA which informed the CP5 determination were both published in July 2012, with similar documents for CP6 expected to be published in Summer 2017. For CP5, the HLOS and SoFA set out a series of capacity and capability enhancements which were expected to cost around £13 billion, out of a total Network Rail spend for CP5 of £38 billion (the balance covering asset maintenance and renewals, day-to-day operations, overheads and interest charges). It also made available a 'ring fenced allocation' of £200 million 'to fund Strategic Freight Network investments identified by the industry'.

Rail network enhancements for CP5 were dominated by three major electrification schemes; the Great Western Main Line (GWML) from west London to south Wales, the Midlands Main Line (MML) from Bedford to Nottingham and Sheffield and the Manchester-Leeds-York Trans-Pennine route. Due to a variety of factors, the final capital costs for all three schemes went significantly beyond that estimated when CP5 was determined by the ORR. In the case of GWML electrification (the other schemes had yet to commence on the ground), there were also significant delays against planned delivery dates. Other schemes also suffered cost over-runs and delays. Consequently, the final enhancement costs expected for CP5 were significantly above the determined value of £13 billion.

As a result, in the Summer of 2015 Network Rail's then Chairman decided to step-down from the role. Former Transport for London commissioner Peter Hendy was subsequently appointed to Chair Network Rail's board by the Secretary of State for Transport, with direct instructions to undertake an immediate cost and timescale delivery review of all the enhancement schemes being funded in CP5. The Government also ruled-out any further enhancements funding beyond the £13 billion agreed for CP5.

Peter Hendy's review was subsequently published in November 2015. In summary, his report set out:

- Those enhancement schemes which would continue to be funded and delivered in CP5 along with their revised (higher) costings and delivery timescales;
- Those enhancement schemes originally planned for CP5 but would now be delayed, with funding and delivery taking place during the following Control Period (CP6, 2019-2024). The associated funding for these schemes could then be released to part-fund the over-spends on the CP5 enhancement schemes; and
- A reduction in some renewal activity and a series of non-core asset sales to complete the short-fall in enhancement funding.

Given the above, the tables below update the position with respect to the afore-mentioned infrastructure upgrade schemes relevant to rail freight movements passing to and from the East Midlands. This is derived from the Hendy review plus briefing materials supplied from Network Rail.

In summary, the loading gauge enhancement schemes to Felixstowe (via Ely, Peterborough and Leicester to Nuneaton), the south coast (Southampton) and the north of England/Scotland have been completed. However, the main change to note since the Leicester and Leicestershire SDS was presented is that while the capacity upgrades planned for the East Midlands network are still planned to go ahead, their completion dates have been pushed back into the following CP6 (2019-2024). This includes the capacity upgrades on the Felixstowe to Nuneaton route and on the Midland Main Line (MML). Likewise, MML electrification, which also delivers loading gauge enhancement on the MML, is delayed until 2023 at the earliest. Extra capacity on the Felixstowe branch line, however, should be delivered by 2019.

Table 4.1: Updated Position with respect to Rail Infrastructure Enhancements

Scheme	Updated Position
Felixstowe to Nuneaton via Peterborough, Syston and Leicester – Phase 1: loading gauge enhancement to W10/W12 and Nuneaton north chord	A gauge cleared route for intermodal traffic from Felixstowe to the WCML at Nuneaton via the East Midlands (i.e. avoiding London). *Completed*
Birmingham to Doncaster via Trent Junction – loading gauge enhancement to W10/W12	A gauge cleared route for intermodal traffic from the West Midlands (and from Southampton) to Yorkshire via the East Midlands. *Completed*
ECML South, London-Peterborough-Doncaster via Lincoln – loading gauge enhancement to W10/W12	A gauge cleared route for intermodal traffic from London (London Gateway) to Yorkshire via the East Midlands. Connects with the Felixstowe-Nuneaton gauge cleared route at Peterborough (see above). *Completed*
Peak Forest to London via MML – Train length increase to 775m	A route from the Peak District to London via the MML which allows the operation of longer 775m length trains, principally to serve the aggregates industry (capacity increase as it allows one train path to convey additional product). *Completed*
Syston to Stoke – loading gauge enhancement to W10/W12	This scheme would provide a W10/W12 gauge cleared route for intermodal traffic from Syston on the MML to the WCML at Stoke. Linking up with the already gauge cleared routes from Felixstowe and the ECML (see above) and the loading gauge enhancements planned for the MML (see below), this will eventually provide an additional gauge cleared route for intermodal traffic from Felixstowe and the East Midlands to the North West and Scotland. *This scheme has been delayed with funding and delivery now expected during CP6 (2019 to 2024).*

Scheme	Updated Position
Felixstowe to Nuneaton via Peterborough, Syston and Leicester – Phase 2: Felixstowe branch line capacity increase.	Track capacity enhancements on the existing single-track Felixstowe branch line to enable additional freight train paths. *Estimated to be funded and delivered during CP5 (2014-2019). Effectively forms part of the wider Felixstowe to Nuneaton Phase 2 works – see below – albeit it is being delivered in CP5.*
Felixstowe to Nuneaton via Peterborough, Syston and Leicester – Phase 2: capacity enhancement	While the loading gauge has been recently enhanced to W10/W12 between Felixstowe and Nuneaton (see above), other infrastructure constraints have limited the capacity for freight traffic along the route. Phase 2 therefore delivers enhanced capacity for the route. In the East Midlands, the section of the route from Syston Junction to Wigston Junction via Leicester is a particular capacity constraint (principally the need for freight trains to cross the fast lines at Wigston or Syston 'on the flat'). While a final scheme is still being designed, it is likely to involve the installation of additional tracks and grade separation at either Wigston or Syston junctions (also being advocated by the *Midlands Connect* transport strategy). Other schemes along the route include double-tracking from Ely to Soham, double tracking at Haughly Junction, Ely North Junction remodelling and re-signalling Peterborough to Syston. All of the schemes are dependent on each other to deliver the enhanced capacity across the route. When the capacity upgrade is completed, this route is likely to become the main freight route to the West Midlands and North West, thus diverting trains away from London and the busy southern section of the WCML. It will also provide additional capacity from the East Midlands itself to Felixstowe. *This scheme has been delayed with funding and delivery now expected during CP6 (2019 to 2024).*

Scheme	Updated Position
Derby station area remodelling	A simplification of the track and signalling at Derby station to improve speeds and separate trains with different destinations, thereby generating additional capacity and better performance on routes through Derby . *Estimated to be funded and delivered during CP5 (2014-2019).*
Bedford to Kettering capacity	Provision of an additional track between Bedford and Kettering, thereby generating additional capacity and better performance. *Work to commence in CP5 (2014-2019) but estimated to be delivered during CP6 (2019-2024).*
Kettering to Corby capacity	Provision of an additional track between Kettering and Corby, thereby generating additional capacity and better performance. *Estimated to be funded and delivered during CP5 (2014-2019).*
Midland Main Line electrification	Electrification of the MML north of Bedford (using overhead wires) to Sheffield and Nottingham (the line from London to Bedford is already electrified). The installation of overhead electric wires involves clearance work at low over-line bridges, which subsequently delivers W10 loading gauge as a side benefit for the freight sector. *Estimated to be funded and delivered as follows:* *1. Bedford to Corby via Kettering – December 2019 (CP5)* *2. Kettering to Derby, Nottingham and Sheffield – December 2023 (CP6)*

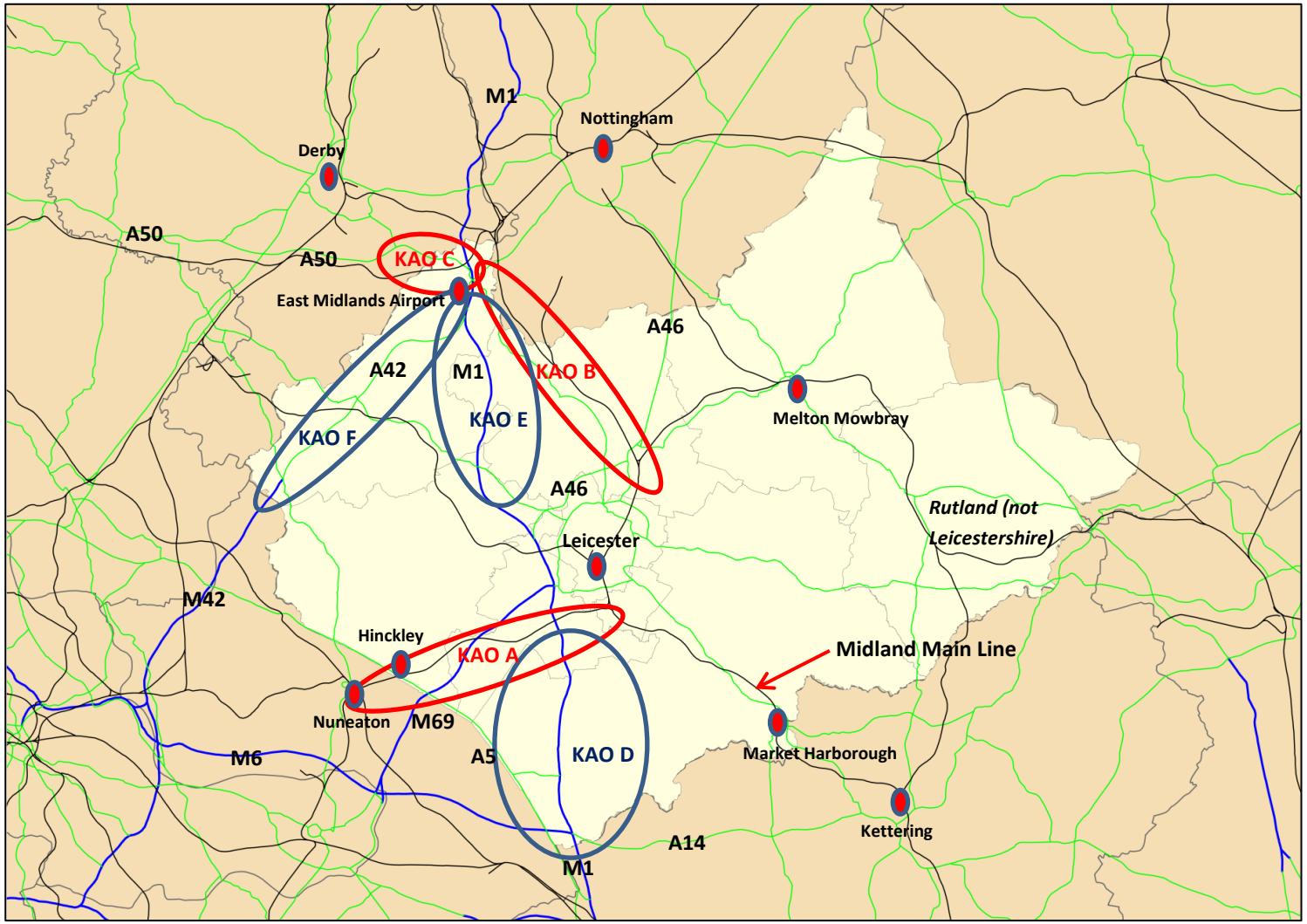
Scheme	Updated Position
The 'Electric Spine'	The creation of an electrified and W10 gauge cleared route from the Port of Southampton to South Yorkshire via Basingstoke, Oxford, Bedford Leicester and Derby. The afore-mentioned MML electrification scheme forms part of the 'electric spine' while Reading-Oxford is being delivered as part of Great Western electrification. The remaining sections (Oxford-Bedford, Reading-Basingstoke and Sheffield-Doncaster) will subsequently be delivered as 'in-fills' to complete the route. *This scheme has been delayed with funding and delivery now expected during CP6 (2019 to 2024).*

As noted in the SDS, the combination of the recent loading gauge upgrades along with the proposed projects to be delivered over the next 5-8 years significantly influenced where rail connected strategic distribution in the East Midlands should be located (adjoining railway lines that are gauge cleared to at least W9, and preferably to W10 and W12, and with sufficient capacity). Once highway and other factors were considered, in spatial terms the various Key Areas of Opportunity identified in the Leicester and Leicestershire SDS (Part B and Final Report) were defined. These are reproduced in the map below. Taking into account the above, these remain valid, albeit that the associated railway upgrades will be delivered 5-8 years later than planned. Locations for strategic rail-served distribution facilities (termed Strategic Rail Freight Interchanges or SRFIs) are therefore, to some extent, self-selecting; it is where railway lines with a suitable loading gauge pass close to motorway junctions.

It is worth noting that, under the Planning Act 2008, rail-served strategic distribution facilities greater than 60a (SRFIs) are now classed as *Nationally Significant Infrastructure Projects (NSIPs)*. Consequently, planning consent is sought via a Development Consent Order (DCO) rather than from a local planning authority. DCOs for SRFIs are granted by the Secretary of State for Transport following an independent examination and recommendation by the Planning Inspectorate. Under the DCO process, promoters of SRFIs are required to consult local authorities at various stages of the application. As outlined in the Leicester and Leicestershire SDS Part A Report (Section 7) and Section 4.3 below, the Secretary of State will use the National Planning Statement for National Networks as the primary basis for making decisions on DCOs.

Map 4.2: Key Areas of Opportunity - Leicestershire

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



Key Areas of Opportunity (KAO) – road linked

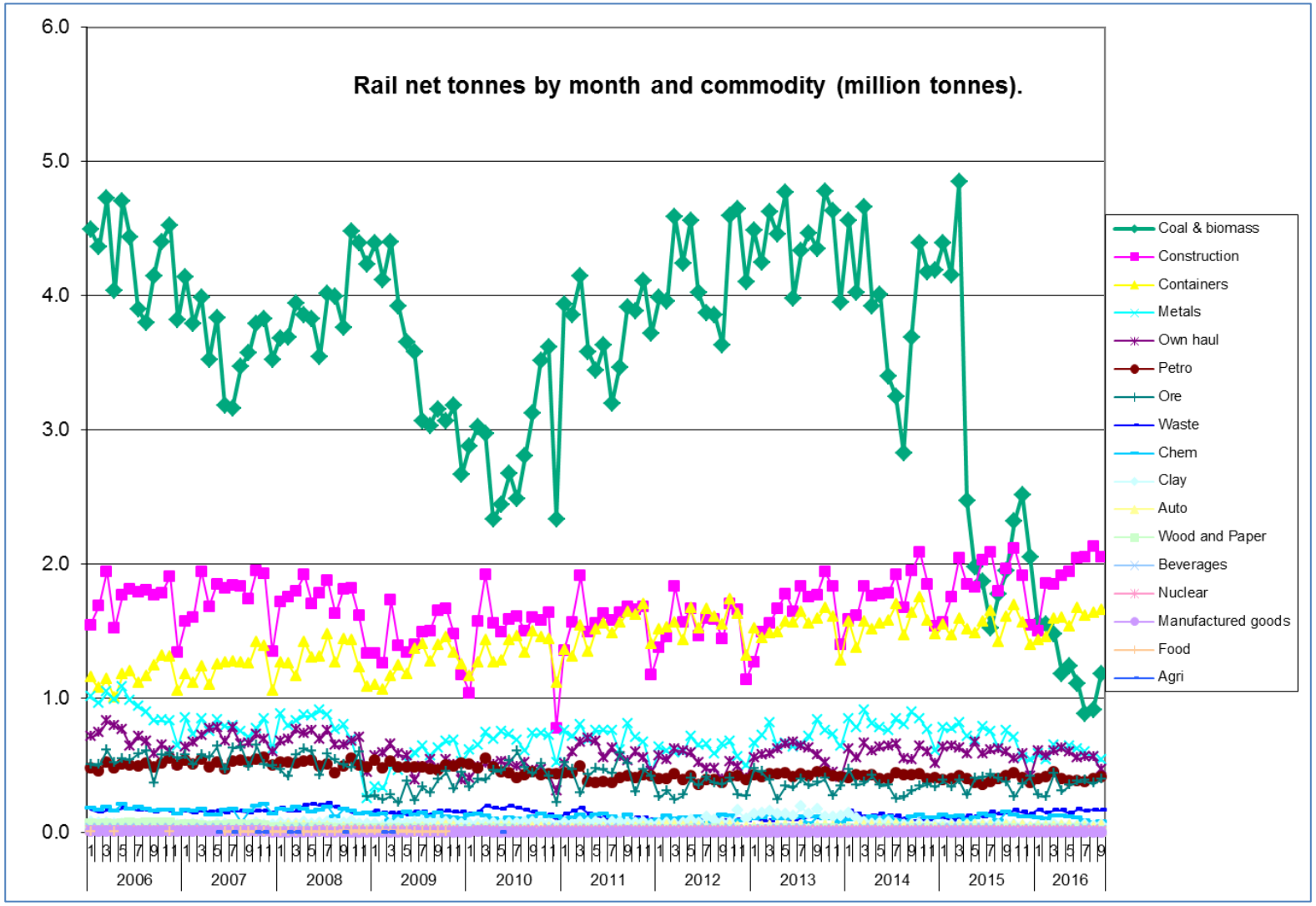
Key Areas of Opportunity (KAO) – both rail-linked and road only connected sites

Graph 4.1 below shows rail freight volumes lifted by commodity group from the start of 2006 to 2016 Period 9.

Despite a small decline during the 2008-2009 recession, the long term trend for containers (intermodal, and containing cargo which passes through distribution centres) is one of steady growth to 2016; growing from around 1 million net-tonnes per month in 2006 to circa 1.8 million net-tonnes per month in 2016. It is now generally accepted that the development of SRFIs e.g. DIRFT, among other factors, has greatly contributed to this trend. Likewise, construction traffics dipped during the recession but have since recorded steady growth rates to 2016. Coal moved by rail, mainly used for electricity generation, has however declined rapidly over the past two years, reflecting the gradual closing down of older coal fired power stations ahead of the 2016 deadline to fit flue-gas desulphurisation equipment. The Government's announcement that all coal-fired electricity generating capacity would close by 2025 and recent announcements from the generators over the future of the remaining larger power stations, means that long-term the recent decline in coal volumes will continue.

Over this time period, total rail freight lifted excluding coal has grown to around 67 million tonnes per annum by the end of 2015. Total inland freight movements, irrespective of transport mode, actually fell by 10% over the same time period. The implication is that rail freight's market share therefore grew by around 30% in the period 2006-2016, or around 3% per annum. By way of comparison, earlier iterations of the national rail freight forecasts produced by MDS Transmodal, based on 2006 actual rail freight lifted, projected 2% per annum market share growth for non-coal volumes i.e. performance ahead of forecasts.

Graph 4.1: Rail Freight Volumes 2006-2016 (Source: Network Rail billing data, processed by MDS Transmodal)



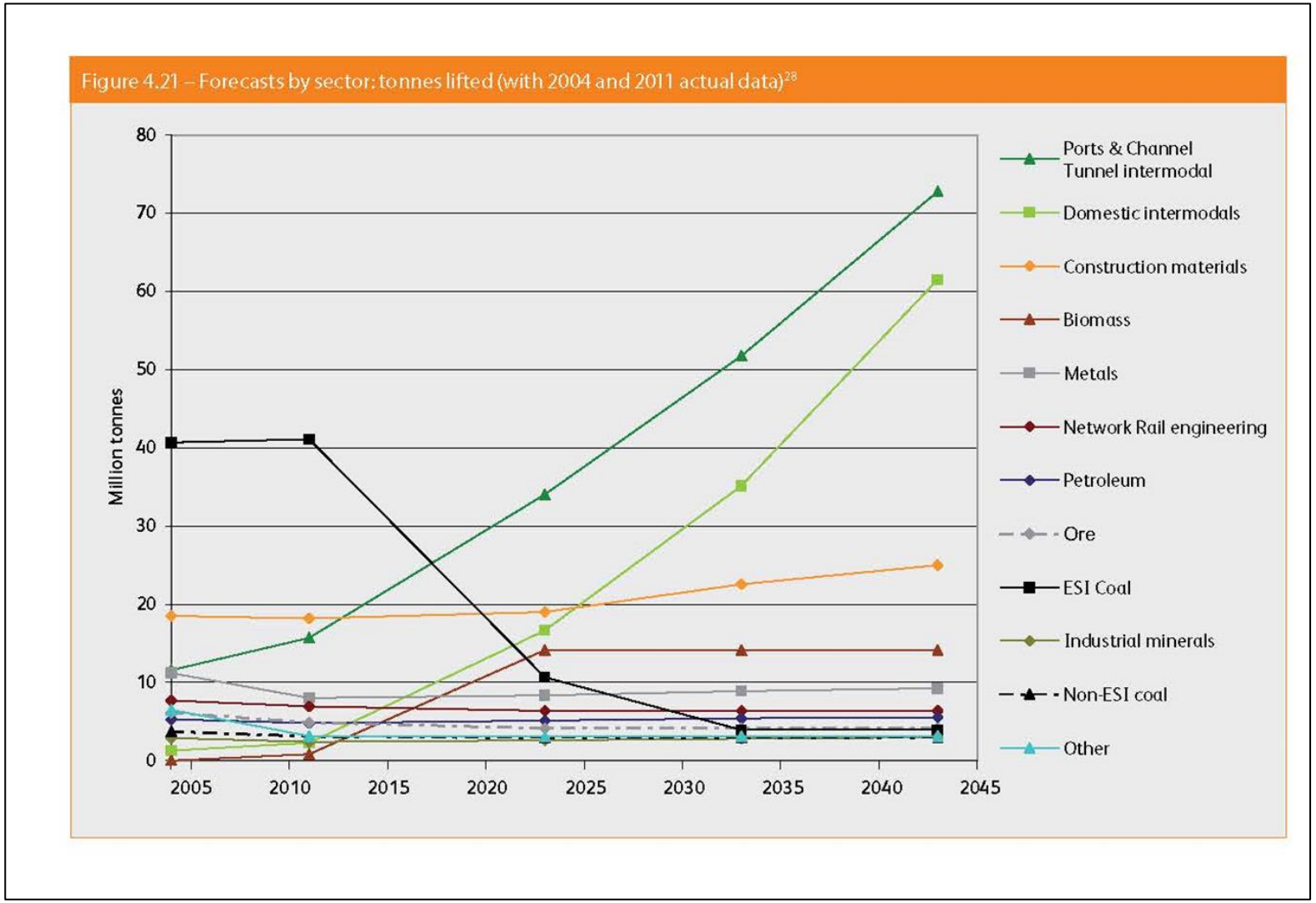
Graph 4.2 further below, taken from Network Rail's Freight Market Study 2013, shows forecast rail freight demand by commodity group to 2033 and 2043 (derived from MDS Transmodal's forecasts for that study – see Leicester and Leicestershire SDS Part B Section 3). Overall, the forecasts indicate a 45% growth in tonnes lifted to 2033. This equates to a 3% per annum growth in rail market share, and is therefore consistent with the 2006-2016 performance recorded (and which included a recession).

Two further points should be noted. Firstly, the freight market study forecasts were produced on an 'unconstrained basis' i.e. it assumed capacity would be available on the rail network to accommodate the projections. The recent 'flat lining' of rail freight volumes in 2015 might suggest a point has been reached where network capacity is beginning to limit growth. The DfT's recent strategy document (see below) attempts to quantify the long term impact of limited capacity. Secondly, the freight market study forecasts were predicated on a significant expansion in the amount of strategic logistics floor space which is located on rail-served sites, including SRFIs (circa 10 million square metres to 2033). Recent work published by Transport for the North[6] suggests that rail freight tonnes lifted in 2033 would fall from 156 million tonnes per annum to 100 million tonnes per annum without this additional rail-served floor space.

Given the number of SRFI schemes now being progressed through the planning system (Section 3), it would appear that the main barrier to future rail freight growth is the availability of sufficient network capacity. The implications are addressed in Section 4.3 below.

[6] http://www.transportforthenorth.com/news/North-could-deliver-the-goods-for-the-UK-economy.html

Graph 4.2: Rail Freight Demand Forecasts to 2033, from Network Rail Freight Market Study (produced by MDS Transmodal)



4.2 Airfreight

This sub-section initially considers the airfreight sector in isolation, before placing it within the context of the wider overall logistics market. The airfreight market is essentially divided into three segments, namely:

- Airfreight carried in the bellyholds of passenger flights (both scheduled and charter);
- Airfreight carried in dedicated cargo aircraft (scheduled and charter); and
- Express service providers.

Freight carried in the bellyholds of passenger flights is the dominant market segment to/from Great Britain. In 2015, 1.6 million tonnes (70%) of airfreight was carried in this manner, compared with 0.7 million tonnes on dedicated freight aircraft or by the express service providers. Within the bellyhold segment, the long-haul (inter-continental) scheduled airlines are the dominant carriers of freight. This is for four main reasons, namely:

- Intra-European flights generally use smaller narrow bodied aircraft with limited payload capacity (e.g. Airbus A320) compared with the larger wide-bodied aircraft used on inter-continental flights e.g. Airbus A340 or A380;
- Surface modes, particularly the accompanied road freight industry, can normally match door-to-door transit times within the European market but for considerably cheaper rates;
- The intra-European passenger market is now dominated by the low cost/no-frills airlines. Their business model is based around short turnaround times at airports to maximise aircraft utilisation and the time taken to load cargo would not allow such operating practices; and
- Inter-continental charter flights do not offer the frequency required by the freight market e.g. normally weekly or twice weekly, and are often seasonal.

The long-haul scheduled airlines principal operating strategy is to sell bellyhold capacity on flights to agents, known as airfreight forwarders. These in turn subsequently fill that capacity with orders placed with them by shippers (exporters). Specialist logistics operators are then contracted by the forwarders to collect cargo from shippers (by road goods vehicles) and deliver it to the passenger aircraft at departure airports. Cargo will pass via transit sheds close to airports, where it is sorted and packaged, before being loaded onto flights. Similarly at the receiving end, logistics operators are contracted to collect cargo from flights and deliver it to the customer (again via a transit shed). Most airlines therefore earn additional revenue by filling what would otherwise be empty bellyhold space, but do not become directly involved in the selling of capacity to shippers or managing the end-to-end supply chain.

Dedicated scheduled freight services, operated either by the freight division of a passenger carrier or a specialist airfreight airline, are utilised on routes which attract large enough volumes to justify a

whole aircraft. However, as airfreight forms a very small proportion of total imports and exports, there are few trade-routes where frequent scheduled freight services are justified (hence the use of bellyholds on passenger flights, where there is demand for frequent flights). Also dedicated freighter aircraft can be chartered for one-off large individual consignments.

The express service providers (e.g. TNT, DHL, UPS) are essentially international parcel couriers who specialise in moving individual shipper consignments at less than container load quantities in short periods of time. Services will generally range from overnight to 3-5 day lead times (short lead times being more expensive). The express providers specialise in operating their own dedicated freight aircraft between hub and spoke airports, where consignments can be 'cross docked' onto connecting flights in short periods of time. Flights generally operate each night, meaning access to airports with minimal night-time flying restrictions is important. Access to transit shed capacity close to airports, in order to handle/sort cargo before, after and between connecting flights, is also a vital requirement. Initial collection from shippers and final delivery to receivers will be undertaken by road transport (often under the providers own livery/branding).

The tables below shows airfreight volumes for 2015 for the five main airfreight airports in Great Britain (these update similar tables presented in the Leicester and Leicestershire SDS Part A Report).

Table 4.2: Airfreight Handled at Major Airports by Aircraft Type and Origin/Destination in 2015

	Tonnes Lifted												
	EU				Other International				Domestic				
	Scheduled		Charter		Scheduled		Charter		Scheduled		Charter		
Airport	Passenger	Cargo	Passenger	Cargo	Passenger	Cargo	Passenger	Cargo	Passenger	Cargo	Passenger	Cargo	**TOTAL**
GATWICK	1,356	0	568	44	65,789	0	5,210	47	356	0	0	0	73,371
HEATHROW	57,333	2,933	0	35,540	1,358,700	39,857	87	328	1,708	0	0	63	1,496,551
STANSTED	2	13,996	15	51,375	756	37,240	15	103,594	2	259	0	742	207,996
MANCHESTER	1,852	1,389	453	4,994	84,907	730	2,881	1,948	70	199	0	595	100,021
EAST MIDLANDS	2	17,544	1	173,234	0	4,900	0	51,913	5	3,802	0	40,287	291,689
sub-total (top 5)	*60,546*	*35,862*	*1,038*	*265,187*	*1,510,153*	*82,727*	*8,195*	*157,831*	*2,141*	*4,261*	*0*	*41,687*	*2,169,628*
Other Airports	701	5,475	112	35,778	22,823	8,129	1,809	4,180	2,701	90	1,214	46,703	129,715
TOTAL	**61,247**	**41,337**	**1,149**	**300,966**	**1,532,976**	**90,857**	**10,004**	**162,011**	**4,842**	**4,351**	**1,214**	**88,390**	**2,299,343**

Source: CAA

Table 4.3: Airfreight Handled at Major Airports by Aircraft Type in 2015

	Passenger	Cargo	**TOTAL**
GATWICK	73,280	92	73,371
HEATHROW	1,417,830	78,721	1,496,551
STANSTED	790	207,207	207,996
MANCHESTER	90,164	9,856	100,021
EAST MIDLANDS	9	291,680	291,689
sub-total (top 5)	*1,582,072*	*587,556*	*2,169,628*
Other Airports	*29,360*	*100,355*	*129,715*
TOTAL	**1,611,432**	**687,911**	**2,299,343**

Source: CAA

East Midlands airport handled just under 292,000 tonnes of airfreight in 2015, almost all of it being moved by the express service providers on dedicated freight aircraft. This represents 12% of all airfreight lifted in Great Britain, and around 42% of freight conveyed on dedicated freight aircraft. The tables show that Stansted and *East Midlands* airports dominate the express service sector, accounting for 70% of freight conveyed on dedicated freight aircraft. In addition to their excellent locations relative to key origins and destinations of cargo and connections to the strategic highway network, both airports offer minimal night-time flying restrictions along with historic availability of land close-by on which transit shed capacity could be developed.

As noted above, airfreight carried in the bellyholds of passenger flights is the dominant market segment to/from Great Britain, and within this sector the long-haul (inter-continental) scheduled airlines are the main carriers. As these predominantly use London Heathrow as their only British 'hub' airport, it dominates the movement of airfreight in the bellyholds of passenger flights (1.5 million tonnes in 2015 or around 90% of bellyhold air freight). Overall, Heathrow accounts for 64% of all airfreight lifted in Great Britain.

East Midlands airport (now part of the Manchester Airports Group) is located at Castle Donington, Leicestershire (North West Leicestershire). It has a single runway 2,893m in length which also permits night-time flying. Airfreight within the East Midlands airport boundary (i.e. providing direct 'air-side' access to the aircraft parking apron) is handled in two dedicated zones, namely.

- Cargo West: This includes the main DHL transit shed and its associated aircraft parking apron. The DHL transit shed has a floor space of around 33,000 square metres; and

- Cargo East: UPS, TNT and Royal Mail have their operations at Cargo East, occupying transit sheds ranging in size from 4,000 square metres to 7,000 square metre. All operators share the existing aircraft parking apron.

In addition, a number of logistics operators are located in Pegasus Business Park. This is located in the south-east of the wider airport estate, albeit that it does not have direct access to the aircraft parking aprons. The table below shows the airfreight volumes handled at East Midlands airport since 2005. Annual growth rates on a compound annual basis are just around 0.9% per annum.

Table 4.4: Airfreight at East Midlands Airport 2005-2015

Year	Tonnes Lifted
2005	266,569
2006	272,303
2007	274,753
2008	261,507
2009	255,121
2010	273,669
2011	264,595
2012	264,292
2013	266,968
2014	277,413
2015	291,689
CAGR	0.90%

Source: CAA

The East Midlands airport *Sustainable Development Plan (Land Use)*, as reported in the Leicester and Leicestershire SDS (Part B), included forecasts for future cargo tonnage at the airport. These forecasts estimated airfreight will be *618,000 tonnes* in 2035 and some *700,000 tonnes in 2040*.

With respect to future land requirements at the airport, the *Sustainable Development Plan* also concluded, as reported in the Leicester and Leicestershire SDS (Part B), that sufficient land is currently available within the airport boundary to accommodate these growth forecasts (i.e. land able to provide direct 'air-side' access to the aircraft parking apron). Land has been reserved in its Master Plan for the further development of the DHL building at Cargo West and land will also be safeguarded for a second major integrator hub in Cargo East.

The DHL building opened in 2000 and it was always intended that the site would be developed in phases. Land continues to be available for further phased development on the western side of the

building as and when it may be required. This gives the opportunity for additional parcel handling facilities and associated support services.

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

Given these conclusions, the Leicester and Leicestershire SDS Final Report did not consider airfreight any further from a spatial or land use planning perspective. Further, there have been no significant developments within the airfreight market since 2014 to warrant any new research or a re-fresh of this position.

The East Midlands airport *Sustainable Development Plan (Economy and Surface Access)*[7] states that that around 2,400 people are employed at the airport in cargo handling activities (36% of total airport direct employment). The largest on-site employer is DHL with 1,575 staff. Across the logistics sector, national data suggests that that for every one warehousing job a further 1.35 jobs are supported in the wider sector. This would suggest that East Midlands airport currently supports around 5,640 logistics related jobs (direct and indirect) within the wider region. To place this in context, the Leicester and Leicestershire SDS (Part A Section 6) presented *Skills for Logistics* data for the East Midlands, suggesting that 156,600 workers in the region employed in the logistics sector. The airport would therefore appear, directly, to account for circa 1.5% of the region's logistics sector employment.

There are a number of distinct differences between the air freight sector and the conventional 'overland' distribution market. Firstly, volumes handled are much smaller. The tables above show that the air freight sector handled 2.3 million tonnes of airfreight in 2015 (and much of that through one airport) compared with total freight lifted in Great Britain that year of around 2,000 million tonnes. In other words, air freight represents about 0.1% of all cargo lifted in Great Britain. Likewise, the Leicester and Leicestershire SDS (Part A Section 3) noted that total freight lifted in the East Midlands is currently around 151 million tonnes. The East Midlands airport volumes of 292,000 tonnes in 2015 therefore represented 0.2% of all freight lifted in the region i.e. consistent with the national figure. However, cargoes are generally high value and time sensitive commodities moving predominantly on long distance international flows.

Further, while the airfreight operators base their landside activities at warehouses ('transit sheds') which from the outside may look similar to the large scale buildings operated by the major retailers and distributors, they are not generally considered as conventional 'distribution centres'. Throughput/dwell times are much quicker than at a standard RDC/NDC, with cargo passing through

[7] https://www.eastmidlandsairport.com/about-us/development-plan/

in a matter of hours rather than days/weeks. Consequently, they are considerably smaller (there being minimal requirement for storage), and as a result, transit sheds are not as 'land hungry'. Transit sheds also need to be located on or close to airport estates. The land-use implications therefore need to be addressed separately.

Summarising the above analysis, it is clear that East Midlands airport is a significant player in the express service sector of the air freight market, handling around 42% of freight conveyed nationally on dedicated freight aircraft. It is also an important local direct employer and it probably sustains a significant number of logistics sector jobs indirectly. However, when placed within the context of the wider overall logistics market, it is a minor player both in terms of tonnes-lifted and employment. Further, the airport's own master plan concludes that sufficient land is available within the airport estate to accommodate forecast freight volumes to at least 2040.

4.3 National Policy

The Leicester and Leicestershire SDS Part A Report (Section 7) undertook a review of current national transport and planning policy. Since that report was presented, two significant documents have been published, namely:

- Freight Network Study (draft for consultation), published by Network Rail in August 2016; and
- Rail Freight Strategy – Moving Britain Ahead, published by the Department for Transport in September 2016.

Both documents are summarised below. The only other (minor) change to note is that the *National Policy Statement (NPS) for National Networks* has since been designated following the period of statutory consultation. The designated version of the NPS reflects the contents of the draft version reviewed for the SDS. All the other policies noted and summarised in the Part A report remain valid.

Freight Network Study (draft for consultation), Network Rail August 2016

The *Freight Network Study (draft for consultation)* considers the future development of rail freight across the rail network of Great Britain. It is a key output of the rail industry's *Long Term Planning Process (LTPP)*, which has been designed to consider the role of the railway in supporting the UK economy over the next 30 years. The LTPP is intended to address demands likely to be placed on the rail network over the next 30 years, capture stakeholder aspirations to develop new train services and present funders with options to accommodate those demands and aspirations. A previous iteration of the Freight Network Study was published in March 2007 under the title '*Freight Route Utilisation Strategy*'.

The LTPP consists of a number of different elements, which when taken together, define the future capability of the Network. The individual elements include Market Studies (forecasts of future demand), Route Studies (which develops options for specific routes) and Network Studies (considers issues affecting the whole network). Together they provide a key part of the evidence base for future updates of the network. A *Freight Market Study (FMS)* was published in October 2013.

The Freight Network Study essentially comprises four phases, namely:

- Baseline – Identifying the current capacity and capability of the railway network, including those enhancements being delivered during Control Period 5 (2014-2019);
- Gaps – Identifying the freight capacity and capability likely to be required beyond currently committed schemes;
- Options – Proposals for a range of possible choices for funders to meet the gaps outlined; and
- Strategy – Proposes the priorities for implementation from the range of options proposed.

The afore-mentioned FMS was informed by a set of national rail freight demand forecasts, produced by MDS Transmodal, over a 10, 20 and 30 year planning horizon (years 2023, 2033 and 2043). Forecasts for 13 commodity groups were undertaken, including intermodal rail from the ports, Channel Tunnel and domestic sources, which were then subsequently combined to form forecasts for all rail freight traffics. A summary of these forecasts were presented in the Leicester and Leicestershire SDS (Part B report), and they were subsequently used to underpin the conclusions contained in the *NPS National Networks*. The Freight Network Study states that it also *'derives its forecasts from the FMS'*, and that these have also contributed to subsequent Route Studies.

It should be noted that the FMS forecasts were not capacity constrained; they were produced without addressing the ability of the rail network to cater for the forecast demand. The Freight Network Study is essentially identifying the capacity and capability gaps that are likely to constrain demand to a level below that forecast in the FMS, and subsequently proposes the interventions likely to be required in order to realise the forecasts.

The Freight Network Study presents the FMS central case forecasts for intermodal traffics. This shows annual growth to 2033 of 5.2% for ports/Channel Tunnel traffics and 11.9% for domestic intermodal. However, it notes that recent growth in the intermodal sector has been lower than implied by the FMS. It cites weaker deep-sea container volumes, capacity constraints and lower road haulage costs as the principle reasons. It concludes: 'Taking into account the weak growth of intermodal volumes since 2011 and discussions with stakeholders, the FMS central case intermodal forecasts will be challenging to meet. However, significant growth can still be expected over the forecast period, assuming the resumption of economic and trade growth'.

Capacity and capability gaps identified in the Freight Network Study which are relevant to the East Midlands include:

- Felixstowe to the West Midlands and the North (via Ely and Leicester) – capacity enhancements along the corridor required to support forecast growth;
- South West to the Midlands – Longer term capacity gaps to freight terminals in the Midlands;
- Midland Main Line (MML) – Additional capacity required to serve new freight terminal depots in the Midlands; and
- Loading gauge clearance on the MML to support new terminal developments in the Midlands.

A series of options (interventions) are subsequently presented to address the identified gaps. It focuses on possible interventions across each of the eleven corridors. It is important to note that the Freight Network Study identifies these options in order to provide potential choices for funders and evidence to allow further work on the feasibility of a given intervention. A detailed business case, including further evidence of the strategic, economic, commercial, financial and management case for a proposal, will be developed if a funder decides to progress a particular scheme. Essentially, these interventions may form part of future Control Period funding settlements.

Interventions proposed which are relevant to the East Midlands include:

- Signalling enhancements Syston – Peterborough;
- Track and signalling enhancements Leicester to Nuneaton;
- Leicester area capacity;
- Four-tracking Kettering to Wigston; and
- Loading gauge enhancement MML.

Note these are proposed longer term interventions over and above schemes already committed (which form part of the Network Study's baseline) and summarised above.

With respect to the development of SRFIs, two clear conclusions can be drawn from the document, namely:

- The central growth rates forecast in the FMS are dependent on the development of rail-served warehousing nationally (slower development produces lower growth rates); and
- Significant enhancements will also be required to the capacity and capability of the rail network in order to realise the FMS central growth rates forecasts.

Overall, the assessments and proposed interventions contained in the Freight Network Study confirm the conclusions reached in the Leicester and Leicestershire SDS, namely that new rail-served

warehousing schemes should be developed along the following routes (either directly on or a short distance from):

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

Rail Freight Strategy – Moving Britain Ahead, DfT September 2016

Rail Freight Strategy – Moving Britain Ahead was published by the Department for Transport in September 2016. The Government recognises the importance of a stable policy framework to enable rail freight to grow. The main purpose of the strategy document was to develop a clear vision for rail freight, in order to provide a sense of direction from Government to help the industry plan ahead and provide greater certainty to customers and investors.

To inform the strategy development and better understand the likely growth potential, the DfT commissioned *Arup* to assess rail freight growth potential by commodity and review the key capacity constraints that will limit this growth. The study confirmed the recent decline of coal traffic to power stations, but also highlighted the potential for the rail freight industry to establish new 'core' markets, including intermodal traffics. Based on the Arup study and extensive engagement with industry, the Rail Freight Strategy identifies four priority areas where further action by Government, industry and others could empower rail freight to achieve its potential, namely:

- Innovation and skills
- Network Capacity
- Track Access Charging; and
- Telling the story of rail freight.

The document references the FMS rail freight forecasts outlined above. It states that *'these forecasts have been invaluable in planning what new investment may be needed on the network to accommodate future freight growth'*. However, it also noted that because the forecasts were unconstrained, '*they are less useful for understanding how in practice various constraints may limit the level of rail freight growth and how these constraints could be overcome'*.

The afore-mentioned Arup study was therefore intended to assess rail freight growth potential by commodity and review the key capacity constraints that will limit this growth. However, it states that *'this assessment is not intended to replace or to be directly comparable with the assessment by Network Rail'* (i.e. it is not a re-forecast of the FMS forecasts). Rather, it is *'intended to support the development of this Rail Freight Strategy by providing an insight into the growth that might be*

achievable on a constrained network, the barriers to future rail freight growth and the impact of different policy intervention'. Arup's assessment of the 'constrained' growth in the intermodal sector is shown in the table below.

Table 4.5: Constrained Freight Growth for Intermodal Sector to 2030 from DfT Rail Freight Strategy

Commodity	Actual freight lifted 2011 (millions tonnes)	Projected freight lifted 2030, central constrained (millions tonnes)	Total Growth
Port intermodal	15.1	31.81	16.71
Domestic intermodal	2.3	4.03	1.73

Source: Arup (as reported in DfT Rail Freight Strategy)

In its central 'constrained' forecast, the DfT is effectively implying that network capacity constraints are likely to limit the development of domestic intermodal rail freight to just 4 million tonnes by 2030. Given the market's enthusiasm on the part of the major distribution centre developers for SRFIs (e.g. East Midlands Gateway, DIRFT, Rail Central etc..), it is possible to arrive at the conclusion that the volume of rail freight in the foreseeable future will be dictated by the relevant capacity that Network Rail is able to make available to freight operators.

The report by Arup which informed the strategy development identified a number of priority issues which should be considered in order to remove barriers to growth and support rail freight to achieve the potential growth and modal shift set out above. These include:

- Infrastructure capacity, including addressing limitations in the network (such as gauge clearance and lack of direct rail access in key locations), supporting development of high capacity rail freight interchanges and availability of efficient freight paths to improve journey times.
- Cost barriers, including costs of additional journey legs for door-to-door journeys with a rail leg, and high capital cost for new facilities (including new locomotives, wagons or equipment).
- Flexibility of rail freight services, including responsiveness of train path allocation, the improvement of freight train path speeds the '7 day railway'; the need for suitable and resilient diversionary routes for freight;
- Attitudes and awareness, including the need for easy-to-access information for current non-rail users, and the need to overcome cultural barriers and risk aversion among customers; and

- Skills, Training and Innovation, including the development of alternative technologies and ensuring that the freight industry is fully engaged in the skills agenda.

Overall, it could be argued that the DfT Rail Freight Strategy document effectively makes the case for the interventions outlined in the Network Rail Freight Network Study.

4.4 Changes in Technology: Driverless and Autonomous HGVs

A lot has been written over the past 12-24 months on so called 'driverless' road vehicles. Technology companies such as *Google* and *Tesla* are currently testing 'driverless' passenger cars on public highways, with predictions that mass market sales are just around the corner. *Ford* is promising to develop a car with no steering wheel or any user activated controls for the mass market by 2020 and that *Uber*, the smartphone taxi app, has said that passengers in Pittsburgh would be able to call-up driverless cars from 2017. The Finnish capital city *Helsinki* have announced that it will be introducing driverless buses in 2017, while insurance company *AXA* has recently published the results of a study claiming significant savings for the logistics sector as a result of the introduction of 'driverless' HGVs (see below).

There appears to be two extreme positions emerging, namely:

- That we are on the verge of a major technological revolution that over the next decade will significantly change the way both private and commercial transport activity is conducted, and which will subsequently need to be reflected or accounted for in public policy and investment decisions; or
- It is a combination of hype and self-publicity that, with no real justification, could start to drive public policy and investment decisions in the wrong direction.

The answer probably lies somewhere between these two extremes, but at present it is significantly closer to 'hype' rather than the 'revolution'. However, as noted above it does raise some important potential implications with respect to land use planning and investment decisions.

Driver wages represent around 35-40% of the annual operating costs of a HGV, and vehicle utilisation is affected by the need for drivers to take statutory break/rest periods. Therefore, while peripheral regions currently offer significantly lower land and warehouse labour costs when compared with the golden triangle, these are then outweighed by higher inbound and outbound transport costs (given greater distance to/from main markets). Taking all factors into account, the golden triangle remains the most competitive location when sourcing and distributing on a national basis (as reflected in the data in Sections 2 and 3). However, remove driver wage costs from the equation and factor in higher vehicle utilisation (implied by the operation of 'driverless' HGVs'), those peripheral regions could

potentially become the optimal locations for NDCs. This would then raise questions over land use planning in the East Midlands that continued to bring forward new land for B8 developments.

Likewise, any significant take-up of 'driverless' road vehicles (passenger and freight) questions the Government's continued investment in the railways. The Government has recently re-affirmed its commitment to proceed and invest in HS2, while Section 4.1 above references the continued investment in the capacity and capability of the existing network (e.g. the Strategic Freight Network). The 'driverless' revolution suggests a need to shift back towards investment in roads.

There is a danger that public policy and investment decisions will start to be influenced by the hype rather than the actualité. In this respect, there are potential similarities with the 1960s where urban planning, particularly in new towns and large conurbations, was driven by a view that railways (heavy and light) were yesterday's technology and that road based transport was the future.

Before continuing, it is worth setting out what is currently being considered. While the headlines refer to 'driverless' vehicles, examination of the 'small print' reveals that what is actually being proposed (and tested) is *'autonomous and connected'* vehicles. This refers to vehicles which, under certain limited operating conditions, will be fully autonomous. This could be on a motorway where vehicle flow is relatively constant and there are no pedestrians. However, vehicles will still have a 'driver' who will oversee its autonomous operation and be expected to take full control in other operating conditions, in an emergency or system failure (akin to an aircraft operating on auto-pilot). It is therefore unlikely that a 'driver' will be able to fall asleep while the vehicle is operating autonomously. Two Government funded test projects in Great Britain are proceeding on this basis; the *Venturer* project in Bristol and the *UK Automotive* project in Milton Keynes. Likewise the previously mentioned Google testing in the USA.

Consider the afore-mentioned AXA study (The Future of Driverless Haulage[8]), which examined the potential impact of 'driverless HGVs' on the logistics sector. The baseline assumption tested was that over the next 10 years, the current British haulage fleet would be gradually replaced by 'driverless vehicles'. It presents the results of an economic modelling exercise undertaken by Douglas McNeill, "an independent financial analyst and expert in the transport and logistics sector", which suggests that 'driverless vehicles' will generate potential savings in four main categories: labour, fuel, insurance and vehicle utilisation. With respect to Labour savings, it states that these would arise as 'driverless vehicles' reduced the need for drivers. Owing to the demographics of the driver workforce, it is likely that this could be accomplished without compulsory redundancies, as drivers are set to retire at a faster pace than they can be replaced. It also notes that "computer-controlled vehicles drive in a more efficient manner than those driven by people" and "insurance savings would arise if driverless vehicles proved less accident-prone". Overall, the study claims that the logistics

8 http://www.axa.co.uk/uploadedFiles/Content/Newsroom/Media_Resources/Reports_and_Publications/PDF_files/The%20Future%20of%20Driverless%20Haulage(1).pdf

industry would save £33.6 billion (central case) over the next ten years as a result of introducing 'driverless vehicles'.

However, behind the headline outputs the study summary report also states that: "It is not assumed that this would eliminate the need for drivers. It is likely that drivers would still be required for such purposes as delicate manoeuvring at the start and end of journeys (in depots, for instance), accompanying vehicles in order to be able to intervene in the event of technical problems, and handling administration at the point of delivery." This is consistent with the 'autonomous and connected' vehicles currently being tested (see above), but it is not driverless vehicles. Essentially, HGV trips will still be under the control of a driver from the start to the end of a journey, albeit that the HGV could run in autonomous mode, but overseen by the driver, for part of the trip. This is not too far removed from today's operating environment, where modern HGVs have automatic gears and cruise control for use on motorways etc.. It must also be assumed that drivers will still be covered by statutory break/rest requirements given that they will remain in the cab and be on-hand to intervene and operate the vehicle under certain operating conditions.

It is therefore difficult to see where the envisaged cost labour cost savings will be generated, given that drivers will still be accompanying vehicles from the start to the end of a journey, and consequently it casts doubt on the credibility of the study as a whole and the headline savings being claimed. The emerging consensus appears to be that it will be at least 2030 before a fully 'autonomous' vehicle will be available on the market. Even then, it probably will still require a 'driver' to oversee its operation and many years after that before they become commonplace. Further, the road haulage business in Great Britain consists of a large number of small/medium sized firms operating on small margins. Will such firms be willing or able to invest in the additional costs for an autonomous HGV when compared with a standard model. Consequently, neither developers or warehouse occupiers are currently considering 'driverless' HGVs in their locational decision making. Consequently, it should also not currently factor in devising land use planning policy and investment decisions.

What is more likely to be achievable over the next 10-15 years is so called '*HGV platooning*'. This involves two or more vehicles operating very close together and connected with vehicle to-vehicle communication, allowing them to effectively operate as a single unit. By reducing the headway between vehicles, it allows them to benefit from reduced aerodynamic drag and therefore increased fuel efficiency (by up to 10%). Further, platooning could also free more road space and improve traffic flow. The DfT is currently consulting on the issue, and a stretch of the M6 near Carlisle has been earmarked as a potential test route. However, it is only likely to be feasible on motorways, meaning that the start and end of journeys would still be manually driven. The HGVs following the lead vehicle would also require oversight by drivers, who could then take control when leaving the motorway or at times of system failure. In other words, not a 'driverless HGV' and the main saving being from reduced fuel consumption and not driver wages.

5. INDUSTRY REQUIREMENTS

This section of the report addresses ***C5*** of the *Scope C Terms of Reference*.

Optimum Site Characteristics

Site identification and location criteria were previously outlined in the Leicester and Leicestershire SDS (Part A and Final Report). Commercially attractive strategic logistics sites are considered to be ones which meet the following criteria:

- Good connections with the strategic highway network;
- Appropriately located relative to the markets to be served;
- For rail-served sites, is served by a railway line offering a generous loading gauge (minimum W9), available freight capacity and connects to key origins/destinations directly without the requirement to use long circuitous routes;
- For rail-served sites; is sufficiently large and flexible in its configuration so that it can accommodate an intermodal terminal and internal reception sidings;
- Is sufficiently large and flexible in its configuration so that it can accommodate the size of distribution centre warehouse units now required by the market;
- Is accessible to labour, including the ability to be served by sustainable transport, and located close to areas of employment need; and
- Is located away from incompatible land-uses.
- This section summarises the key characteristics that distribution and logistics occupiers seek in sites. These findings are drawn from GL Hearn's wider research and experience.

According to Lipscomb (2010)[9] the main criteria that affect the choice of location for distribution centres are the infrastructure facilities, proximity to market, land availability, labour supply as well as government and industrial support.

The exact factors that affect the choice of location vary from business to business. However, according to academics[10] further factors considered include:

[9] Lipscomb, R. T. (2010). STRATEGIC CRITERIA FOR EVALUATING INLAND FREIGHT HUBLOCATIONS. MISSOURI UNIVERSITY OF SCIENCE AND TECHNOLOGY.

[10] Botha & Ithmann (2008) LOGISTICS HUBS AN INTEGRATION OF TRANSPORT INFRASTRUCTURE. SOUTHERN AFRICAN TRANSPORT CONFERENCE (SATC 2008) (pp. 146-156). Pretoria, South Africa: Document Transformation Technologies cc.
Skowron-Grabowska (2008) DEVELOPMENT OF LOGISTICS CENTRES IN POLAND. Czestochowa University of Technology, Management Faculty

- Adequate network systems including the condition of roads; bridges; site local accessibility points and links to the strategic road network as well as road density and congestion;
- Available rail and road links with local consumer and production areas;
- Governmental (central or local) support in terms of land availability; incentives, flexibility and minimal bureaucracy;
- Good telecommunication systems;
- Reasonable port charges; vehicle taxes; and land taxes;
- Adequate cargo and container handling facilities; and
- Capability to handle all kinds of commodities (including dangerous goods).

It should be noted that there are additional land constraints derived from the supply chain of the logistics sector. The supply chain can be a value creator and a source of competitive advantage for logistic companies. The supply chain can also employ local workforce and benefit the local economy, however it also requires plenty of space with specific standards as well as proximity to the distribution sites.

Considering all of the above and interpreting the academic research, our experience and discussions with the main occupiers and agents; we present below the key site characteristics that logistic companies are seeking from their location choice. These are consistent with the site identification and location criteria outlined above, which should be read in conjunction with the text below.

High Accessibility

There is a general preference of logistics activity to be located equidistant between any given goods production and their final destination / consumers and market. Sites near to the strategic road network, in particular motorways and key junctions, as well as proximity to rail freight facilities, are considered the ideal location for distribution activity.

Good strategic links decrease the transport costs and allow large freight amounts to reach their market in optimal times while heavy loaded HGVs require good road conditions in order to operate to optimum functionality.

Accessibility is directly linked to the transport infrastructure as well as the proximity to the goods and markets. This is the main reason why the Golden Triangle and the Midlands in general is such a popular place for distribution and logistics companies. As presented in the above sections the Golden Triangle enables distribution of goods to 90% of the UK consumer market within one driver's working day.

The East Midlands is not only an area well-connected to manufacturers and consumers; but also it is well linked to key commercial transport nodes such as Felixstowe and the Dover Straits, as well as the East Midlands airport. It can also readily access other transport hubs such as Immingham,

London Gateway, Heathrow and Stansted. This enables efficient export and import activity and consequently improves the accessibility of companies that locate in the area.

A component of accessibility is also workforce access, with good quality sites having the ability to draw on a local pool of workers. This is influenced by the population proximate to a site, transport accessibility (including by sustainable modes of transport)and labour market capacity.

The context of the site

The site characteristics vary based on the nature of the freight/cargo. However there are some general characteristics that make a site much more efficient and consequently profitable for the logistic companies. The context is something which is often considered as the surrounding land uses; existing buildings on site and previous use; noise level restrictions; volume of truck traffic around site; current planning regulations; and environmental and other site specific constraints and opportunities.

A modern logistics site should have an optimal layout ideally square or rectangular that allows cubic capacity and consequently the free flow of operations. The site should have a relatively flat topography as changes of level might lead to inefficiency which increases production costs. Good drainage and sub-soil conditions are also preferable, with good load-bearing qualities and surface water run-off.

There is demand for larger units with high ceilings and flat smooth floors. This will allow new technology and digitalisation in the production/operation process. Research shows that around 15% of current warehouses in Europe are mechanised[11]. In addition to the technology used in manual warehouses, these distribution centres use some type of material handling automation such as conveyors, sorters, goods-to-picker solutions, and other mechanised equipment.

All this automation requires space and height standards that currently cannot be met by the existing warehousing stock. This is why occupiers show a desire for bespoke built-to-suit warehouses. Moreover, large yards and ample outdoor storage facilities that enable easy loading/unloading, sufficient parking space, turning lanes, circulation and temporary storage of HGVs is also a desirable site specification.

Furthermore there is also demand for warehouses than can accommodate functions which can add value to the products. For example final customisation of the product, call-centres and even production of goods. In general logistics companies seek to utilise at least 80% of the available floor space; and currently this percentage is increasing.

[11] Robotics in Logistics (2016) A DPDHL perspective on implications and use cases for the logistics industry, DHL Trend Research

Finally warehouses which are easily adaptable to potential future growth are desirable. Thus as well as the existing floor space room to expand is also a deciding factor occupiers look for in a site.

Distribution Clusters

Agglomeration economies are the benefits that come when firms and people locate near one another. These benefits all ultimately come from transport costs savings. Transportation costs are interpreted broadly and include the difficulties in exchanging goods, people, and ideas.

The connection between agglomeration economies and transport costs would seem to suggest that agglomerations should become less important, however the industrial agglomerations remain remarkably vital and even more vital in distribution clusters.

Logistics companies benefit more by locating near each other rather than operating on isolated locations. In particular clusters of logistics or distribution centres benefit from:

- Encouraging co-operation that can consequently reduce supply chain costs;
- Allows exchange of knowledge, technology and services;
- Encouraging innovation derived from the synergies among the cluster's occupiers;
- Maintain and retain good conditions in the local infrastructure; and
- Provides access to specialised workforce.

It should be noted that this is consistent with the advice presented throughout the Leicester and Leicestershire SDS. In the Part A report, for example, it was noted that rail-served sites (i.e. SRFIs) should be at least 50ha in size, so that can provide *at least 200,000 square metres* of floor space in total and individual plots with the ability to accommodate very large warehouses *up to 100,000 square metres in size*. Site size contributes towards the viability of rail freight services to and from that site. The recommendations in the Final report concerning the extensions of existing sites and satellite sites is also consistent with this 'cluster' concept.

An adequate supply of suitable workforce is also an important factor in the choice of location. The requirements are changing while technology is evolving and higher skilled labour is more than ever occupied in the logistics' sector.

6. MAINTAINING LEICESTERSHIRE'S COMPETITIVE ADVANTAGE

This section of the report addresses ***C6*** of the *Scope C Terms of Reference.*

This section seeks to examine the spatial advantages/disadvantages of Leicestershire from a commercial perspective. It seeks to set out the rationale for Leicestershire consolidating these advantages into a larger market share. The starting point is the advice and conclusions presented in the Leicester and Leicestershire SDS Final Report, which still remains valid as the recommended strategy designed to maintain and enhance the county's established competitive advantage and enable growth for the strategic distribution sector in Leicestershire.

As set out in previous Sections (Sections 2 and 3 in particular) the Golden Triangle is the optimum distribution location across the country. This is linked to its geographic centrality through which it can reach 90% of the British consumer base.

The area also benefits from excellent transport links with both North-South and East-West motorways, the Midland Main Line and West Coast Main Line transecting the area.

Although not close to any particular port the golden triangle does have excellent road links to these key interchanges. Furthermore the development of the East Midlands Gateway SRFI will also provide the region with a further such facility (DIRFT already operating and being close to Hams Hall and BIFT in the West Midlands region). This will allow for improvements to international imports and exports as well distribution across the country.

The wider transport infrastructure is continually being upgraded and although there can be capacity issues these tend to only be for short, peak periods. In consultation with the County Council we also identified a number of major investments in the Strategic Road Network (SRN). The confirmed schemes on the (SRN) include:

- Upgrading the M1 (J13-25) to a 'SMART Motorway' by 2025;
- Junction upgrades for J19 (Catthorpe Interchange) and J24/24A as part of the SRFI mitigation package by 2021;
- Dualling of the A46 north of Leicester to Newark;
- A46 Junction upgrades on the Tollbar End junction Binley and Walsgrave junctions; and
- A453 dualling/widening from M1 J24 into Nottingham

There are also several future new links on the local network which could also potentially have a significant impact on the distribution market:

- New link from A47 to A563 (Lubbesthorpe Way) as part of Lubbesthorpe SUE;
- Castle Donington Relief Road;

- A6 Kegworth Bypass (part of SRFI mitigation);
- Garendon Park Link Road as part of West of Loughborough SUE

In the wider area the Cathorpe Interchange improvements near Rugby which are currently ongoing will increase capacity at this pinch point in the network. It will also improve the flow of goods from Leicestershire to the South West, West Midlands and Wales.

Balancing Operational Costs

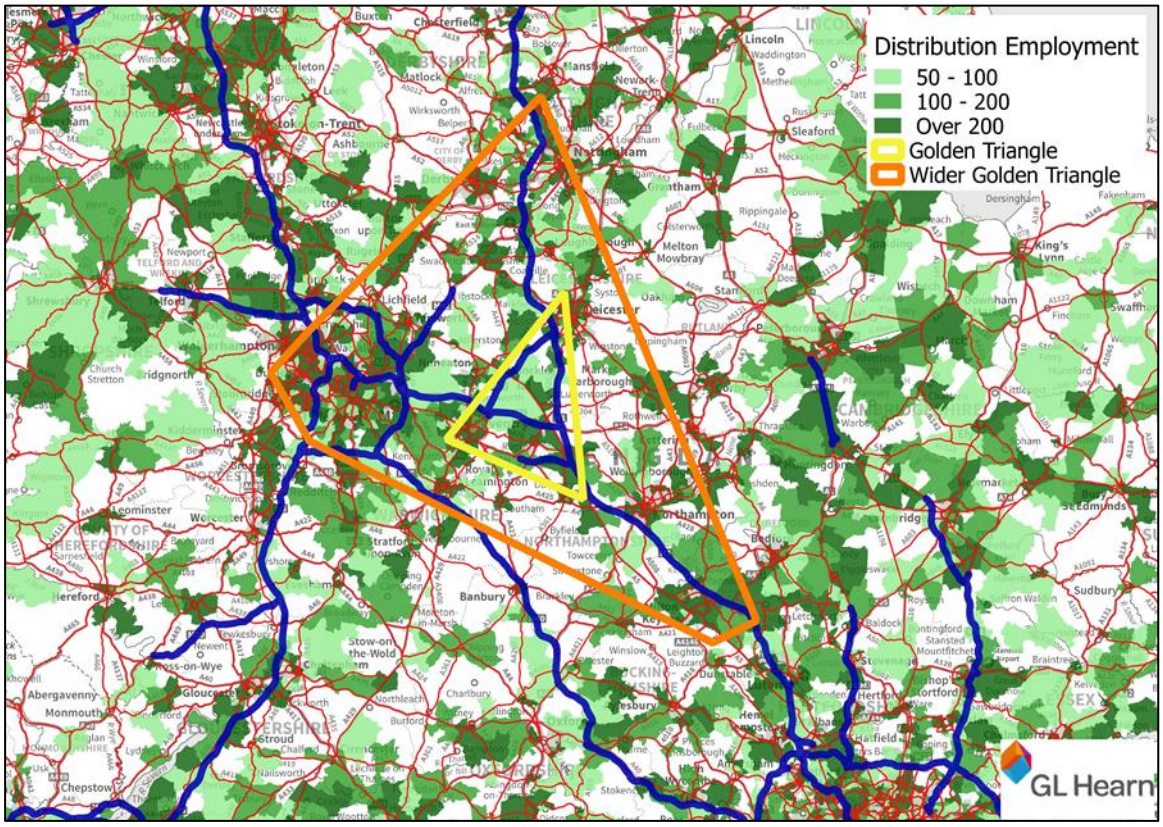
Within the wider Golden Triangle and indeed the M1 corridor there is a balance to be struck between rental costs, operational costs and labour costs. The closer a site is to the largest consumer market (London and the South East) the more rental and labour costs become. While both of these can be offset by moving northwards the operational costs of longer trips to the Core Market somewhat negates this.

In deciding their location logistics operators must also be mindful of the product being distributed. For example Waitrose may choose a site closer to their core southern market whereas Morrison's may choose a site closer to their core market in the North. The centrality of the Golden Triangle provides access to both but it may be the difference in choosing to locate in Milton Keynes rather than Long Eaton.

As well as proximity to the consumer market operators must also look at the supply of labour. If the labour force is not readily available then this would result in higher operating costs. This would either require higher wages to justify travel costs or providing staff transport. Therefore as well as being on the strategic road network prime sites also have to have a readily available labour supply.

Figure 23 below illustrates the location of people employed in the distribution sectors (Postal, Warehousing and Wholesale). As shown almost all of the wards in the small golden triangle have at least 50 people employed in the distribution sectors. The same can be said of much of the wider golden triangle. There is therefore a plentiful supply of trained operatives within the sub region.

Figure 4.1: Employment Within Distribution Sectors (2015)



Source: NOMIS, 2016

Within Leicestershire there is a more plentiful labour supply in the western and northern parts of the county rather than the more rural eastern Harborough and Melton local authorities. These urban areas are therefore likely to be more attractive to operators.

Furthermore those areas around Charnwood and Leicester have lower employment rates than those areas further south (Coventry and Nuneaton and Bedworth excepted) therefore operators could access a larger latent labour force in these area. This advantage could extend into neighbouring areas with good transport links such as Blaby and North West Leicestershire. Although obviously the latent labour force may not necessarily be trained operatives.

Providing an Adequate Supply of Land

In discussion with local developers it would appear that delivery of additional warehousing space within the Leicestershire area is viable therefore the need for financial governmental support (central or local) is likely to be minimal if at all.

In order for Leicestershire to consolidate its position within the distribution market there is however still a requirement for local authorities to support the industry in terms of land availability and also be flexibility to their need and reduce bureaucracy.

Local authorities must ensure that there is a suitable level of available land. The re-freshed forecasts presented in Section 3 (and Scope B report) must be the starting point, noting again that these should be viewed as minimum requirements going forward in order that a geographical spread of commercially attractive sites is always available across the county; it is not a maximum cap or target. Ideally this land should be located adjacent to existing sites for agglomeration purposes. If this is not possible the supply should still cater to the needs of the industry. That would entail identifying cleared sites with excellent accessibility to the strategic road network and in particular a motorways junction.

Such accessibility will decrease the transport costs and allow large freight amounts (full loaded tracks) to reach their market in optimal times. It will also allow access to the labour market required for operation.

There are some general characteristics that make a site much more efficient and consequently profitable for the logistic companies. Sites should therefore be capable of hosting at least one but preferably multiple large sheds (+9,000 square metres).

Such sites will allow operators to take advantage of the new technology and digitisation in the production/operation process. They would also accommodate large yards that enable easy loading/unloading, circulation and temporary storage of HGVs is also sought after.

Many large warehouses also have supplementary uses on sites such as call centres, customisation and even production. In examining a planning application for such sites the local authorities should be flexible to such supplementary uses.

The local authorities could reduce bureaucracy in the industry by providing further policy guidance, such as Supplementary Planning Guidance (SPD) for the sector. They could also ensure that a significant suitable supply of allocated land is identified. They could even go to the extent of providing prior-approval for B8 use on certain sites.

7. SUMMARY AND CONCLUSIONS

This section of the report provides a summary of the key findings from the analysis detailed in the previous sections, alongside the main conclusions which can be drawn from the study.

Section 2 presented the existing supply of large scale logistics and distribution floor space capacity nationally and across the so called *'golden triangle'*. It showed that:

- *1,755 buildings* covering *33 million square metres* of warehouse floor space can be identified from the VOA Rating List database in England and Wales (as at November 2015);
- The East Midlands region hosts just over *6 million square metres* of floor space across 284 commercial properties (18% of total English and Welsh warehouse capacity). The average floor space per commercial property in the East Midlands is around 21,000 square metres, compared with the national average of 18,000 square metres;
- Just over 1.7 million square metres of large scale floor space is currently directly rail-served at SRFIs or other sites. This represents around 5% of the national total;
- The small golden triangle currently hosts just over 1.7 *million square metres* of floor space across 78 commercial properties (around 29% of the East Midlands regional total); and
- The wider golden triangle currently hosts just over 5.7 *million square metres* of floor space across 269 commercial properties (17% of total English and Welsh warehouse capacity);

Overall, the analysis provided further support to the conclusions contained in the Leicester and Leicester SDS, namely that the wider golden triangle has a distinct competitive advantage in this sector, in that it has attracted a quantum of warehouse floor space significantly above that which its population and wider economy would suggest.

The aim of *Section 3* was to 'sign post' future long term trends in the sector on a qualitative basis i.e. where future new-build demand can be expected, derived from a quantitative overview of recent trends in the strategic logistics and distribution sector nationally, and how this is likely to affect the golden triangle (including Leicestershire) over the long term. It concluded that:

- Increasing take-up of larger warehousing units nationally. In particular 2014 saw a peak of more than 5 million square metres transacted, and annual average take-up between 2011-16 equated around to 4 million square metres per annum. The data highlights strong and growing demand for warehouse/distribution space in recent years;
- The highest level of freehold take-up since 2000 has been recorded in East Midlands, with a total of 6.3 million square metres of transacted space, followed by the North West (5.4 million square metres) and the West Midlands (4.9 million square metres);
- One quarter of the recorded transacted floor space nationally took place within the wider golden triangle, highlighting that this is the prime market for strategic distribution demand

nationally. There have been 351 transactions accommodating 8.5 million square metres since 2000 in the wider golden triangle;

- Around 60% of the transacted stock in wider golden triangle and small golden triangle was built post-2000;
- The highest average space per transaction across Britain since 2000 is recorded in East Midlands, pointing to the region seeing some of the largest deals.
- Total supply in September 2016 (including build to suit opportunities) was 14.2 million square metres. The national vacancy rate is currently at 7.1%, significantly lower the long term averages, pointing to a shortage of supply at the current time. Almost 61% of the available floor space is either proposed or represents built-to-suit opportunities (plots with planning permission but not commenced). Existing and second-handed premises equal 33% of the advertised floor space. New stock comprises 3% of available property and similarly 3% is the stock currently under construction.
- Build-to-Suit is an important component of supply within the regional market.

Overall, the data clearly re-enforces the picture which emerged from the analysis in Section 2 and in the original Leicester and Leicestershire SDS.

Section 4 addressed the following issues alongside their likely impact on Leicestershire and its competitive position:

- Rail network and freight developments;
- The position of East Midlands airport;
- Government policy; and
- Changes in the industry and technology

The long term trend for containers moved by rail (intermodal, and containing cargo which passes through distribution centres) is one of steady growth to 2016; growing from around 1 million net-tonnes per month in 2006 to circa 1.8 million net-tonnes per month in 2016. It is now generally accepted that the development of SRFIs e.g. DIRFT, among other factors, has greatly contributed to this trend. Excluding coal, rail freight's market share grew by around 30% in the period 2006-2016, or around 3% per annum. Network Rail's Freight Market Study forecasts indicate a 45% growth in tonnes lifted to 2033. This equates to a 3% per annum growth in rail market share, and is therefore consistent with the 2006-2016 performance recorded (and which included a recession).

Taking into account the updated the position with respect to railway infrastructure upgrade schemes relevant to rail freight movements passing to and from the East Midlands, highway and other factors in spatial terms the various *Key Areas of Opportunity* identified in the Leicester and Leicestershire SDS (Part B and Final Report) remain valid. However, the associated railway upgrades will be delivered 5-8 years later than planned.

There have been no major changes in Government policy. Two recent publications, Network Rail's Freight Network Study and the DfT's Rail Freight Strategy, both reiterate the case for further development of rail-served strategic logistics facilities alongside continued investment in the capacity and capability of the railway network.

With respect to future land requirements at East Midlands airport, the Leicester and Leicestershire SDS (Part B) concluded that sufficient land is currently available within the airport boundary to accommodate growth forecasts. There have been no significant developments within the airfreight market since 2014 to warrant any new research or a re-fresh of this position. While the airport is a significant player in the express service sector and an important local direct employer, when placed within the context of the wider overall logistics market, it is a minor player both in terms of tonnes-lifted and employment.

Neither developers or warehouse occupiers are currently considering 'driverless' HGVs in their locational decision making. Consequently, it should also not currently factor in devising land use planning policy and investment decisions. What is more likely to be achievable over the next 10-15 years is so called '*HGV platooning'*. The DfT is currently consulting on the issue, and a stretch of the M6 near Carlisle has been earmarked as a potential test route. However, it is only likely to be feasible on motorways, meaning that the start and end of journeys would still be manually driven.

Section 5 considered optimum site characteristics. It broadly confirmed the conclusions contained in the Leicester and Leicestershire SDS with respect to site identification and selection.

Section 6 sought to seeks to examine the spatial advantages/disadvantages of Leicestershire from a commercial perspective. Again, It broadly confirmed the conclusions contained in the Leicester and Leicestershire SDS.

The key conclusion to be drawn from the above analysis is that the main findings contained in the Leicester and Leicestershire SDS remain relevant today. Leicestershire retains a competitive advantage in the strategic logistics sector. They key to maintaining that advantage is the continued development of new commercially attractive strategic sites within the priority Key Areas of Opportunity identified.

The analysis outlined in this document, the clarifications, conclusions and advice contained in the *Scope A* and *Scope B* reports alongside the recommendations in the Leicester and Leicestershire SDS should therefore be taken forward as part of any Strategic Growth Plan for Leicestershire.

APPENDIX

STUDY TERMS OF REFERENCE

Outline Sub Scope C

Outline of Further Consultancy Advice on Logistics and Distribution required to support the Strategic Growth Plan (SPG) to 2050

Casting aside the need for a forensic analysis of what already exists in the SDSS (might need to be updated) the questions that I would like to ask are:

C1 **<u>What is the supply of Logistics & Distribution floor-space?</u>**

- Nationally
- In the wider golden triangle
- In the smaller golden triangle
- Within Leicester & Leicestershire (Attachment 2 and 7 provided as background)

This should be categorised as:

- existing
- with planning permission
- at pre-application stage
- otherwise thought likely to be promoted
- All by quantum and location.

C2 **<u>What is the demand for Logistics & Distribution floor-space?</u>**

A qualitative overview of what's happening nationally and how this is likely to affect the wider golden triangle, the smaller golden triangle and Leicester & Leicestershire in the long term (2050).

Low, high and 'most likely' growth scenarios should be identified; quantitative forecasts for every region will not be required.

C3 **<u>What factors are likely to influence long term change (to 2050)?</u>**

- Government policy
- Changes in the industry
- Changes in technology e.g. driverless vehicles which removes the benefit of 4.5 hours' drive time (possible overlap with the above)
- How will these changes affect the competitive position of Leicester & Leicestershire?
- What are the implications in terms of employment density, type and skills required?

C4 **<u>How is Leicester & Leicestershire perceived in the market?</u>**

- What are the critical advantages of Leicester & Leicestershire?
- What are the critical disadvantages of Leicester & Leicestershire?
- How important is the airport as a generator of goods?
- How important are the Leicester & Leicestershire railway lines (in comparison with others nationally/regionally)?
- Is there capacity on the rail network for further movement of goods?
- Is it credible to assume that there will be a significant shift to rail? If so, how and when will this occur?

- How unique and important is the juxtaposition of road, rail and air infrastructure in Leicester & Leicestershire?

C5 What is the industry looking for?

- What kind of sites?
- Within the golden triangle do they have preferred locations?
- To what extent is it credible to assume that redevelopment can satisfy the modern requirements of the industry?

C6 If Leicester & Leicestershire were to target the Logistics & Distribution industry as one of its preferred growth sectors, how would it do so (in terms of making available land and infrastructure)?

- From an industry perspective what are the best locations?
- Who are our competitors?
- What are they doing to enhance their position?
- How credible is a position of resistance?
- When is 'enough, enough'.