West Midlands Strategic Employment Sites Study 2023/24

Final Report

Mace Ltd with Iceni Projects Ltd,
Knight Frank and MDS Transmodal

August 2024

AUGUST 2024

MACE LTD WITH ICENI PROJECTS LTD, KNIGHT FRANK AND MDS TRANSMODAL

West Midlands Strategic Employment Sites Study 2023/24 FINAL REPORT

Contents

1. Executive Summary 5

2. Introduction.....21

3. Policy and Evidence Review 32

4. Market Dynamics.....32

5. Modern Requirements for Sites – Market Feedback 84

6. Commitments and Allocations 84

7. Traffic Growth & Replacement Demand Model (Need for Sites).....99

8. Completions (Need for Sites) 123

9. Net Absorption - Need for Sites.....125

10. Need for sites – Conclusions and requirements by type and size 128

11. Areas of search: Site Identification and Site / Junction Assessment Methodology.....143

12. Recommendations on locations for growth.....170

13. Policy Recommendations 191

14. Conclusions.....191

Appendices

A1. Glossary

A2. Economic Context

A3. Commitments

A4. Completions

A5. Supressed Demand

A6. Units on Non-Strategic Sites

A7. Site Age Case Study

A8. Junctions within the Corridors of Search

A9. Junctions Omitted from Scoring

A10. Transport for West Midlands – Travel Time Isochrone Methodology

A11. Transport for West Midlands – Employment Catchment Methodology

A12. Local Employment Needs Summary Table

1. Executive Summary

1.1 Mace Ltd supported by Iceni Projects Ltd, Knight Frank and MDS Transmodal has been commissioned to undertake the West Midlands Strategic Employment Sites Study 2023 (WMSESS) published 2024. The commission is contracted to Dudley Metropolitan Borough Council with the client group comprising of the West Midlands study area local planning authorities and the West Midlands Combined Authority. The study area covers much of the central West Midlands as well as Shopshire but excludes Herefordshire and most of Worcestershire (see Figure 2.1) which are considered to fall outside of the main regional market. The steering group for the work has included representatives from a number of the local authorities in the West Midlands[1].

1.2 This is a study about strategic employment sites, intended to inform local plan making. Plan making can be challenging, involving decisions about how much and where to put development and the potential effects on greenfield / Green Belt land. However, this is ultimately a study about the West Midlands economy. For businesses to grow and for inward investment to take place, creating jobs and GVA growth, land needs to be available. Many modern businesses relevant to the logistics and manufacturing sectors require large, high-quality, environmentally sustainable premises that have often been lacking. Since the end of the regional planning and Regional Spatial Strategies it has been more challenging to bring forward large scale investment sites in the West Midlands and other parts of the UK. This report attempts to look across the next two decades and economic cycles (to 2045) to provide land

[1] North Warwickshire, Wolverhampton, Dudley, Birmingham, WMCA, South Staffordshire County, South Staffordshire, Solihull, Shropshire, Rugby, Bromsgrove. Other authorities within the study area were engaged with throughout the process receiving project update presentations and draft report for comment.

based recommendations which are designed to support the continued economic growth and success in the West Midlands.

1.3 The purposes of this WMSESS as defined by the brief includes to:

- Provide an updated position on currently committed strategic sites;
- Identify the need for large scale strategic logistics and manufacturing;
- Addressing modern industry's requirements - looking at sector (qualitative) requirements as well as quantitative, informed by regional priority sectors and discussions with agents and occupiers;
- Provide recommendations on the overall number and type of strategic sites required in the study area, including how many rail-enabled logistics sites / manufacturing sites are needed to attract large scale international investors; and
- Advise on the phasing and priority of broad locations / corridors for new strategic sites to meet forecast demand to inform Local Plan preparation.

1.4 A number of key definitions and interpretations of scope are used throughout the study. The most important of these is the definition of strategic units for manufacturing and logistics, being broadly recognised as above 100,000 sq.ft or 9,300 sq.m. The second is that of strategic sites, being typically of 25 ha and above. The reasoning for these thresholds is set out in the report.

1.5 The term 'West Midlands' is often used interchangeably with the actual study area which is not the whole region (see figure 2.1).

1.6 The study takes a policy off approach to assessing need / supply opportunities in terms of Green Belt but does acknowledge this as a delivery and Plan making constraint.

1.7 The headline messages of this study are as follows.

Market

1.8 This study considers current market conditions but has a ten year look back period, during which both manufacturing and logistics floorspace has grown considerably but particularly the latter.

1.9 The COVID-19 pandemic saw demand increase, driven by e-commerce, against an already strong trajectory. The market has now cooled towards the long term average.

1.10 Vacancy rates for large units have remained sub optimally low since 2014, putting pressure on rents and land values and reducing choice for business growth and inward investment. Whilst a restricted supply can have the benefit of supporting brownfield recycling, the market has typically been so over occupied that there is insufficient space to allow for redevelopment.

1.11 The market evidence points to a strong need for additional investment sites to be brought forward across the region to support growth.

Market requirements

1.12 Considerable cross sector engagement has been undertaken in developing this study. The key messages regarding strategic sites include:

- Generally logistics type inquiries make up approximately 75% of requirements compared to manufacturing, with e-commerce remaining a key occupier driver.
- Ageing stock renewal remains a major driver of demand.
- In terms if unit size, the average unit size demanded has increased – 9,300 sq.m (100,000 sq. ft) is no longer considered ‘big box’ with logistics occupiers looking at least 20,000 sq.m and many +100,000

sq.m. In general, manufacturing units are smaller than logistics i.e. 10,000 – 20,000 sq.m rather than +100,000 sq.m.

- Office space is an increasingly important element of the logistics units.
- Environmental sustainability is important to most major developers and occupiers. Meeting needs for modern space that have high ESG[2] requirements.
- Manufacturing specialist sectors include vertical farming, food and drink, medical, green tech, robotics aerospace, gigafactories, advanced automotive and modular housing building.
- Manufacturing space requirements are increasingly for generic B2/B8 industrial units that are not readily differentiated from distribution type B8 units, rather than for manufacturing plant development. There is uncertainty around plant-based investment (outside of gigafactories).
- There are mixed views from stakeholders on earmarking sites for manufacturing, with some not agreeing with imposing a B2 only use-class.
- There is consistently reported to be a need for an injection of supply to improve choice and allow for some churn, increasing vacancy and therefore renewal of sites and stock.
- Labour shortage is an issue for both manufacturing and logistics occupiers. Occupiers feel most comfortable where there is access to large pools of labour near main settlements.
- Up to three times more electrical power is needed than compared to 10 years ago due to the shift to automation. Move to electric HGVs will up the power requirement further. Manufacturers in the

[2] Environmental, Social and Governance – is a set of standards measuring a business's impact on society, the environment, and how transparent and accountable it is.

automotive sector require a significant amount of electrical power and therefore many sites are not suitable. Current power infrastructure is poor in many areas and is provided by the network provider on a first come first served basis.

Future requirements for strategic sites – quantum

1.13 This study uses three main models to assess needs, which are first assessed in terms of large units and then translated to large sites in sqm and ha. The key methods are:

- Traffic growth and replacement demand (MDS Transmodal): considering freight forecasts plus a replacement of older stock, adjusted for manufacturing inputs (as a proportion of total space);
- Completions trends: which risks under estimating future needs given historic undersupply;
- Absorption trends (change in space occupied reported via leases): which is similarly sensitive to past supply side constraints.

1.14 Several sensitivities and adjustments are made to these models to take account of:

- Suppressed demand – applied as a sensitivity on the net absorption scenario.
- Margin for flexibility.
- Relationship between strategic units and strategic sites.
- Recycling of sites.

1.15 Taking into account the steps above, the preferred needs scenario is in the range of 1,920- 2,282 ha, of which the completions trend model sets a minimum requirement at the lower end and the MDST Central scenario is at the upper end of the range. Of this total, the road need is 1,555-1,848 ha and the rail need is 365-433 ha. This is considered to

be the need for strategic sites across the West Midlands Study Area 2022-2045.

1.16 Accounting for existing supply, the residual need is **548-841 ha of land for road needs and from 67 ha to 135 ha for rail**, indicating a likely need for a new strategic rail freight interchange (SRFI) site within the study period.

Table 1.1 Supply-Demand Balance Summary (Ha)

	MDST	Completions
Forecasted Need 2022-45 with adjustments and margin	**3,354***	**3,080**
Strategic sites adjustment (-25%)**	2,516	2,310
Brownfield recycling adjustment* **	2,282	1,920
Adjusted Road Need******	1,848	1,555
Adjusted Rail Need******	433	365
Commitments [3]	1,305	
Road Shortfall	841	548
Rail Shortfall	135	67
Shortfall (Ha)	**977**	**615**

Source: Iceni Projects

*includes -20% recycling adjustment

**downwards adjustment of 35% for strategic units not on strategic sites and upwards 10% adjustment to allow for small units on strategic sites.

*** see chapter 10

[3] Of which 298ha is rail-served (West Midlands Interchange)

****Based on the MDST model road to rail split of 81% / 19%

Size of sites

1.17 As indicated, the minimum typical site size for consideration is 25 ha. Across a recommended road shortfall of 548-841 ha this is the equivalent of 22 – 34 sites of this size. However, it is common and anticipated that some sites will be 50 ha or more, which provides more viability in terms of infrastructure investment. At this scale, the range of sites required would be 11-17, which is still considerable.

1.18 SRFI sites tend to be of a much larger scale c.100-300ha due to the significant infrastructure requirements and lower plot ratio. The rail-served need of 67-135 ha therefore indicates a need for one SRFI site.

Manufacturing and Logistics

1.19 It is estimated that around 30% of land supply will be required by manufacturing and 70% by logistics based on ratios of stock, take up and market sentiment.

1.20 Current manufacturing dedicated supply at c.400 ha meets over half of the 500-600ha manufacturing need - but does indicate the potential for significant further need in manufacturing space over the next 20 years of up to 200 ha. Much of the further B2 need is likely to take place on general strategic sites, whilst recognising occupier specific challenges such as demand for freehold sites. There is some larger scale provision notably the Coventry Airport Gigafactory as well as JLR at Gaydon.

1.21 There remains a case for further dedicated E(g)/B2 areas (Class E(g)(ii/iii) / B2 with office as ancillary) with a number of issues reported in the need for and supply of B2 sites. This includes a preference for freehold sites which are not always available via the major industrial park developer portfolios. This would therefore require sites where infrastructure is provided but plots made available for sale most

commonly from under public ownership, as with i54 and Peddimore. More generally, manufacturers may be priced out of the land market.

1.22 Given the B2 concentration to the south of Birmingham, arguably there might be a case for more dedicated B2 investment area in the Staffordshire area notably Stoke / Stafford. There are already dedicated areas for investment here of a non-strategic scale.

1.23 Regarding mixed sites, including for both logisitics and manufacturing, there appears to be a considerable shortfall in space following several years of high demand. Of note the Coventry and Warwickshire area is responsible for around half of the current large general strategic sites supply (i.e. non B2), notably Coventry Gateway and Symmetry Park Rugby.

Testing area capacity

1.24 In line with the brief, work has been undertaken to consider the achievability of new strategic land parcels across the study area. Due to the scale of the geography involved, this has been a mechanical approach and does not attempt to provide definitive recommendations at the site level. This assessment has focused primarily on road based sites to test:

- Whether realistic land parcels exist to accommodate growth, and how they perform on a range of factors.
- How ‘junctions’ perform, including those where potential land parcels exist.

1.25 It is not intended that the capacity testing be published due to being commercially sensitive and concerns about contesting of results, which would not be beneficial given that the capacity testing does not directly inform the recommendations on 'broad locations for growth'. Detailed land parcel issues are expected to be explored through the preparation of local plans and through the consideration of individual planning applications.

1.26 It is **not** the intention that the junction / area capacity testing work be used to guide Local Plan strategy, because of the simplistic methodology used and the need to evaluate locations on their merits as part of a wider range of factors. It does however, highlight the potential of a wide range of locations to support new strategic sites.

Future requirements for strategic sites – locations for growth

1.27 Comparable studies elsewhere, notably in Leicestershire, used an 'Areas of Opportunity' approach, which derived areas of search from a combination of rail and road corridors. This is considered to be a broadly effective way in identifying appropriate growth locations across the whole of the West Midlands.

1.28 The approach to opportunity area (OA) development encompasses:

- Rail focused on a combination of appropriate gauge track, connections and highway network proximity.
- Road focussed on:

  I. The strategic highway network routes, given the centrality of this as an investment requirement.

  II. Contained in the main market areas, which reflect demand.

  III. Reasonable access to labour, which has focused the OAs around the urban areas rather than the highway network -

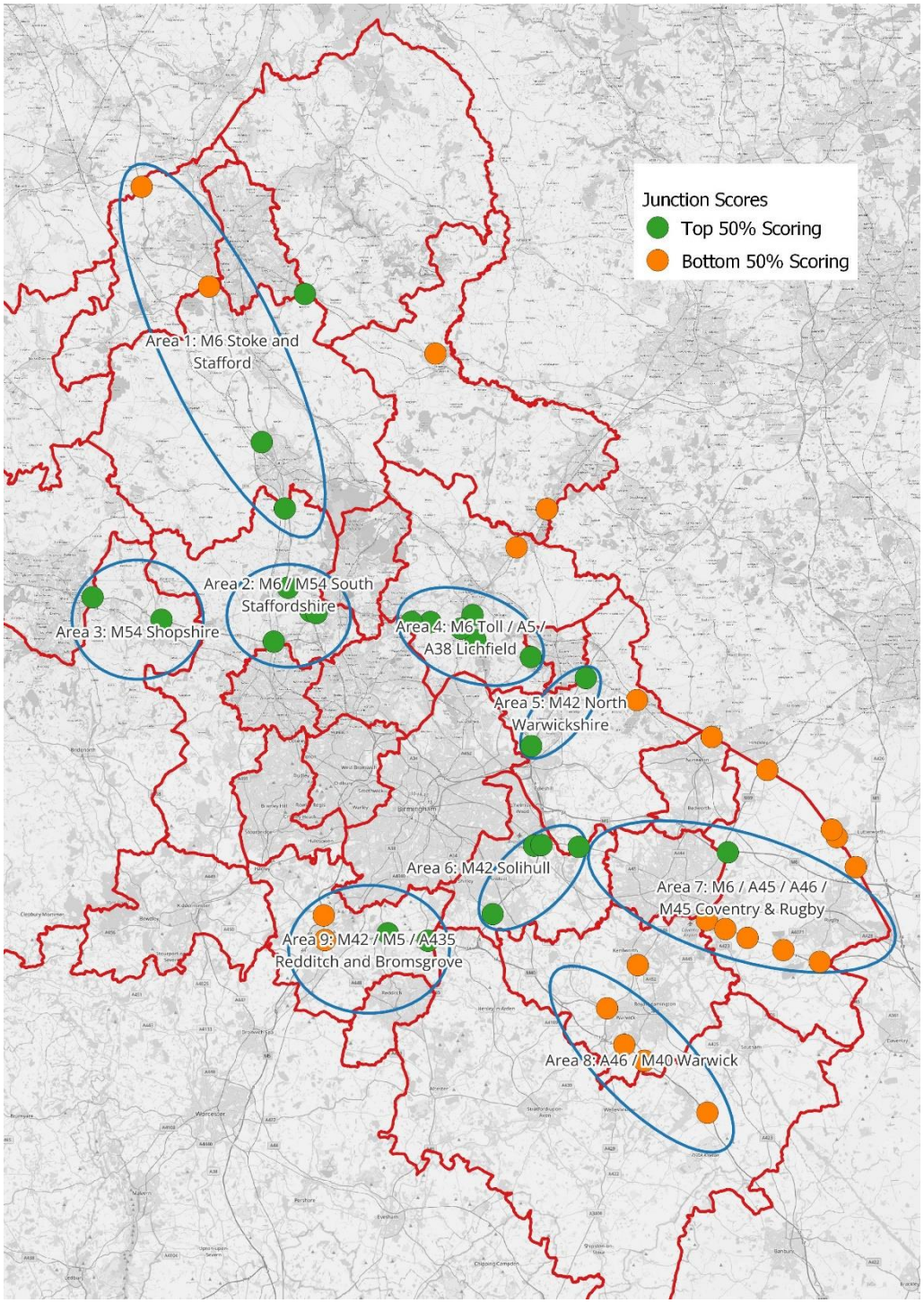
particularly for Coventry / Rugby and South Staffs / Stafford. This enables breaking down of some of the main highway routes into labour catchments.

IV. Reflects the junction assessment work undertaken – in terms of broad achievability of locations.

Road based Opportunity Areas

1.29 The 9 road based OAs are set out in the following diagram (which also identifies the junction assessment outcomes as previously noted). Half of the OAs ‘ring’ the Birmingham conurbation along the highway network, reflecting both its scale of economy, labour market and resulting market demand. Note the boundaries are not precisely defined or delineated.

Figure 1.1 WMSESS Road Opportunity Areas



1.30 These OAs are therefore considered to provide a guide on optimum locations for future (road based) strategic employment sites. This is not to say that sites will not come forward through allocations or applications in other locations, and where this is the case, they would still be considered to contribute to any 'need' at the regional level.

Indicative apportionment

1.31 To assist in guiding the apportionment of need by OA, a high level exercise has been undertaken to balance current commitments against past-take up rates, market attributes and other considerations of opportunity areas. This exercise is indicative as it will be for the Local Plan making process to identify the scale, suitability and achievability of sites and therefore the 'apportionment' strategy here is intentionally simplistic and high level.

1.32 The approach includes:

- A 'market rank' of ABC (high to low) which Knight Frank has advised on. This is based on market strength in terms of rents and take up. This reflects that in some areas demand will be very high, whereas others may struggle to deliver substantial quantum;
- Consideration of the size of the area of opportunity / number of LPAs within it, proximity to SFRIs and potential Green Belt constraint;
- Assessing current supply in years using past take up rates;
- Balancing the shortfall in supply against the market rank and other factors;
- Assuming a road need of 841 ha (upper bound);
- An indicative site count assuming 50 ha sites for mixed use sites and 25ha for E(g)/B2 sites (office as ancillary).

Table 1.2 Indicative Site Distribution by Opportunity Area (Ha)

	Notional supply – years (hatched areas = current committed supply)					Market rank	Indicative phasing	Indicative additional strategic site requirement at B8/mixed c.50ha – E(g)/ B2 c.25ha	Narrative – market rank / performance, scale (no. LPA), site supply, SRFIs, Green Belt
Opportunity Area	Type	0-5	5-10	10-15	15-20				
Area 1: M6 Stoke and Stafford	B8/ Mixed					B	C	2	Large OA. Market supply at present but potential for two sites through study period.
	E(g)/ B2						B	0-1	Has existing manufacturing focused supply – but non-strategic (sub 25ha). Blended sites may be preferable.
Area 2: M6 / M54 South Staffordshire and Black Country	B8/ Mixed (road)					B	D	1	WMI providing major strategic supply. Potential for additional road based supply later in the period. Constrained GB area.
	E(g)/ B2						D	1	i54 has existing supply but potential for extension later in period – not all take up strategic. Constrained GB area
Area 3: M54 Shopshire	B8/ Mixed					C	A	1-2	OA with demand overspill from Black County on M54. Part constrained GB area.
	E(g)/ B2						-	0	i54 expected to absorb demand.
Area 4: M6 Toll / A5 / A38 Lichfield	B8/ Mixed					B	A/B	1	Part GB constrained OA. A5/M6Toll route not established location.

	E(g)/ B2						-	0	Not established location, preferable alternatives.
Area 5: M42 North Warwickshire	B8/ Mixed					A	B	1-2	Part GB constrained OA. High demand established location. Supply requirement later in study period. Two existing SRFIs.
	E(g)/ B2						-	0	Existing supply at MIRA considered sufficient.
Area 6: M42 Solihull	B8/ Mixed					A	C	1-2	Constrained GB area. High demand location with good labour market proximity.
	E(g)/ B2						B	0-1	Anticipated market / occupier potential.
Area 7: M6 / A45 / A46 / M45 Coventry & Rugby	B8/ Mixed					A	C/D	1-2	Large OA. Highest existing supply. High demand location. Part GB constrained OA. Supply requirement later in study period.
	E(g)/ B2						C/D	1-2	Highest existing supply although Coventry Airport is a single occupier site that may shorten supply period. Further supply at Ansty Park. Potential to attract further investment.
Area 8: A46 / M40 Warwick	B8/ Mixed					B	A	1-2	Large OA. Existing supply is in Warwick but at Coventry, identified in Rugby/Cov. OA.
	E(g)/ B2						C/D	1	Existing JLR/AML supply concentrated for single occupier. Potential for further manufacturing agglomeration.
Area 9: M42 / M5 / A435 Redditch and Bromsgrove	B8/ Mixed					C	B	1-2	Large OA. GB constrained OA.
	E(g)/ B2						C/D	0-1	High manufacturing labour concentration. Existing supply but potential for further supply if take up increases.
Total	B8/ Mixed							10-16 (500-800ha)	
	E(g)/ B2							3-7 (75-175ha)	

1.33 The results above are indicative and are not intended to pre-empt any Local Plan processes. It is recognised that in some of the OAs it will be very challenging to deliver the level of supply indicated, given Plan processes and wider constraints including Green Belt. In reality, sites will be of differing sizes due to land constraints and wider policy considerations will influence capacity. However, the high level policy-off capacity work undertaken for this study does suggest that in broad terms that these numbers could be theoretically achievable.

Rail-based Opportunity Areas

1.34 Give the scale of rail-based requirements considered in the long term, it is likely that a new strategic rail freight interchange site will be required.

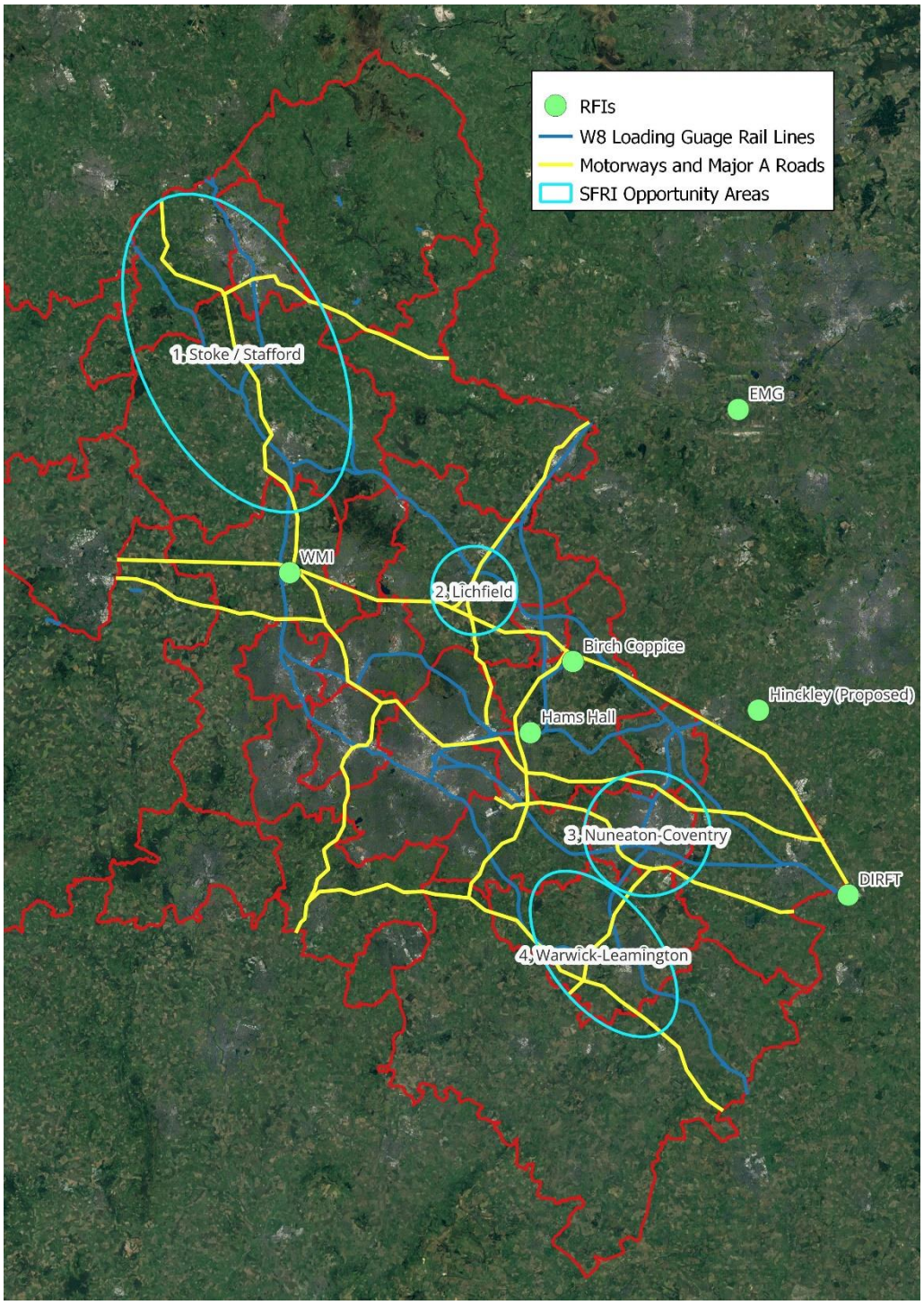
1.35 Identifying potential new sites to meet the forecast short-fall in rail-served land will broadly follow a two stage process, namely:

1. In the first instance, identifying broad areas of search, these being areas which will potentially contain commercially attractive sites that are suitable for accommodating SRFIs; followed by
2. Identifying and then assessing specific sites within the broad areas of search.

1.36 Broad areas of search across the West Midlands will be where appropriately freight gauge cleared railway lines coincide with the strategic highway network and are appropriately located for serving both the regional market (i.e. close to the main urban conurbations) and a national hinterland. This suggests four broad areas of search for new commercially attractive sites, namely:

- Stoke / Stafford;
- Lichfield;
- Nuneaton-Coventry; and
- Warwick-Leamington.

Figure 1.2 West Midlands SFRI Opportunity Areas



Policy recommendations and next steps

Relationship with EDNAs

1.37 It is not expected that the outcomes of this WMSESS will be readily reconcilable with local EDNAs due to the different methodologies involved and the influence of cross boundary working.

1.38 This WMSESS considers pan regional methodologies for 'need'. However urban areas including the Birmingham conurbation have constrained supply particularly for large sites, so findings for this WMSESS are likely to be higher than local or FEMA studies.

1.39 Where large sites are provided to meet 'locally derived' needs, they would be contributing to the strategic need simultaneously. As indicated here, this would be on extensions to existing large parks or new sites, ideally over 25ha, and meeting other criteria identified herein.

1.40 It is recommended that EDNAs do look to provide analysis and differentiation between larger unit and smaller units trends and requirements in the LPA or study area. It is also recommended that EDNAs look at both the issue of their strategic and non strategic sites, which can be identified via the characteristics noted elsewhere in this report.

Identifying, allocating and delivering strategic employment sites

1.41 The focus of bringing sites forward would be through individual local plans however authorities may elect to work independently on responding to the need or may choose to work at their local FEMA level (or other appropriate strategic geography) to consider most appropriate sites and balance of sites. The steps to develop and maintain a portfolio of strategic sites is recommended as:

- Undertaking a call for sites as a part of the Local Plan process, in the context of plans being reviewed at least every five years (NPPF para 32).
- The call for sites process may consider specifically identifying the need for strategic sites. These sites should meet the criteria set out I section 5, in summary being:
    - Good connections with the strategic highway network (for road)
    - Sufficiently large and flexible - ideally sites would be a minimum of 25ha and readily over 50ha
    - Is or can be served from an electricity supply grid with sufficient capacity.
    - Is accessible to labour and includes a clear sustainable transport solution for the local road network.
    - Is located away from incompatible land-uses
    - The ability to deliver high-bay warehousing
- These sites will need to be assessed through the Local Plan process to ensure that they meet the above criteria and other local sustainable appraisal requirements taking into account issues of landscape, biodiversity and network capacity.
- In Green Belt areas it may be necessary to consider testing alternative options and undertaking a review of the Green Belt.
- The benefit of operating at the OA or FEMA level will enable LPAs to develop a consistent narrative for duty to cooperate proceedings / memorandum of understanding and ensure they have a clear response to the overall recommendations.
- Progress sites through the Plan stages towards adoption.

Take up of land for non-strategic uses

1.42 It is recognised that in some instances large-scale strategic employment sites see the take-up of land for non-strategic uses, for example car-sales or other sui-generis operations.

1.43 Sites allocated specifically for B2 may be more vulnerable to such applications as these tend to take longer to achieve full occupation. Similarly sites in sub optimal locations which are less attractive to the market.

1.44 In part this highlights the importance of maintaining a good range of land across the plan portfolios to ensure choices for other non-strategic uses. This includes separate allocations for mid-sized and smaller industrial areas, more suited to diverse uses. These uses may also be less suited to the criteria needed for strategic sites, preferring proximity to population density and urban areas over the strategic network.

1.45 Allocations should utilise the B2, B8 and E(g) Use Classes including of note the E(g) sub division distinctly from broader Class E definition.

Monitoring

1.46 To effectively and consistently monitor the development of strategic sites across the West Midlands, it is recommended that data monitoring and collection are actively pursued beyond the individual authority level. The most useful area to be considered would be the regional level. This process has been effectively deployed in Leicester and Leicestershire.

1.47 The single most important aspect of the monitoring is the new supply through allocations and applications permitted (rather than completions data).

1.48 It is recommended that future updates to this work be commissioned at an indicative 5 year interval. This will enable:

- A review of progress on delivery

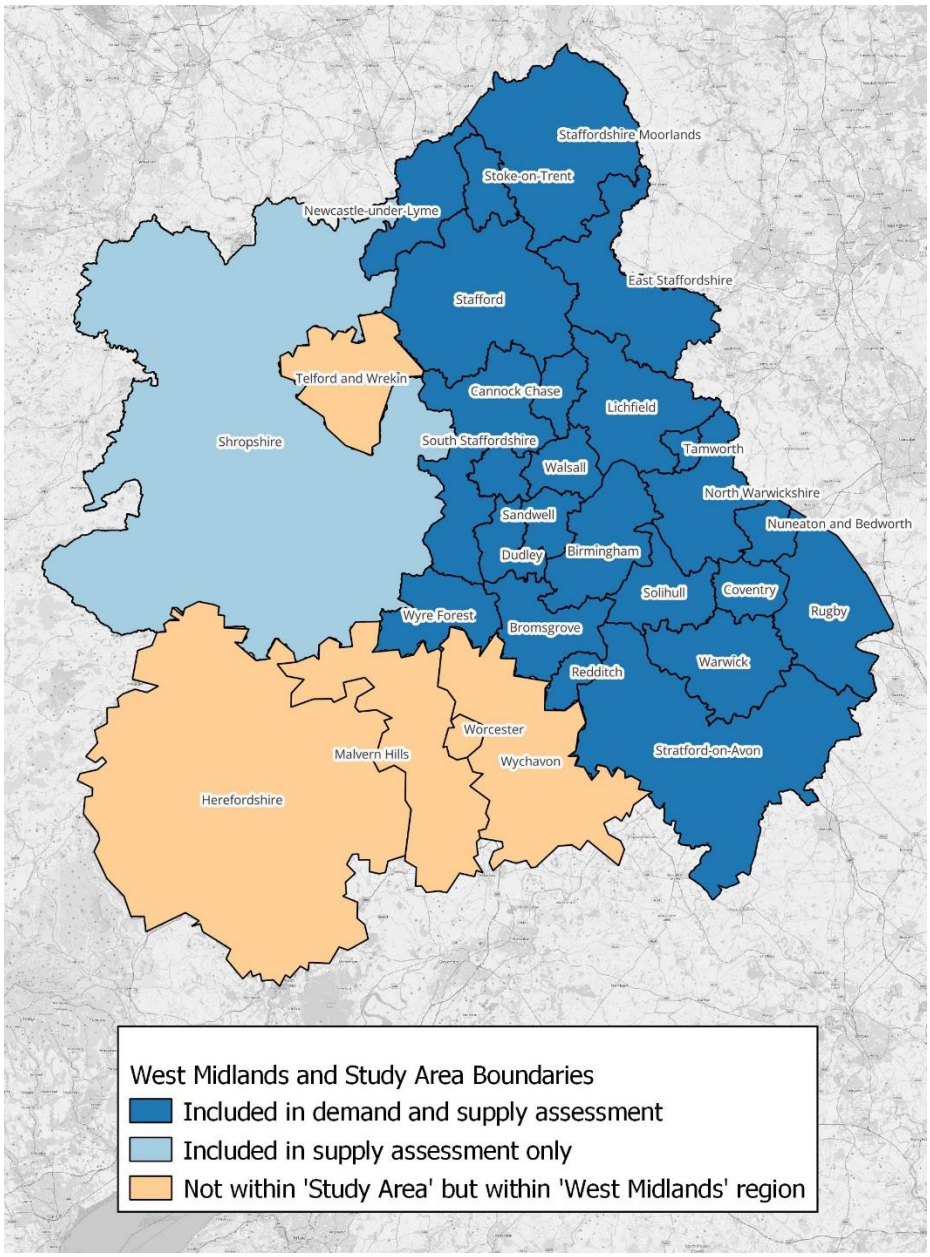
- An update to market conditions
- A review of future need including market take up, completions and traffic growth / replacement demand – the replacement component for which may be decreasing

2. Introduction

2.1 Mace Ltd supported by Iceni Projects Ltd, Knight Frank and MDS Transmodal has been commissioned to undertake the West Midlands Strategic Employment Sites Study 2023 (WMSESS). The commission is contracted to Dudley Metropolitan Borough Council with the client group comprising West Midlands study area local planning authorities and the West Midlands Combined Authority. The study area essentially covers the central West Midlands as well as Shopshire but excludes parts of Worcestershire and Herefordshire (see figure below). The steering group for the work has included representatives from a number of the local authorities in the West Midlands[4].

[4] North Warwickshire, Wolverhampton, Dudley, Birmingham, WMCA, South Staffordshire County, South Staffordshire, Solihull, Shropshire, Rugby, Bromsgrove. Other authorities within the study area were engaged with throughout the process receiving project update presentations and draft report for comment.

Figure 2.1 Map of West Midlands and Study Area



2.2 This is a study about strategic employment sites, intended to inform local plan making. Plan making can be challenging, involving decisions about how much and where to put development and the potential effects on greenfield / Green Belt land. However, this is ultimately a study about the West Midlands economy. For businesses to grow and inward investment to take place, creating jobs and GVA growth, land needs to be available. Many modern businesses relevant to the sector require large, high-quality, sustainable premises that have often been lacking. Since the end of the regional planning and Regional Spatial

Strategies it has been more challenging to bring forward large scale investment sites in the West Midlands and other parts of the UK. This report attempts to look across the next two decades and economic cycles to provide land based recommendations which are designed to support continued economic growth and success in the West Midlands.

2.3 The purposes of the WMSESS as defined by the brief is to:

- Determine and appraise the overall level of current provision and review the need identified in the 2021 Study[5], ensuring that this need is projected forward over a suitably long timescale that can support local plan reviews, and that further specificity is provided on where and how this need can be accommodated;
- Provide an updated position on the currently committed sites that exist in the study area;
- Identify the need for large scale strategic logistics and large scale manufacturing sites, acknowledging that employment forecasts and past take up rates on their own are not necessarily reliable indicators of future need and that a bespoke and defensible forecast is required drawing on best practice from elsewhere. This should be reflected as a range, making it clear what the underlying assumptions are;
- The study should acknowledge locally identified EDNA needs and advise where sites can be meeting both a local and regional need simultaneously;
- Addressing modern industry's requirements - looking at sector (qualitative) requirements as well as quantitative, informed by regional priority sectors and discussions with agents and occupiers;

[5] West Midlands Strategic Employment Sites Study – Avison Young, Arcadis, 2021

- Provide recommendations on the overall number and type of strategic sites required in the study area and in relation to identified opportunity areas within the study area, including how many rail-enabled logistics sites / manufacturing sites are needed to attract large scale international investors;
- The Study should review the criteria for the selection of strategic sites;
- Advise on the phasing and priority broad locations / corridors for new strategic sites to meet forecast demand to inform Local Plan preparation;
- The work should be informed by engagement with key stakeholders to understand the deliverability and suitability of the priority locations for additional provision;
- Additional policy advice should be provided regarding the take-up of land for non-strategic uses and on the practical mechanism for identifying, allocating and delivering strategic employment sites.

2.4 A number of key definitions and interpretations of scope are used throughout the study. The most important of these is the definition of strategic units for manufacturing and logistics, being broadly recognised as above 100,000 sq.ft or 9,300 sq.m. The second is that of strategic sites, being typically of 25 ha and above. Reasoning for these thresholds is set out in the report.

2.5 This study only covers manufacturing and logistics strategic employment sites and does not consider strategic offices or other employment types which may require other forms of employment land.

2.6 This study is evidence based and not a strategy. Whilst it makes recommendations it does not propose or supersede plan making or local plan allocations.

2.7 The term ‘West Midlands’ is often used interchangeably with the actual study area which is not the whole region (see figure 2.1).

2.8 It is important to recognise the predecessors to this WMSESS being the 2021 West Midlands Strategic Employment Sites Study[6] and 2015 West Midlands Strategic Employment Sites Study. Much of the context of the 2021 study remains relevant and in a number of instances this WMSESS cross refers to the 2021 study. Important differentiations between the two publications are the inclusions herein of (i) recommendations on the type and quantum of strategic sites to be required to 2045 and (ii) recommendations on broad locations / opportunity areas for strategic sites.

2.9 The contents of the study are as follows:

3. Policy and evidence review
4. Market Dynamics
5. Modern Requirements for Sites – Market Feedback
6. Commitments and Allocations
7. Traffic Growth Model (Need for Sites)
8. Completions (Need for Sites)
9. Net Absorption - Need for Sites (3)
10. Need for sites – Conclusions and requirements by type and size
11. Areas of search: Site Identification and Site / Junction Assessment Methodology
12. Recommendations on locations for growth
13. Policy Recommendations

[6] https://gbslep.co.uk/resource/report/west-midlands-strategic-employment-sites-study-%E2%80%93-final-report/

14. Conclusions

2.10 This work has involved considerable stakeholder consultation. The authors and commissioning parties are grateful to the stakeholders who have inputted. It is important to note that consultees in no way have endorsed the findings of the study nor had prior knowledge of the findings and recommendations as published. Main consultees included:

- Coventry and Warwickshire Chamber of Commerce
- County Highways: Warwickshire, Staffordshire and Black County - particular thanks for officer inputs regarding network capacity
- Federation of Small Businesses
- Hodgetts Estates
- IM Properties
- Invest in Warwickshire, Warwickshire County Council
- JLL
- Marches LEP
- Prologis
- Savills
- St Modwen
- Stoford
- Transport for West Midlands – particular thanks for technical inputs regarding modelling labour accessibility
- Tritax Symmetry
- Turley
- National Highways - particular thanks for officer inputs regarding network capacity
- Nurton Developments
- WM Growth Co

- WMCA (Economic Development and Delivery)
- Warwickshire Skills and Employment Service

2.11 The WMSESS technical work was primarily undertaken between March and November 2023. In October 2023 it was announced by Government that HS2 north of Birmingham was ‘cancelled’. As far as possible the findings have been updated to reflect this change, including implications for land availability and Government investment.

3. Policy and Evidence Review

3.1 This section contains a review of relevant policy documents that have been published since or were not covered in the previous study in 2021. Summaries of the following documents can be referred to in the West Midlands Strategic Employment Sites Study, 2021:

- WMCA Strategic Economic Plan (SEP) (2016)
- SEP Sector Review (2016)
- Midlands Engine: Vision for Growth (2017)
- The West Midlands Spatial Investment And Delivery Plan (SIDP)
- The West Midlands Local Industrial Strategy (2019)
- The Black Country Strategic Economic Plan (SEP) 2017
- The Staffordshire and Stoke on Trent Strategic Economic Plan (SEP) 2018
- The Coventry and Warwickshire Strategic Economic Plan (CWSEP) 2016
- The Greater Birmingham and Solihull Strategic Economic Plan (GBSSEP) (2016-2030)
- Constellation Partnership HS2 Growth Strategy
- Greater Birmingham HMA Strategic Growth Study (2018)
- The West Midlands Land Commission Study (2017)

Key Messages from the above Policy Documents

3.2 WMCA Strategic Economic Plan – 8 priority actions to 2030 include new manufacturing economy, environmental technologies, exploiting the economic geography. In order to achieve the vision, the strategy

includes creating conditions for growth, exploiting the area's world class innovation infrastructure and improving opportunities to meet local aspirations. The WMCA has an ambitious plan to deliver half a million jobs by 2030.

3.3 SEP Sector Review 2016 – Advanced manufacturing, logistics and transport technologies are classified as 'transformational' sectors, which are the key drivers for growth.

3.4 The Black Country Strategic Economic Plan 2017 – promoting the Black Country as a world class centre for advanced manufacturing and engineering and improving the quality of the key employment locations will build on the Black Country's position at the heart of the Midlands Growth Engine.

3.5 The Staffordshire & Stoke on Trent Strategic Economic Plan 2018 – the SEP is mindful of how industrial growth can benefit areas of the country which have clear potential, but risk getting over-looked in the city-devolution drive that government is pushing forward. The area has established two enterprise zones, which aim to become world class centres for advanced manufacturing.

3.6 The Coventry and Warwickshire Strategic Economic Plan 2016 – one of the key themes for the strategy is advanced manufacturing and engineering development. The aim by 2025 is that the area will be a 'high performing economy with our innovative businesses competing internationally, growing and providing better paid employment opportunities for all residents across both rural and urban areas'. The SEP notes that there is need to address the low stock and immediate pipeline of employment land and that there is a particular need for additional strategic sites that can accommodate the largest storage and distribution requirements.

3.7 The Greater Birmingham and Solihull Strategic Economic Plan 2016 - The Strategy notes the challenges that exist in relation to long-term housing and employment land capacity but highlights that there are

considerable commercial and residential opportunities to unlock across Greater Birmingham. In terms of potential strategic employment site opportunities, these include UK Central in Solihull, Redditch Eastern Gateway and Rugeley Power Station. The Strategy notes that some of these sites have outline planning permission and are investible, 'shovel-ready' opportunities that are primed to deliver jobs and growth. The challenge is to secure appropriate investment, and to ensure that in developing these sites, they meet the LEP's broader vision and that the focus is on delivering quality outcomes, rather than the easiest and fastest solutions.

3.8 In addition the remainder of this section covers:

- Draft National Policy Statement for National Networks 2023 (DfT)
- Future of Freight: a long-term plan 2022 (DfT)
- West Midlands Plan for Growth 2022
- East Birmingham Inclusive Growth Strategy, February 2021
- The Midlands HS2 Growth Strategy, 2021
- Staffordshire County Council: Economic Strategy 2023-2030
- WMCA – Recharge the West Midlands, June 2020
- Coventry & Warwickshire Sub-Regional Employment Market Signals Study 2019
- Leicester and Leicestershire Strategic Distribution Study 2021
- South East Midlands Warehousing and Logistics Study 2022
- South Warwickshire Economic Strategy 2023

Draft National Policy Statement for National Networks 2023 (DfT)

3.9 The National Networks National Policy Statement, (NPS) sets out the need for, and government's policies to deliver, development of nationally significant infrastructure projects (NSIPs) on the national road and rail networks in England.

3.10 There is a need to recognise the important role that all modes play in the transportation of freight across our transport networks, which is vital in achieving our economic goals domestically and internationally through facilitating effective and efficient movement of freight.

3.11 There is a need for long-term strategic action through government and industry collaboration, to bolster the operation of the freight network as a whole through improvements to infrastructure with multi-modal impacts.

Future of Freight: A Long-term Plan 2022 (DfT)

3.12 This Future of Freight Plan is government and the sector's joint response to the challenges facing the freight and logistics sector. The priority areas and actions include:

- **A National Freight Network** Challenge: Lack of visibility and understanding of the freight network as a cross-modal system... **Goal**: Government and industry collaboration securing a system-level approach to the freight network supporting end-to-end freight journeys that are more efficient, reliable and resilient. Full consideration of the role of freight in strategic infrastructure investment and planning.
- **Transition to Net Zero** Challenge: A cleaner, greener freight system will deliver opportunities, including cutting emissions and supporting high quality green jobs. The freight and logistics sector

has opportunities to lead the world in developing and rolling out zero emission solutions for freight, gaining global first mover advantages in some of the most challenging areas

- **Planning** Challenge: A disconnect exists between industry, that is not equipped to properly engage with planning processes, and local planning authorities, that are unable to understand the needs of a changing and innovative freight and logistics sector. This leads to increased complexity, cost and time for promoters bringing forward schemes that are in the national interest. **Goal**: A planning system which fully recognises the needs of the freight and logistics sector now and in the future and empowers the relevant planning authority to plan for those needs. **Actions**: Government and industry will deliver this by: Collaborating to support a programme of engagement with local planning authorities; Reviewing and amending Planning Practice Guidance; Publishing a freight specific call for evidence to understand what is working well and what requires improvement in planning; Engaging with a consultation on updated guidance for Local Transport Plans; Engaging with the review of National Networks National Policy Statement; and Engaging with the Department for Levelling Up, Housing and Communities programme of changes to the planning system.
- **People & Skills** Challenge: Immediate and future skills shortages across the sector could undermine resilience of UK supply chains. There is a need to: Produce a pipeline of talent across the freight sector by improving the training and employment options; addressing awareness and negative perceptions of the industry; and promote the availability of attractive, fulfilling jobs at all levels of the industry. **Goal**: The freight and logistics sector is seen as an industry of choice for talented, diverse, and skilled people at all stages of their career, so that the sector can meet the demand for the distribution of goods to, from and in the UK. **Actions**: Collaborating to deliver a programme of employer engagement and reforming the

Freight and Logistics training offers to encourage transferable qualifications.

- **Data & Technology** Challenge: There is limited awareness in the sector of innovative solutions coming to market, and of the sector's needs amongst innovators. Goal: Greater awareness of the sector amongst innovators and greater sector awareness of **innovations**. Accelerating the adoption of currently available solutions within the sector and developing the future pipeline in line with real-world needs.

West Midlands Plan for Growth 2022

3.13 This recognises that the West Midlands has suffered as a result of the Covid pandemic, Brexit disruption and supply chain difficulties, having had a disproportionate effect on the region because of its industrial base. The intention is to focus on clusters (rather than sectors) to support growth. The key clusters are:

- Manufacturing of electrical light vehicles and associated battery storage devices
- Health-tech and med-tech
- Aerospace (including manufacturing alternative fuels)
- Logistics and distribution
- Professional and financial services and supply chain
- Creative content production and gaming
- Manufacturing of future housing
- Modern and low carbon utilities

3.14 The levers of growth identified in the report are:

- Direct competitive funding as part of a business support system

- Develop future skills pathway
- Business location coordination and foreign direct investment
- Early growth fund
- Land assembly and infrastructure fund
- Transport and infrastructure fund

East Birmingham Inclusive Growth Strategy, February 2021

3.15 Following a baseline study conducted in 2017 to explore how to combat long-standing problems, East Birmingham and neighbouring North Solihull have been chosen as an Inclusive Growth Corridor, bringing together public sector organisations, businesses and the local community to deliver growth, to develop new approaches and better ways of working. The Council have adopted an Inclusive Growth Strategy to guide the delivery of inclusive growth in the area over the next 20 years.

3.16 The plan split East Birmingham into 5 areas including:

- Northern Industrial Corridor – includes major road connections (A38, M6 and S47 Heartlands Spine Road), key employment locations (Star City, the Fort Shopping Park, Fort Dunlop and Jaguar Land Rover)
- Southern Industrial Area – significant industrial area along the A45, Birmingham-Solihull railway and Grand Union canal, home to Tyseley Energy Park and many light manufacturing firms.

3.17 The high deprivation levels in the region are acknowledged, with more than twice as many people in the area being unemployed compared to the national average. Key areas influencing these figures include poor health amongst families, high numbers of young people ages 16-24 out of work, and the high number of local manufacturing businesses in the region offering poor pay and unfavourable terms and conditions.

3.18 To address the issues within manufacturing an ongoing investment into the Peddimore development of 71-hectare site for businesses and manufacturing uses is ongoing and likely to remove any poor pay offerings in the region, through offering 6,500 new jobs in the industry. Alongside the development of transportation links to increase accessibility to the wider region and surrounding areas, it is predicted HS2 will create 47,500 new and protect 70,000 existing jobs in the region, whilst attracting new businesses to region, and providing readily available travel routes for people to access wider employment options.

The Midlands HS2 Growth Strategy, 2021

3.19 Building on the original document submitted to the Government in April 2015, the updated Growth Strategy outlines key aspiration that the region looked to capitalise on following the construction of HS2, taking into account both short term and long term needs of the region, specifically the economic recovery plan following the effects of COVID-19. This updated strategy addresses areas of opportunity which have emerged over the past five years where public interest and social conscience have increased, such as; environment; growing regional economies; additional rail capacity, along with the opportunities this will bring.

3.20 The strategy combines three interlinking strands of people, business and place of which they believe will continue to draw on this economic growth through placing targeted action over the short, medium, and long term.

- People- Including jobs and skills, apprenticeships and the National College of Advanced Transport and Infrastructure.
- Business- Supply chain support for the construction of HS2 as well as the wider regional impacts of business growth and the necessary support that could be provided.
- Place – considering the station locations and how these could be developed to become destinations in their own right and the wider

‘connectivity’ that would link over 2m regional residents to the key growth nodes in this region within 45 minutes.

3.21 Alongside outlining the immediate short-term asks of the government to:

- Accelerate the ambitious development plans around the HS2 Interchange Station; Bring forward the creation of at least 16,000 net new jobs and 3,000 net new homes.
- Fast-track Birmingham International Connectivity Project (BICP); enable wider growth and investment on a global scale.
- Regenerate the Curzon Street/Digbeth area; boost the economy by £285m, create 24,800 jobs and upskill 3,000.
- Energise the area through Dudley Interchange; create 12,000 m2 of new facilities.

3.22 The revised strategy also highlights the significant increases in expected jobs as a result of HS2; initially planned to achieve 104,000 new jobs the revisions see an expected number of 150,000 with an extended target of 175,000, with a large mix of entry level to facilitate inclusive growth and high skilled roles. This is set to increase the population by 400,000 people by 2043, which has led to the housing target of 215,000 new homes for the region.

3.23 Long term effects of HS2 are set to ensure the region remains a primary destination for overseas investment following Brexit, through the infrastructure improving connections to key international gateways which includes Birmingham Airport. It is expected that this will to lead to further businesses being attracted into the region, which is supported by the agreement amongst HS2 and Birmingham City Council agreeing a target of at least 24 hectares of employment land being created within the region, with further targets expected throughout the development of the infrastructure.

Staffordshire County Council: Economic Strategy 2023-2030

3.24 This outlines the long-term plan in which the area will achieve economic growth between 2023-30, alongside meeting climate change targets which are set out within the County's Climate Change Action Plan. The Economic Plan is described as agile and policies within it are likely to be influenced by alternative strategies set out within the County such as; Rural Economic Strategy and Destination Staffordshire's Visitor Economy Action Plan.

3.25 The aim of the Economic Plan is to expand on previous successes of which the County wish to continue developing:

- Unlocking of Strategic Employment Sites: i54 South Staffordshire Enterprise Zone, Redhill, and the Lichfield South Park.
- Planning and delivering major infrastructure schemes to support growth including the Stafford Western Access Route and Lichfield Southern Bypass.
- The delivery of business support programmes.
- Creation of new high-quality business premises.
- Investment in skills and employability programmes.

3.26 Taking into consideration these previous successes the key priorities set out are:

- Town centre/high street regeneration
- Higher skilled, higher paid workforce
- Supporting start-up and set-up business
- Innovation
- Developing investment ready projects

- Strategic Corridors – A50/A500 and A38 improvements, road, rail and digital connectivity investment, become part of the Smart Energy region drive

3.27 The strategy acknowledges that over the next decade significant employment land is projected in the region due to the central locality of the region leading to investment in industry and infrastructure due to being an attractive place to live, work and invest. The development of the rail connected West Midlands Interchange site and HS2 are set to be huge contributors into increasing industry within the region which in turn will require further employment land.

3.28 Further projections for employment land are expected through the development of new green technologies in the region, which will aid and support a cleaner operation of goods around the country and beyond; in turn is expected to increase the numbers of highly skilled, high-paid jobs on offer in the region.

WMCA – Recharge the West Midlands, June 2020

3.29 The WMCA has produced an investment case for the government, which demonstrates their clear and credible recovery plan in which they outline how they plan to deliver for businesses, the economy, the environment, and people with a thematic focus on supporting people who have particularly been badly affected by the economic effects of COVID-19, through helping them to retrain and find jobs. The aim of their investment case is to seek immediate funding from the government which will total £3.2bn of investment over the next three years which will create or safeguard 135,800 jobs, support 154,000 young people and workers, and build 35,000 new homes through:

- Creating green manufacturing jobs:

- Building a new ‘Gigafactory’
- £65m innovation programme for automotive and aerospace companies
- Prototyping autonomous battery powered transport system and testing in Coventry
- Developing a network of EV charging stations
- Reducing fuel poverty through regional retrofit programme
- Decarbonisation of the Black Country.
- Maximise job creation for local people from HS2 and other unique West Midlands opportunities.
- Invest in healthcare innovation.
- Build better digital and transport links.
- Regenerate brownfield sites and build new homes.
- Supporting development and deployment of Advanced Manufacturing in Construction through Regional AMC Accelerator Fund
- Get people back into work.
- Offering retraining opportunities in logistics, business services and health and social care
- Support our region’s businesses.
- Investing in Advanced Manufacturing Excellence Programme

3.30 The strategy takes on the view that the region will use the outcomes of the COVID-19 pandemic as an opportunity to reset their economy to ensure it is more equal, inclusive and sustainable. By prioritising green growth, the region will address the economic fallout whilst building a climate resilient economy and work towards achieving their net zero commitments. This proposal is expected to unlock 51,700 green jobs with investment of £614m.

3.31 Further job creation is projected throughout the following focuses in the strategy:

- Major infrastructure is planned to be undertaken in the county, through maximising the value of assets and existing investments to unlock inward investment and growth.
- Providing targeted support for high-growth sectors to address such as data-driven health and life sciences, to improve health outcomes and reduce regional health inequalities – set to unlock 3,200 jobs over the next 7 years whilst creating more than 700,000 sq. ft of space for health tech.
- Improving connectivity via transportation links with the creation of HS2 – expected to create 4,200 jobs in construction.
- Tackle the immediate issues of unlocking stalled and difficult to deliver sites, whilst investing providing affordable homes, and inclusive growth – expected to create 35,000 additional new homes – of which over 20,000 are affordable.

Coventry & Warwickshire Sub-Regional Employment Market Signals Study 2019

3.32 The six local authorities within the Coventry and Warwickshire HMA, Warwickshire County Council and the Coventry & Warwickshire LEP commissioned the study to undertake an analysis and assessment of the market for employment land within the sub-region.

3.33 Manufacturing is concentrated throughout Coventry and Warwickshire, with the exception of Warwick District. It is noted that traditional manufacturing is more prevalent in the north of the sub-region, with advanced manufacturing concentrated in Coventry and the south.

3.34 Most of the sub-region's industrial economy is reliant on a resurgent car industrial sector and the growth of Jaguar Land Rover. However,

manufacturing demand and growth also covers transportation more widely (aerospace and rail).

3.35 Logistics is a significant sector in the sub-region in particular the more northernly districts of North Warwickshire, Nuneaton & Bedworth and Rugby, driven by road and rail accessibility, linkages to the ports and ability to access northern Europe.

3.36 Large scale B2 and B8 has enjoyed a prolonged period of strong demand with a limited supply of suitable Grade A buildings and prime employment land to meet the demand. There is a severe shortage of accommodation both in available, speculatively developed buildings and bespoke, pre-let opportunities.

3.37 Generally, the M1 / M6 corridors are considered to be ‘peak’ areas for ‘big box’ accommodation. Other motorway corridors (M40, M42, M69 and M45) are not as ‘hot’ but nevertheless performing well. For distribution operations, companies are requiring locations immediately adjacent to motorway junctions.

3.38 The majority of large-scale transactions occurred in Rugby, with some large deals in Coventry and Warwick – the size of the market is smaller in the other three districts.

3.39 High occupier take-up and limited supply has resulted in the rise in prime rents for well-located, high-quality, modern, accommodation. Those who deemed the rents unaffordable relocated to secondary markets. This may become more common in the long-term if the supply of good quality space is not increased to meet future demand. Due to the lack of properties, occupiers tend to stay put, limiting the healthy level of churn in the market and preventing business growth.

3.40 Requirements of manufacturers often include the need for substantial distribution floorspace as an integral part of their operation, therefore the distinction between use class B2 and B8 is not always feasible.

3.41 The high level of demand means that there are few ‘move-on’ situations, which in turn is restricting business churn and therefore the release of premises into the market. There is evidence of large-scale occupiers unable to find space in the region, who therefore look further afield.

3.42 Occupier challenges in the logistics sector include a need for:

- Reasonable cost locations
- More readily available labour
- Sufficient power to sites
- Increased supply of both warehouse and office space premises with large external yards
- More thought to be given to the design of sites close to existing residential developments or where a residential development is likely to take place in the future

Leicester and Leicestershire Strategic Distribution Study 2021

3.43 This study looks at the 2020-41 need for largescale logistics across Leicester and Leicestershire. The study builds on previous iterations of the work dating back to 2014.

3.44 The principal modelling techniques in the 2021 report used to forecast space for large scale logistics to 2041 are past completions trends (2011-2020) and a traffic growth with replacement demand model, alongside a margin of 5yrs completions. North West Leicestershire notably drives the completions trend reflecting units at East Midlands Gateway and Distribution Centre.

3.45 These two models demonstrate a good level of alignment in terms of providing recommendations for long term needs which amount to 2.6m

sq.m, derived of 1.1m sq.m of rail served sites and 1.5m sq.m of road served sites.

3.46 A map of Key Areas of Opportunity is provided indicating general areas of development potential The report identifies the most central drivers for change in the sector as decarbonisation and e-commerce.

3.47 In terms of labour and skills, the study indicates there is likely to be a shift away from the focus on warehouse floor staff (50% of sector employment) to around 30% in the future. This is expected to be paralleled by a rise in office and technical skills, able to manage and service robotics and support back office e-commerce functions.

South East Midlands Warehousing and Logistics Study 2022

3.48 This study was commissioned by the South East Midland Local Economic Partnership (SEMLEP) on behalf of its constituent local authority partners to consider the future demand for strategic logistics premises and its potential implications for the local economy.

3.49 **Drivers of change in logistics:**

- Growth of E-Commerce - Just under 30% of retail sales (by value) are now undertaken via e-commerce platforms; they were below 4% in 2007. This trend is likely to continue. The National Infrastructure Commission (NIC) noted in its 2019 report, Better Delivery: The Challenge for Freight, that e-commerce could reach 65% of all retail sales by 2050. Many older warehouse units cannot accommodate the equipment and facilities required for online sales, or the ability to handle distribution to retail outlets alongside direct to home e-commerce deliveries under the same roof.
- Warehouse Automation - Automation is being driven by the growth in e-commerce, with the consequent need to pick, pack and label ever increasing volumes of goods. Automation is required to run the

operation speedily and efficiently. A second driver is the increasing difficulty in recruiting labour at competitive rates of pay. Many new warehouse developments are therefore being designed and built with potential for automation from the start - in some cases these new developments are replacing existing physically sound capacity that cannot accommodate automation.

- De-carbonisation - de-carbonisation is essential and is occurring in some parts of the logistics sector. Modal shift to rail, particularly for medium to long distance flows, is likely to form an important component in de-carbonising the supply chain. For smaller road freight vehicles (i.e. LGVs), battery-electric vehicles (BEVs) are now emerging as the viable zero emission alternative to petrol- or diesel-powered vans. Electrifying HGVs will be more challenging, and potentially require alternative green fuels.
- Power and sustainability - the demands for electricity driven by automation and BEV charging are significantly increasing the power requirements for logistics units. The sector's response is at the vanguard of sustainable development, reflecting both the ESG (environmental, social, and governance) agenda of businesses and shareholders to move to zero carbon, as well as the difficulties in accessing sufficient power from the distribution network.

3.50 **Logistics skills & employment** - the British Property Federation's (BPF) Levelling up - The Logic of Logistics published in 2022 argues that the sector 'is subject to continuing misconceptions about average pay and skill levels'. The BPF reports substantial growth in technical and professional roles (+331,000) over the last decade. Managers / senior officials employment has declined, with otherwise relatively stable employment in most occupations. Process and plant operatives remains the largest occupational sector.

3.51 In the SEMLEP area job postings in the logistics sector over the last 3 year period (to 2021), according to Labour Insight, report a rise in all logistics occupations. Data examination reveals that in 2021, 65% of job

postings accounted for technical roles (i.e. non drivers and handlers / warehouse associates). This includes over 700 project managers, over 600 sales managers, over 500 supply chain analysts, over 500 software developer / engineers and over 200 jobs in computer support. This demonstrates the increasing demand for skilled employment in the sector - alongside elementary and driver roles.

3.52 **Need and supply:** Three models are used for estimates of future warehousing demand: Traffic growth with replacement demand; Completions trend; and Market signals. After taking into account the supply (including at DIRFT) and other factors, a shortfall of 237 ha to 576 ha is identified.

3.53 The study provides detailed recommendations on appropriate locations for future development for logistics including: connections with the strategic highway network; sufficiently large and flexible sites; power supply; accessible to labour, and being located away from incompatible land-uses (including residential).

South Warwickshire Economic Development Strategy 2023-28

3.54 The strategy aims to co-ordinate economic growth activities across South Warwickshire and highlight the area's significance contribution to the wider regional and national growth plans.

3.55 The sub-region is a world -class centre for advanced manufacturing and engineering. Martin Lagonda, Jaguar Land Rover and Lotus Engineering all have a major presence in South Warwickshire particularly at Gaydon (where Aston Martin has its global headquarters). In Stratford-on-Avon District, manufacturing (of which the automotive sector forms a significant part) is the largest sector accounting for over 40% of GVA.

3.56 Part of a Government programme to fast-track the development of cost-effective, high-performance, durable, safe, low-weight and recyclable

batteries, the UKBIC provides the missing link between prototype battery technology and successful mass production. UKBIC has been delivered through a consortium of Coventry City Council, CWLEP and Warwick Manufacturing Group/University of Warwick (WMG). The Energy Innovation Centre as part of WMG at the University of Warwick's Science Park is undertaking ground breaking research and development into battery technology.

3.57 **West Midlands Investment Zone –** WMCA region and Warwick district in particular have the prospect of the development of an Investment Zone – the Giga Park in Coventry and Warwick is proposed as one of the three regions to receive tax benefits.

4. Market Dynamics

4.1 This chapter provides an assessment of the manufacturing and warehouse/logistics commercial market in the West Midlands, focused on strategic units of 9,300 sq.m / 100,000 sq.ft as at spring 2023.

4.2 The assessment combines quantitative analysis with qualitative research and interviews to build up a picture of the level and nature of demand. The quantitative analysis uses CoStar – one of the UKs largest subscription service providers of commercial property data - and data provided by Knight Frank.

4.3 The broad context for the review at 2023 is one that follows a period of unique and exceptional demand for notably logistics premises in 2020-2022, driven by the COVID-19 pandemic and the resulting unprecedented demand for online retailing. Into 2023 these demands have eased, with a range of factors including the war in Ukraine, the autumn 2022 Mini-Budget, persistent high UK inflation and global economic headwinds all influencing demand side factors.

4.4 Given the need to consider trends to 2045, this review considers both the current context but also the longer term historic and underlying factors that influence demand for large scale premises and sites.

4.5 It is broadly recognised that commercial markets require between 5-10% vacancy (and/or availability, being space advertised rather than physically vacant) for equilibrium, stabilising rents and enabling firms to grow or inward investment to occur. As seen below, across the West Midlands industrial vacancy has typically been below 5% since 2014, a key indication of the ongoing demand / supply imbalance for sites.

UK Warehouse / Industrial Market Overview Spring 2023

4.6 CoStar reports in April 2023 that “the tailwinds that propelled record occupier and investor demand for industrial property through the height of the pandemic are fading amid high inflation and interest rates. However the sector is expected to continue to benefit from the structural shift towards e-commerce and emerging industries like green energy, which should support leasing activity and provide investors with ample opportunities. Pure play online retailers[7], 3PLs (third-party logistics) and parcel operators have nonetheless been less active in recent months amid the ongoing cost-of-living squeeze. Demand for warehouses from traditional retailers has also cooled down lately.”

4.7 Furthermore “most industrial landlords believe that the sector remains in a strong place. Net absorption [occupier space move ins minus move outs] has outweighed deliveries for much of the past decade with vacancies near record lows at 3.4%. Owners of newer and more energy-efficient schemes are particularly well positioned to take advantage of the relative undersupply of such product. Warehouses with the strongest green credentials are widely expected to outperform from an occupier demand and rent perspective in the months and years ahead. Manufacturers have stepped up leasing, with green energy firms particularly acquisitive of late.”

4.8 In terms of rent, CoStar states “sector-wide rent growth has begun to ease from record levels as vacancies have inched up and as occupiers face growing cost pressures in a subdued economic climate. Rents are expected to keep growing, however, with elevated build costs and rising yields likely to act as a brake on new construction moving forward… Newer and greener warehouses are particularly well-positioned as occupiers increasingly consider ESG issues. Analysis of BREEAM ratings shows a rent growth ‘green premium’ of more than 200 basis points for industrial properties rated Very Good, Excellent or Outstanding.”

4.9 Turning to construction, CoStar states "industrial construction activity remains elevated. A near record 73.7 million sq.ft (6.8m sq.m) is underway across the UK, which is likely to cause vacancies to rise, though not to such an extent that market conditions tip in tenants' favour. Nearly half of all schemes that broke ground last year were speculative, equivalent to roughly 30 million sq.ft (2.8m sq.m). The East Midlands and the East of England continue to account for an outsized share of new development (around 50% of deliveries). ESG refurbishments of older warehouses remains a key development theme. Over 100 big boxes have been renovated since 2020… Other development trends worth monitoring include repurposing and multi-level warehousing, though examples of such projects remain minimal."

Knight Frank Logic Midlands - Q1 2023

4.10 This report covers both the East and West Midlands.

4.11 Knight Frank report[8] that the opening quarter of 2023 recorded 2.2 million sq.ft of occupier take-up in the Midlands region (units over 50,000 sq.ft), 41% lower than that recorded in Q1 2022. Demand for larger sized units has been holding up; while take up for Q1 2022 to Q1 2023 is one-third lower, at 13.5 million sq.ft, units over 250,000 sq.ft comprise 60% of this volume, up from 56% the previous year.

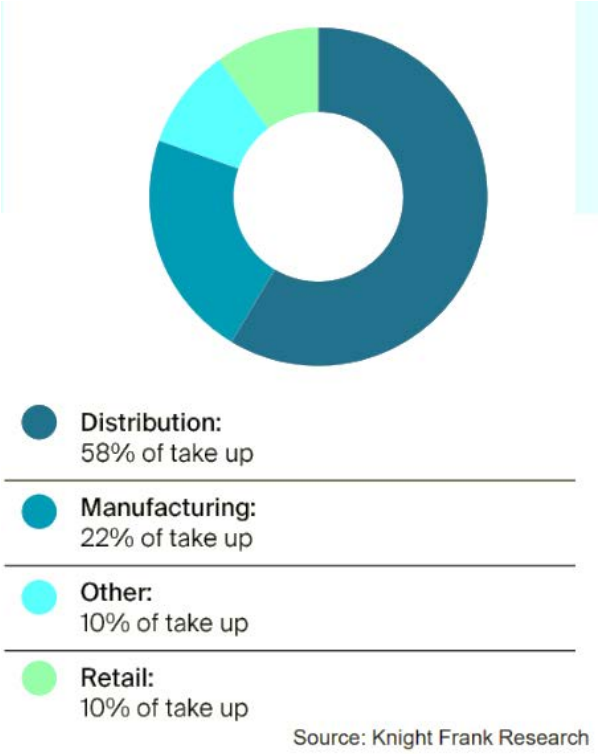
4.12 Knight Frank report that take-up continues in 2023 to be dominated by distribution firms, comprising 58% of annual take up. Manufacturing occupiers have been increasingly active, with activity growing by 18% year on year and accounting for 22% of the annual total, compared with

[7] Companies that transact exclusively via e-commerce and have no brick and mortar retail spaces

[8] https://content.knightfrank.com/research/489/documents/en/logic-midlands-q1-2023-10132.pdf

12% the previous year. Retailers have been notably less active, accounting for 10% of the total, compared to 41% the previous year.

Figure 4.1 Midlands Take-up by Sector (Q2 2022 – Q1 2023)



4.13 Knight Frank report that an additional 8.1 million sq.ft of speculative development was underway at end-March 2023, 10% lower than the previous year. Despite rising completion levels, fewer speculative developments are commencing construction, which may be due to the rise in development and financing costs.

4.14 Demand for new, high quality space remains steady, with build-to-suit and new, speculative buildings accounting for 80% of Q1 2023 take-up.

4.15 Key Midlands deals include:

- Syncreon Technology – 595,000 sq.ft at Segro Park
- Hankook Tyre UK – 357,221 sq.ft at Apex Park, Daventry
- DSV Logistics – 315,000 sq.ft at Mercia Park, Appleby Magna

West Midlands Logistics market July 2023 – Savills

4.16 Savills report[9] that supply has increased with an influx of 'grey space'[10] which now accounts for 31% of total available space. The level of supply within the region currently stands at 5.8m sq.ft across 27 units, representing a 123% increase from the period in the previous year. Despite the rise, the vacancy rate is in line with the long-term average, and when using the three-year average annual take-up there is only 0.72 years worth of supply.

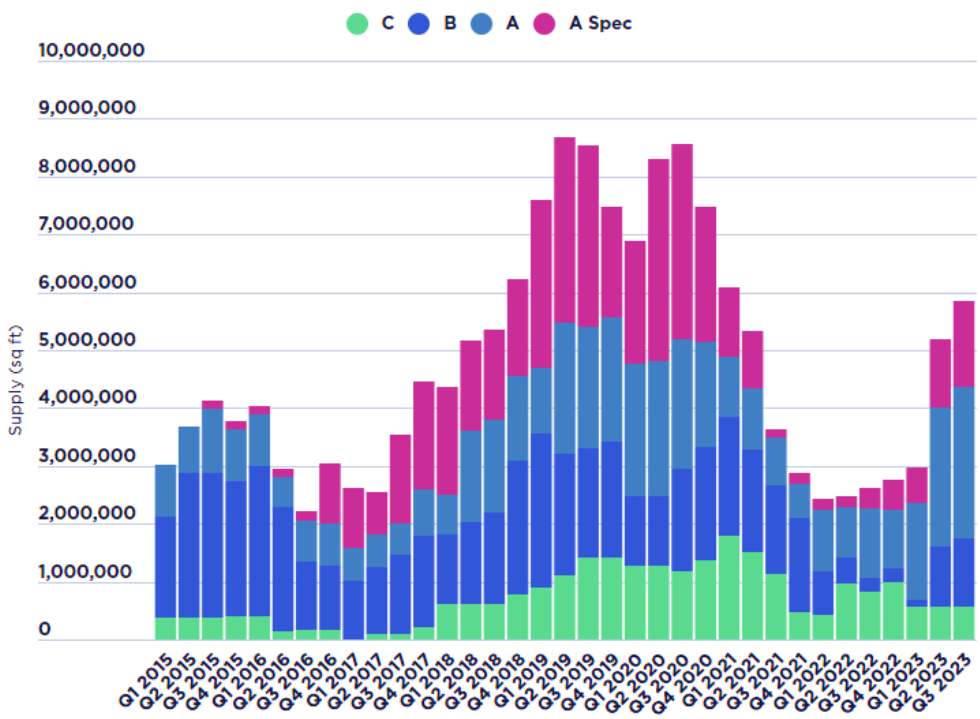
4.17 Of the available stock, 25% is Grade A[11] speculatively developed, 45% Grade A second-hand space, 20% Grade B and 10% Grace C. As of July 2023, 20% of the available supply is under offer and set to exchange in Q3 2023 – bringing the vacancy down to 4.86%.

[9] https://www.savills.co.uk/research_articles/229130/349339-0

[10] Floorspace which the tenant decides to vacate during the lease period and remarket

[11] Grade A: high quality infrastructure, high sustainability credentials; Grade B: visible signs of aging but still good quality and functional; Grade C: low quality, poorly located, require significant repairs/renovations, poor amenities

Figure 4.2 Supply by Grade (sq.ft)



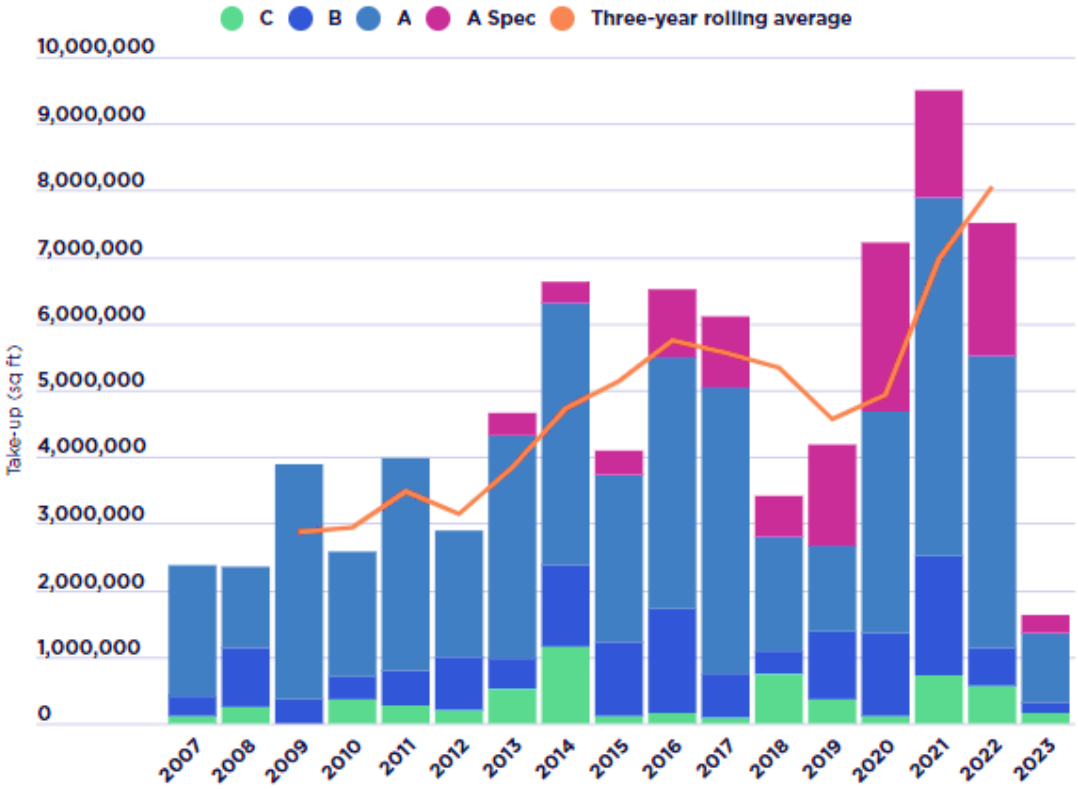
Source: Savills Research

4.18 Savills report that 2023 take-up has reached 1.6m sq.ft across 8 transactions, with an average deal size of 202,727 sq.ft. The vast majority, when analysing the take-up trends by grade, still is good quality space, with 81% of take-up being Grade A quality, 9% Grade B, and 10% low-quality Grade C space.

4.19 Deal counts demonstrated the preference towards smaller ‘big box’ units with 88% of deals were recorded within the 100,000–200,000 sq.ft size band and 12% in the 500,000 sq.ft+ size band.

4.20 Grocery retailers have dominated activity in 2023, accounting for 41% of the total take-up (Sainsbury's acquiring Rugby 661), followed by wholesalers at 30% and 3PLs at 23%.

Figure 4.3 Take-up by Grade (sq.ft)



Source: Savills Research

4.21 At the national level, for 2023 Savills report[12] that demand from manufacturing-related occupiers continues to rise as companies look to de-risk their supply chains, although we [Savills] view this trend as more of a slow burn given the complexities of changing global manufacturing supply chains.

[12] https://www.savills.co.uk/research_articles/229130/349347-0

Warehouse / Industrial Midlands Overview – Birmingham, Coventry and Shropshire and Staffordshire Markets spring 2023 (CoStar)

4.22 CoStar made the following statements about the three industrial markets in April 2023:

4.23 "**Birmingham** is a well-established regional industrial centre, historically defined by engineering, manufacturing and the automotive industry. Thanks to its easy connectivity to the rest of the UK, the area has attracted increasing numbers of online retailers and delivery specialists in recent years. Net absorption turned negative towards the end of 2022 due to lack of new supply and slowing occupier demand, exacerbated by rising occupation costs and supply chain issues. Logistics space continues to be in demand in the Birmingham Core industrial submarket, attracting several occupiers with its connectivity and good quality stock. Rent growth in Birmingham has begun to slow alongside weakened occupier demand and rising costs but remain positive. Speculative development remains on the smaller side with no units larger than 80,000 sq.ft under construction, meaning that for occupiers with larger requirements, build-to-suit remains the only viable option."

Figure 4.4 Map of Birmingham CoStar Market

Source: CoStar

4.24 "**Coventry** is one of the most important industrial markets in the UK and the target of much industrial investment in recent years, Alongside Northampton and Leicester, Coventry sits within the 'Golden Triangle' [M6 / M1 / M42] at the heart of the motorway network. Thanks to its connectivity to the rest of the UK, the area has attracted a number of online retailers and delivery specialists in recent years, pivoting away from its manufacturing past. Supported by robust demand, rents in Coventry continued to expand at a rapid rate in 2022. Current projections are for rental growth to moderate in the near term. Rising construction and operating costs are putting downward pressure on rents. Leasing volumes reached a 10-year high with more than 5 million sq.ft transactions. Leasing outperformance in Coventry was driven by an abundance of large-scale big box lettings to 3PL occupiers. Big box leasing in 2022 increased by 100% on 2021 levels."

Figure 4.5 Map of Coventry CoStar Market

Source: CoStar

4.25 "Straddling the M6 and M54 motorways and servicing the Birmingham and Manchester conurbations to the south and north, respectively**,** **Shropshire & Staffordshire** is an important industrial market and a strategic location for logistics operators. Retailers such as B&Q, Tesco and Sainsbury's and online players such as Amazon and Ocado have significant distribution and fulfilment centres located here. The industrial sector proved to be the more resilient of the main property types in recent years fuelled by the growth of online retailers and third-party logistics providers. Although market conditions remain strong, demand faces headwinds from rising operating costs and a pullback in consumer spending, which is reflected in the slowdown of leasing activity. Development is being facilitated by public-led investment in road infrastructure and employment land sites, especially along the M54, A5 and A41/49 corridors. Industrial rents have grown strongly over past 5 years, thanks to robust occupier demand and low vacancies. For

occupiers with large requirements over 100,000 sq.ft build-to-suit remains an option, although there are two speculative units +300,000 sq.ft under construction in Staffordshire.

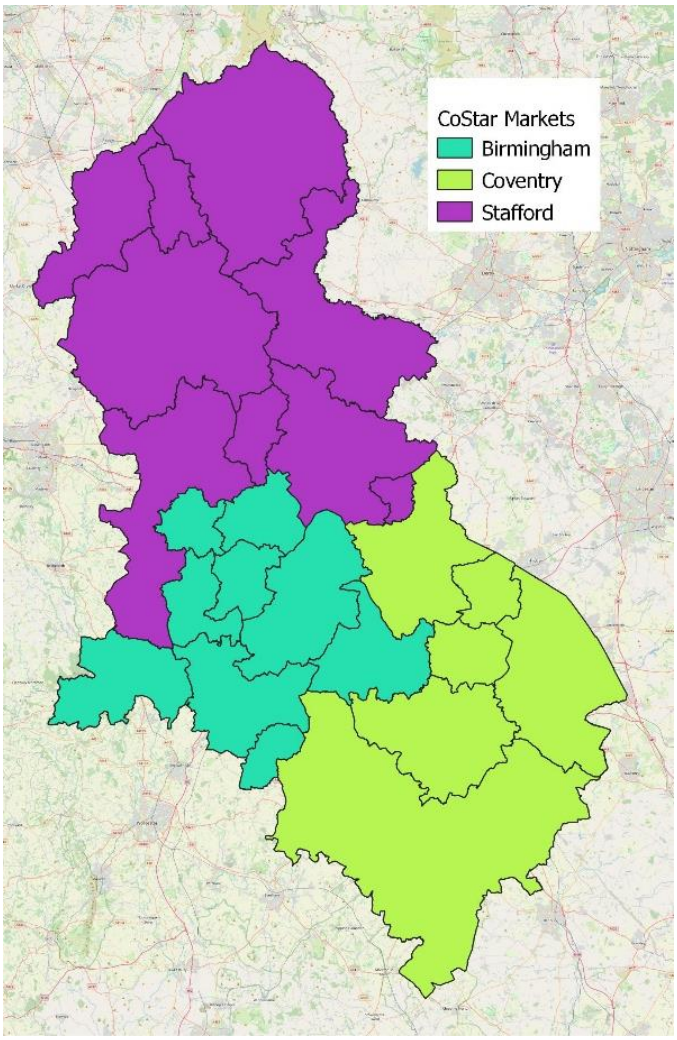
Figure 4.6 Map of Shropshire & Staffordshire CoStar Market

Strategic Floorspace Context

4.26 As noted previously, the focus of this assessment, is on “strategic” units over 9,300 sq.m (100,000 sq.ft). This floorspace has been split into manufacturing (B2) and logistics (B8) uses using CoStar’s secondary use classification. This classification will not be completely accurate as the classification is based on the occupier's primary use and does not always take into account the planning use class permission, or for example the fact that some manufacturing companies have a storage and logistics component. Furthermore, the CoStar data (both overall and by segment) will differ from that for the Valuation Office Agency (VOA) which is used by Government to capture business rates. The are a number of reasons for the discrepancies including that CoStar is transactional based and therefore owner occupier units may be inadvertently excluded or similarly

those leased units where transactions have not taken place in many years or deals not recorded.

Figure 4.7 Map of Broad Market Areas



Source: CoStar

4.27 For the purpose of this analysis, the 24 local authorities within the study area have been grouped in three broad market areas: Birmingham, Coventry & Warwickshire and Staffordshire.

Table 4.1 Local Authorities by Broad Market Area

Greater Birmingham	Coventry & Warks	Staffordshire
Birmingham	Coventry	Staffordshire Moorlands
Sandwell	Rugby	Lichfield
Solihull	Stratford-on-Avon	East Staffordshire
Wolverhampton	Nuneaton and Bedworth	Stafford
Dudley	North Warwickshire	South Staffordshire
Redditch	Warwick	Newcastle-under-Lyme

Bromsgrove Wyre Forest Walsall		Stoke-on-Trent Cannock Chase Tamworth

4.28 CoStar data reports that there was 16.3m sq.m (175m sq.ft) of strategic (large unit) floorspace in the West Midlands. Of this floorspace, 33.5% has been attributed to manufacturing uses and 66.5% to logistics use.

Table 4.2 West Midlands Strategic Floorspace Use Split

	B2 Floorspace	B8 Floorspace	Total Floorspace
Stock (sq.m)	5,452,874	10,805,877	16,258,752
% of total stock	33.5%	66.5%	

Source: CoStar (2023)

4.29 The table below shows the change in strategic floorspace by area for the period 2012-2022. Overall, the West Midlands has seen a 21% increase in strategic floorspace, an increase of 2.9m sq.m (30.7m sq.ft). A majority of the growth was located in Coventry & Warks (+1.3m sq.m), followed by Staffordshire (+934,000 sq.m) and Birmingham (+610,000 sq.m). Despite the lack of relative growth in strategic floorspace, a majority of it is located in the Birmingham area (42%).

Table 4.3 Change in strategic floorspace by market area 2012-2022

Area	Strategic floorspace (sq.m)	% of West Midlands floorspace	Change 2012-22 (sq.m)	% change 2012-2022
Greater Birmingham	6,864,125	42%	608,833	10%
Coventry & Warks	4,384,387	27%	1,268,562	41%
Staffordshire	5,010,240	31%	933,661	23%
West Midlands Total	16,258,752	100%	2,848,217	21%

Source: CoStar and Iceni Analysis

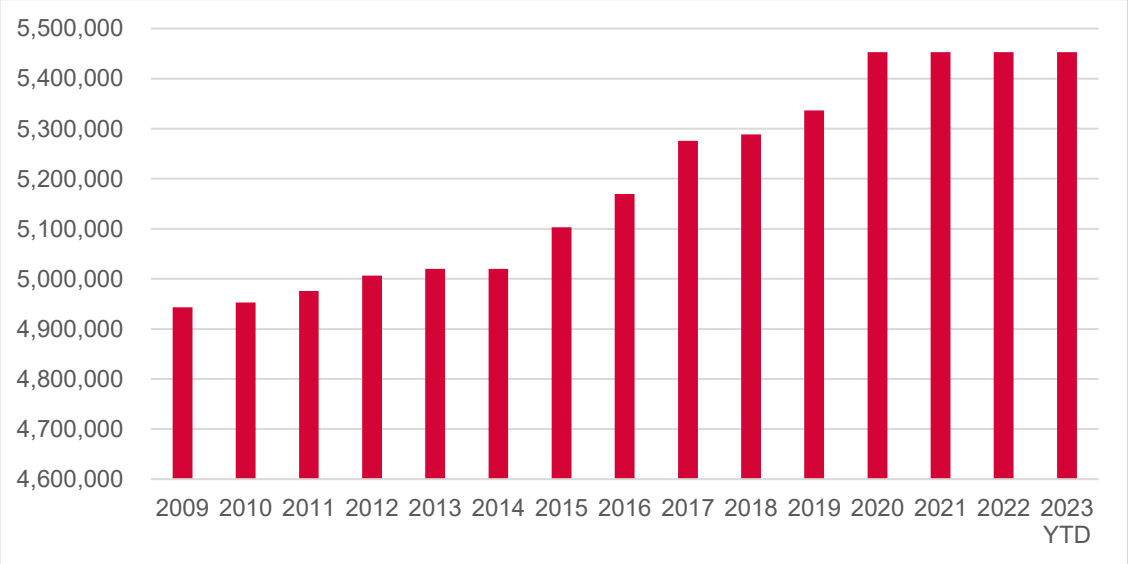
4.30 The following two sub sections consider (i) the manufacturing and (ii) the logistics market components.

Manufacturing (B2) Market Review

4.31 The following section provides a market review for the strategic manufacturing market. Manufacturing floorspace has been defined by using CoStar's submarket feature and includes Food Processing, Light Industrial, Light Manufacturing and Manufacturing subcategories. It should be noted, as above, that CoStar allocates typologies based on the company's primary use, therefore floorspace used for logistics purposes in a predominantly manufacturing company will be listed as manufacturing.

4.32 The figure below shows that manufacturing floorspace in the West Midlands has increased substantially over the past 13 years. Growth was strong from 2014-2020 increasing 9% in the period but has since levelled off and has remained stable at 5.5 m sq.m since 2020, most likely due to supply side impacts.

Figure 4.8 West Midlands Manufacturing Floorspace (sq.m) 2009-2023



Source: CoStar and Iceni Analysis (2023)

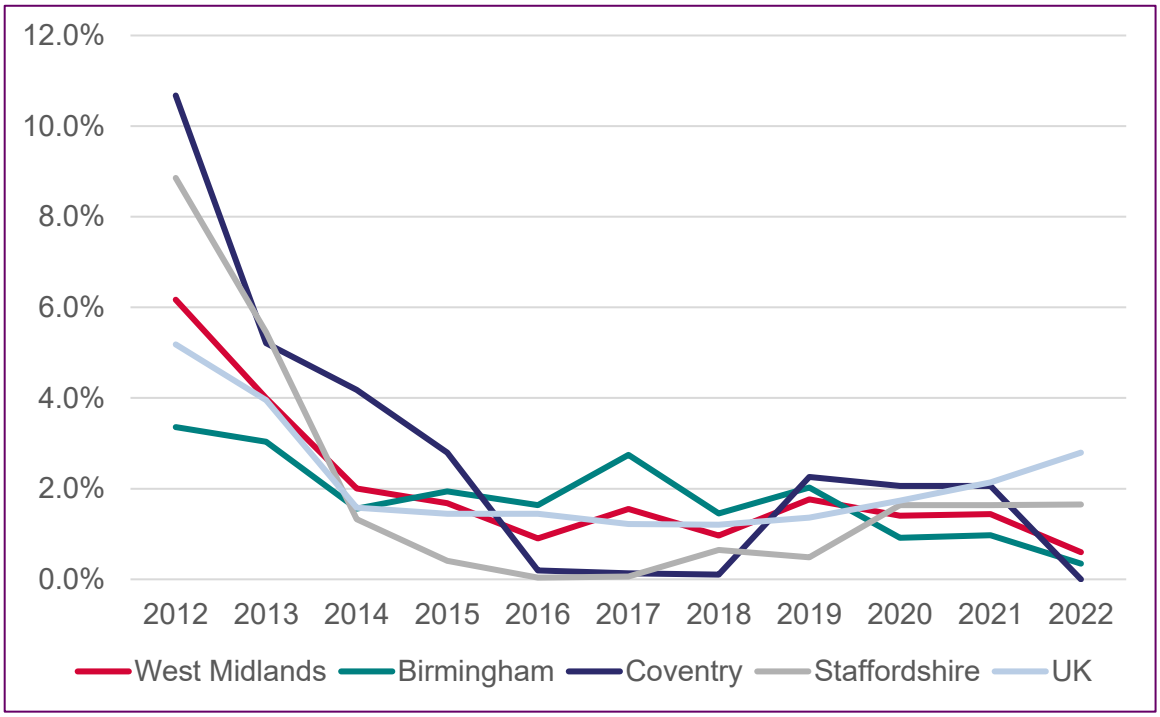
Manufacturing Vacancy rates

4.33 The graph below shows the vacancy rates for strategic manufacturing floorspace over the past 10 years. Vacancy rates in the West Midlands

declined from 2012 to 2016 and since this have remained at a low rate, at Q1 2023 sitting at 1.3%.

4.34 The three markets within the West Midlands have followed a similar trend with Coventry experiencing the lowest vacancy rates at 0% in 2022. Since 2020, vacancy rates in the West Midlands have been below the UK average.

Figure 4.9 Vacancy Rates 2012-2022



Source: CoStar and Iceni Analysis (2023)

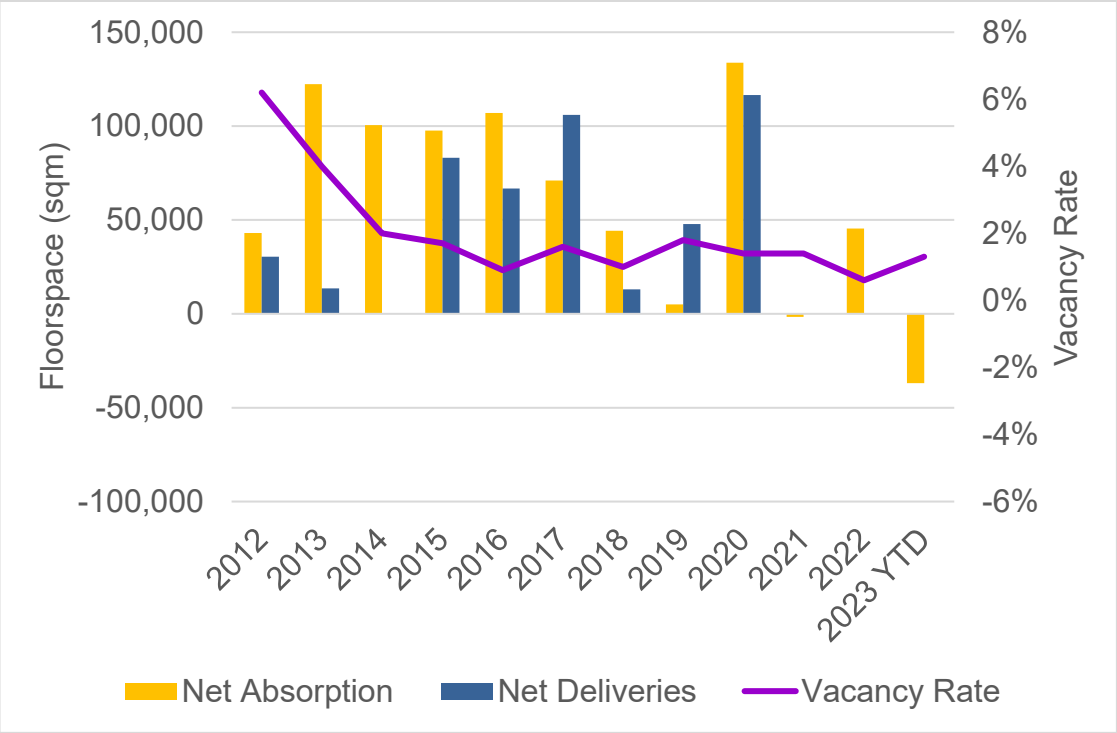
Manufacturing Net Absorption, Deliveries and Vacancy rate

4.35 The graph below shows manufacturing net absorption, net deliveries and vacancy rates in the West Midlands for the period 2012-2022. Over the past 10 years, net absorption has been positive and persistent with the exception of a dip in 2021. Net deliveries[13] were positive 2015-2020, but since then there have been no dedicated net deliveries reported. Combining this with positive net absorption has resulted in the vacancy

[13] Strategic floorspace constructed minus strategic floorspace losses

rate steadily declining; as of April 2023 the vacancy rate is 1.3%. This indicates that there is a shortage of strategic manufacturing floorspace, which is constraining market and economic growth.

Figure 4.10 West Midlands Manufacturing Net Absorption, Net Deliveries and Vacancy Rate (2012-2022)

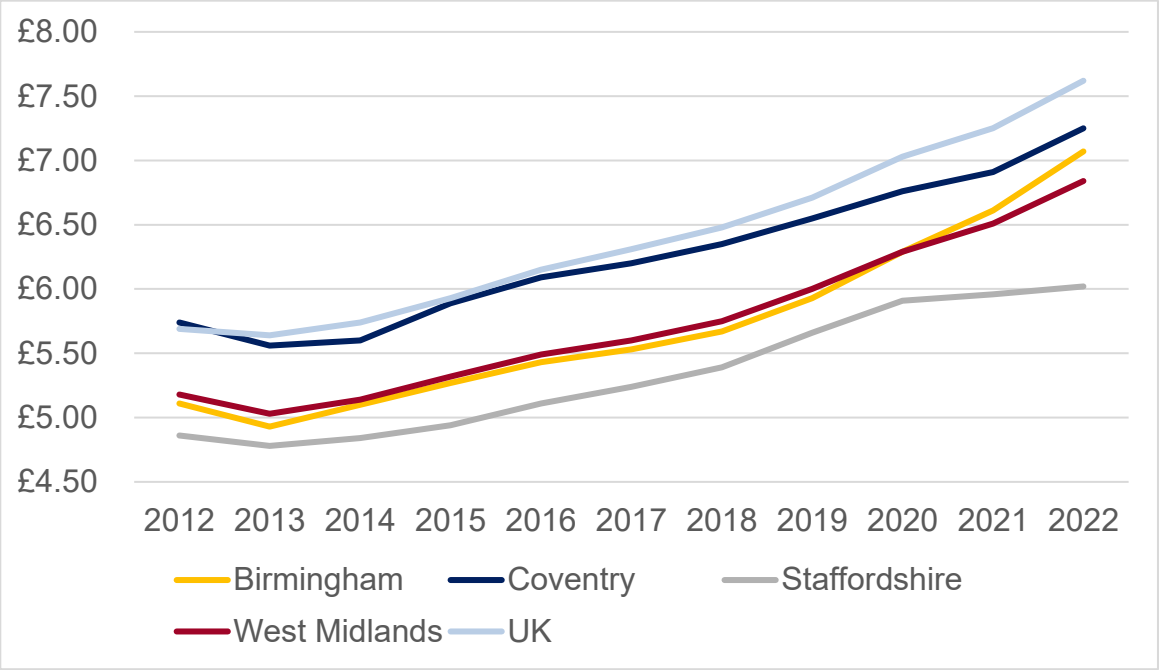


Source: CoStar and Iceni Analysis

Manufacturing Rents

4.36 The graph below shows that rents for strategic manufacturing floorspace have been increasing in the West Midlands over the past 10 years, reflective of high demand. Rental trends have followed that of the UK but overall rents in the West Midlands are historically lower than the UK average. On average rents in the West Midlands were £6.84 per sq.ft in 2022. Rents in Birmingham and Coventry were above this average with rents of £7.07 and £7.25 per sq.ft respectively. Rents in the Staffordshire market are lower at £5.98 per sq.ft.

Figure 4.11 Strategic Manufacturing Inflation Adjusted Average Rents (£/sq.ft)



Source: CoStar and Iceni Analysis (2023)

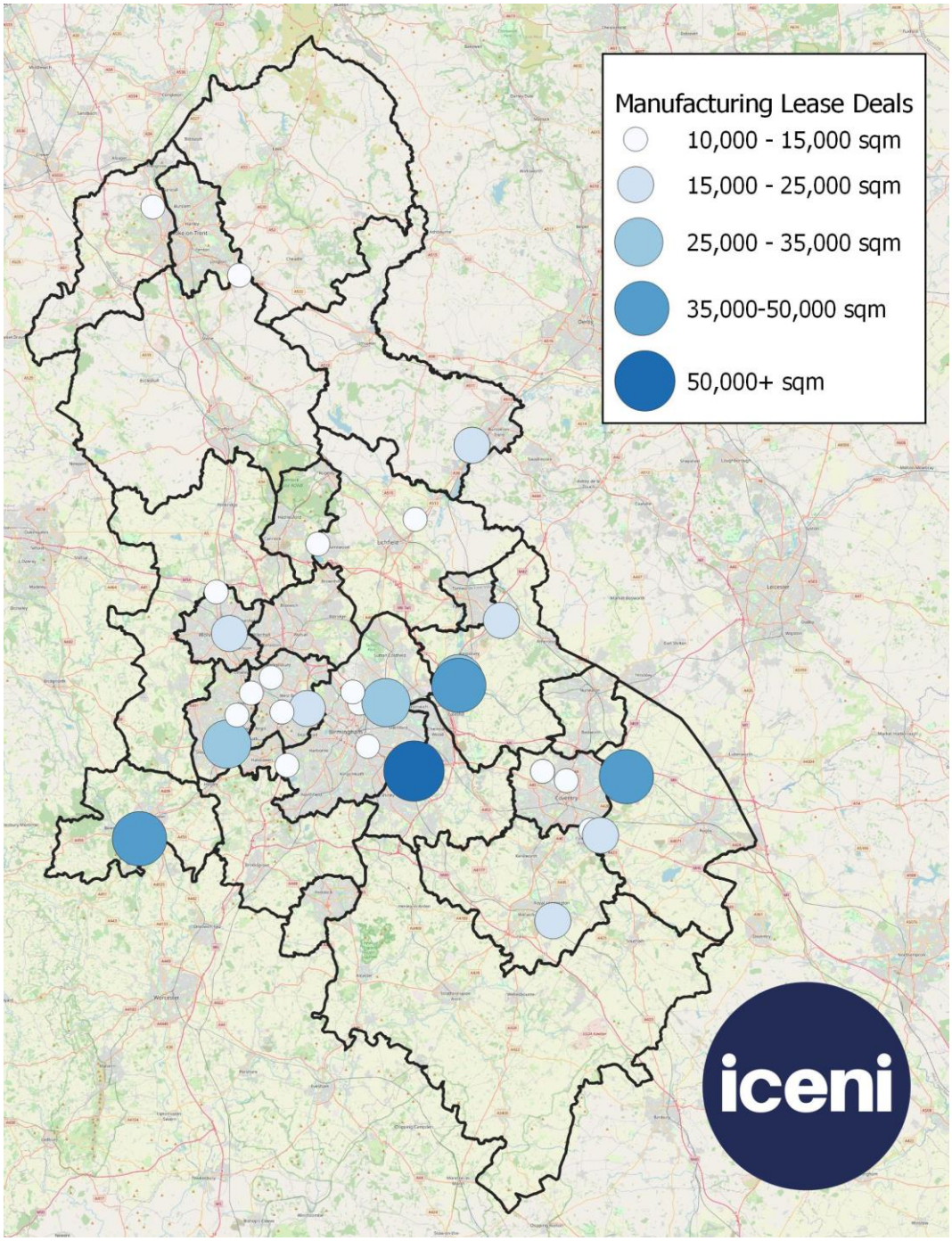
Strategic Manufacturing Floorspace Take-Up

4.37 Take-up is defined as the leasing and occupational sales of floorspace, as recorded on CoStar. For the purposes of this assessment, only "Strategic" units over 9,300 sq.m (100,000 sq.ft) have been included. Take-up includes both new and existing floorspace deals.

4.38 Figure 4.9 below profiles the spatial distribution of strategic manufacturing transactions since 2018. For the period 2018-2022 there have been 31 deals recorded.

4.39 The deals are generally focused in the local authorities surrounding Birmingham – east and west - with fewer recorded in Staffordshire. Deals tend to occur on A-roads in or near urban areas with proximity to labour typically a greater requirement than motorway network access. Manufacturing can also be more price sensitive than logistics.

Figure 4.12 Strategic manufacturing deals in West Midlands (2018-2022)



Source: CoStar and Iceni Analysis

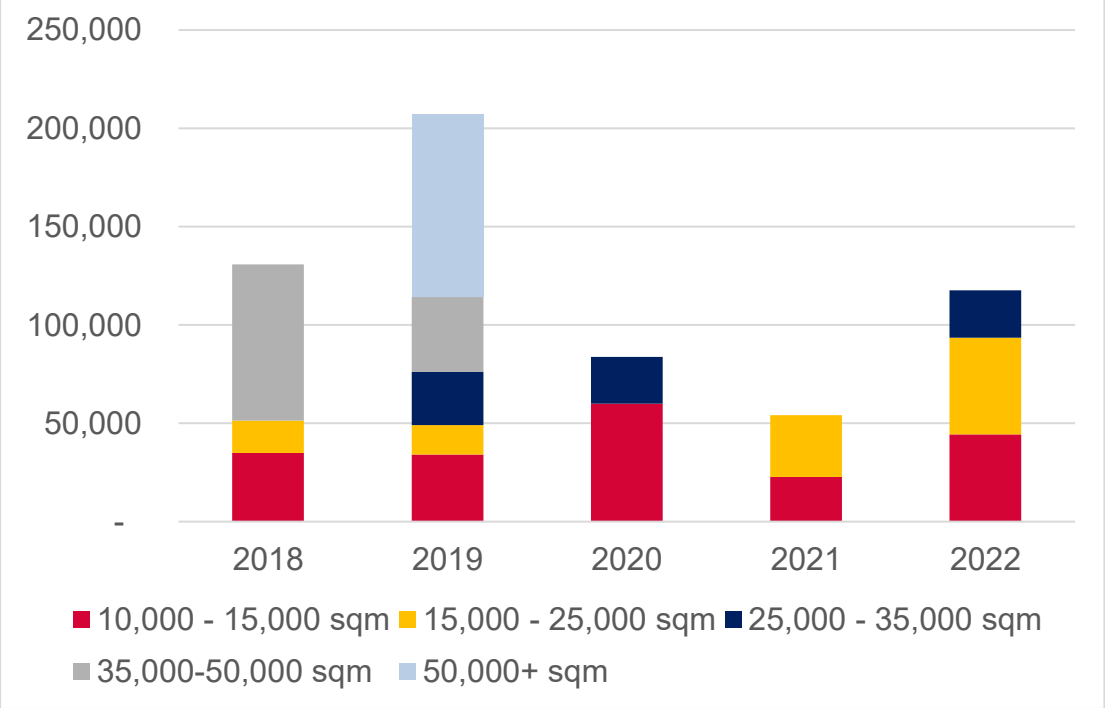
4.40 The figure below shows the take-up (lease deals) of industrial (manufacturing) floorspace per year by size. The year 2019 also saw the greatest take-up in the West Midlands with 206,900 sq.m strategic

manufacturing floorspace leased. This year also saw the only deal over 50,000 sq.m in the 5-year period where 92,700 sq.m was leased by JLR at Damson Parkway. Table 5.7 demonstrates that a majority of strategic manufacturing floorspace taken up in the past 5 years was 10,000-15,000 sq.m in size, making up 17 of the 31 deals.

4.41 Notable deals include:

- Meggitt PLC – 40,923 sq.m leased at Ansty Park (2018)
- Jaguar Land Rover – 38,495 sq.m leased at Hams Hall (2018)
- Britishvolt – 24,109 sq.m leased at Hams Hall (2022)

Figure 4.13 Strategic Manufacturing Floorspace Gross Take-up by Size and Year (sq.m) 2018-2022



Source: CoStar and Iceni Analysis

Table 4.4 Manufacturing strategic floorspace take-up by size band 2018-2022

Size band	% of floorspace take-up	No. of deals	Floorspace leased (sq.m) 2018-2022
10,000 - 15,000 sq.m	33%	17	196,254

15,000 - 25,000 sq.m	19%	7	111,880
25,000 - 35,000 sq.m	13%	3	74,961
35,000- 50,000 sq.m	20%	3	117,415
50,000+ sq.m	16%	1	92,716
Total	100%	31	593,227

Source: CoStar and Iceni Analysis

4.42 The table below shows strategic manufacturing floorspace take-up by local authority over the past 5 years. Over the period Solihull saw the greatest take-up with 92,700 sq.m leased (JLR at Damson Parkway), making up 16% of the West Midlands total. This is closely followed by North Warwickshire with 13% and Birmingham City with 12%. There were no deals in Bromsgrove, Redditch, Nuneaton and Bedworth, Stratford-On-Avon, Cannock Chase, South Staffordshire, Stafford and Tamworth.

Table 4.5 Strategic Manufacturing Floorspace Gross Take-up (sq.m) by Local Authority

	Local Authority	2018	2019	2020	2021	2022	Total
Birmingham	Birmingham City	9,826	36,787	12,614	-	9,522	68,749
	Bromsgrove	0	-	-	-	-	-
	Dudley	12,620	0	23,790	-	-	36,410
	Redditch	0	-	-	-	-	-
	Sandwell	-	-	34,339	-	17,769	52,108
	Solihull	-	92,716	-	-	-	92,716
	Wolverhampton	16,395	-	13,045	-	-	29,440
	Wyre Forest	-	37,996	-	-	-	37,996
	Birmingham Total	38,841	167,499	83,788	0	27,292	317,420
Coventr	Coventry	12,546	-	-	-	22,689	35,235
	North Warwickshire	38,495	14,941	-	-	24,109	77,545

	Nuneaton and Bedworth	-	-	-	-	-	-
	Rugby	40,923	-	-	15,399	-	56,322
	Stratford-On-Avon	-	-	-	-	-	-
	Warwick	-	-	-	-	27,636	27,636
	Coventry Total	91,965	14,941	0	15,399	74,434	196,738
Staffordshire	Cannock Chase	-	-	-	-	-	-
	East Staffordshire	-	-	-	15,937	15,937	31,875
	Lichfield	-	13,782	-	10,127	-	23,910
	Newcastle-under-Lyme	-	10,639	-	-	-	10,639
	South Staffordshire	-	-	-	-	-	-
	Stafford	-	-	-	-	-	-
	Stoke-On-Trent	-	-	-	12,645	-	12,645
	Tamworth	-	-	-	-	-	-
	Staffordshire Moorlands	-	-	-	-	-	-
	Stafford Total	0	24,421	0	38,710	15,937	79,068
		130,806	206,862	83,788	54,108	117,663	593,227

Source: CoStar and Iceni Analysis (2023)

Strategic Manufacturing Floorspace Sales

4.43 To capture owner-occupier activity we have looked at sales activity of the 2018-22 period. Investment sales have been excluded to avoid double counting leasing activity. There were just 4 sales over the 2018-22 period, totalling 50,917 sq.m of floorspace. Sales included:

- Triton, Shackleton Way, Stafford (10,701 sq.m) bought by Altenic Ltd
- Monarch Aircraft Engineering, Birmingham Airport (13,517 sq.m) bought by Apple Aviation
- Zortech Avenue, Wyre Forest (12,152 sq.m) bought by Bepco UK

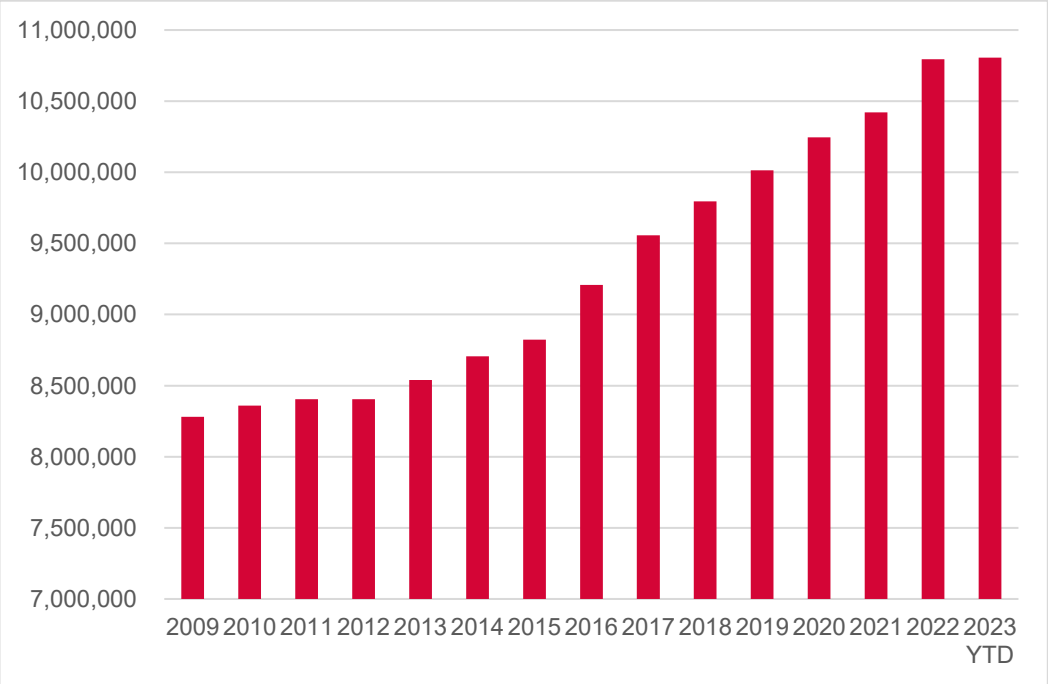
- Alder House, Alderflat Drive, Stoke-on-Trent (14,546 sq.m) bought by Venesta
- Zone A, Peddimore (60,386 sq.m) bought by Amazon in 2022

Logistics (B8) Market Review

4.44 This section considers the B8 rather than B2 market segments.

4.45 The figure below shows that logistics floorspace in the West Midlands has increased substantially over the past 13 years. Growth has been notably strong since 2015 increasing on average 3.2% a year. An additional 2.5 million sq.m of floorspace has been accumulated over the past 13 years.

Figure 4.14 West Midlands Logistics Floorspace (sq.m) 2009-2022

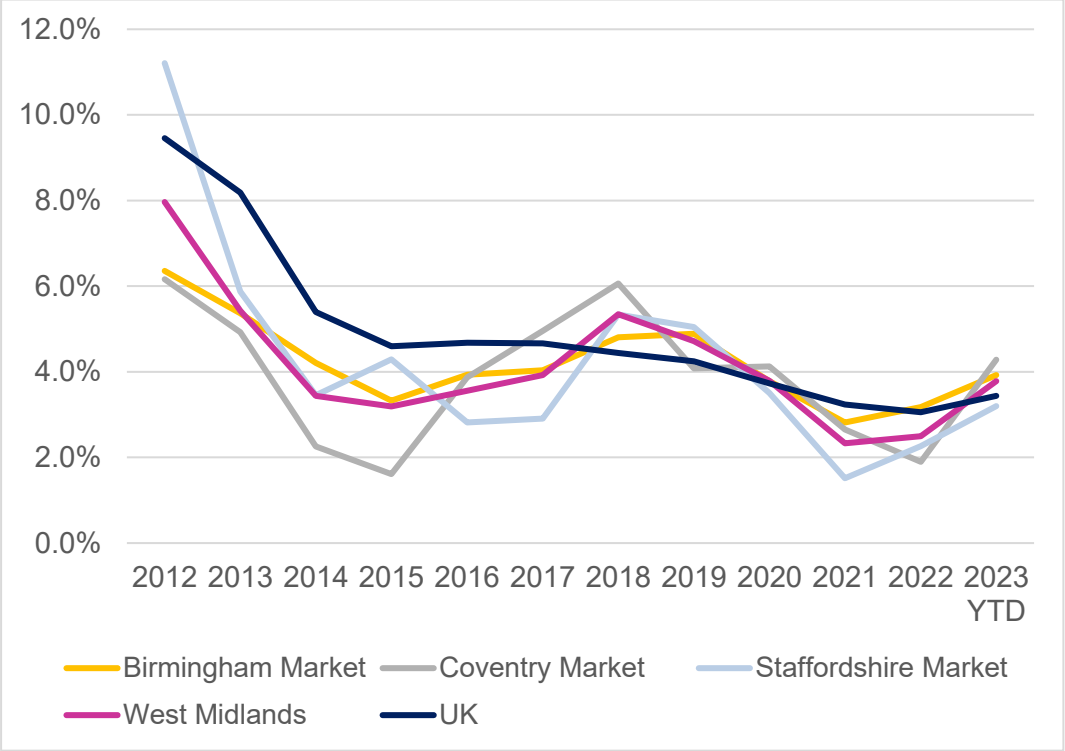


Source: CoStar and Iceni Analysis (2023)

4.46 The figure below shows the vacancy rates for the three CoStar Markets, West Midlands and the UK. Across the West Midlands vacancy rates were at their lowest in 2021-22 after declining since 2018. The most recent data is seeing vacancy rates creep up with the current vacancy

rate in the West Midlands at 3.8%. Vacancy rates are in line with the UK average.

Figure 4.15 Strategic Logistics Vacancy Rates (2012-2023)

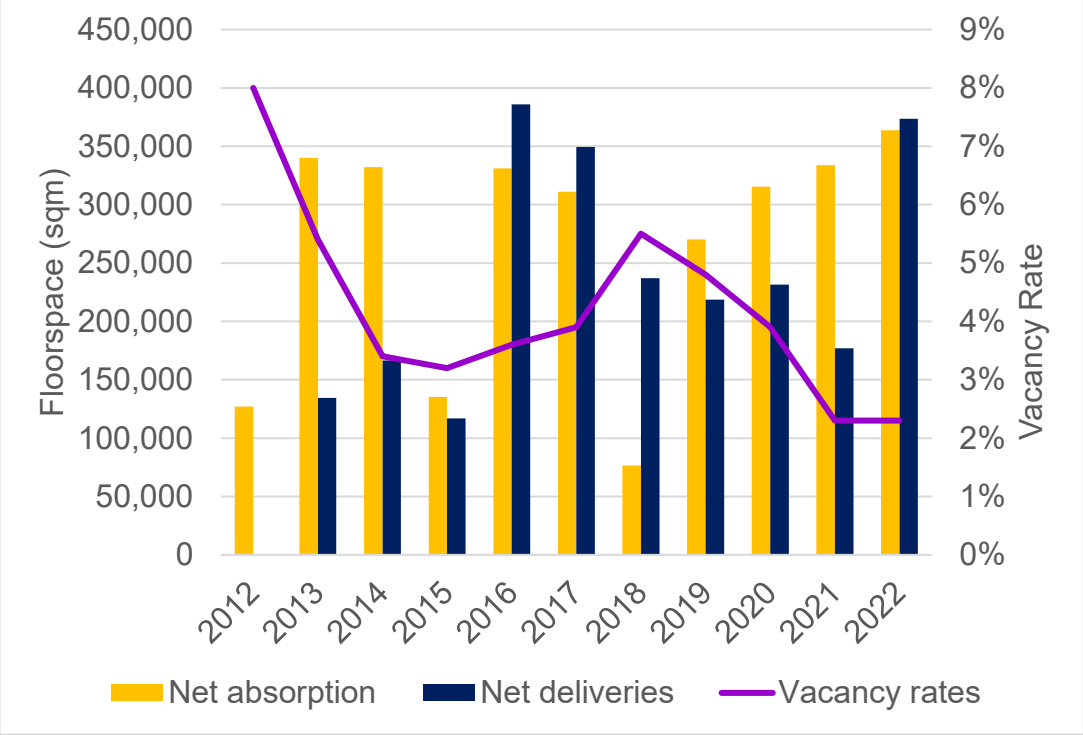


Source: CoStar (2023)

Logistics Net Absorption, Deliveries and Vacancy Rate

4.47 The graph below shows logistics space net absorption, net deliveries and vacancy rates in the West Midlands for the period 2012-2022. Over the past 10 years, net absorption has been positive with an average of 234,271 sq.m a year. This demand has been met by consistent net deliveries however overall net absorption has exceeded net deliveries resulting in declining vacancy rates.

Figure 4.16 West Midlands Logistics Net Absorption, Net Deliveries and Vacancy Rate (2012-2022)

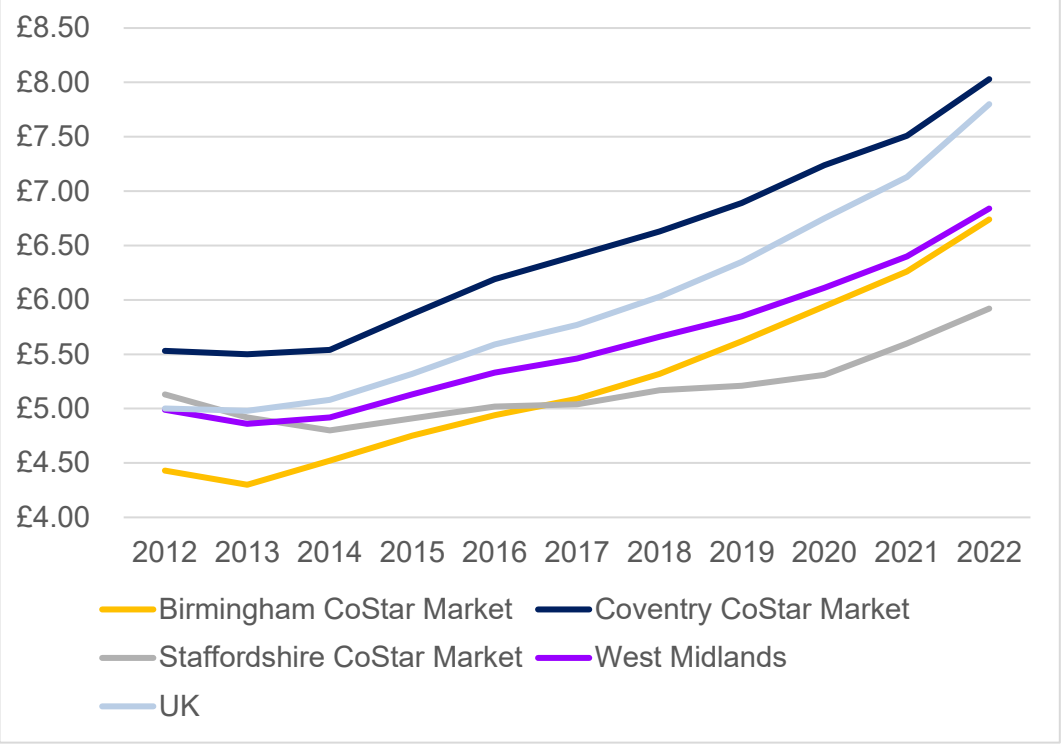


Source: CoStar and Iceni Analysis

Logistics Rents

4.48 The graph below shows that rents (inflation adjusted) for strategic logistics floorspace have been increasing in the West Midlands over the past 10 years, reflective of high demand and a shortage of supply. On average rents in the West Midlands were £6.84 per sq.ft in 2022. Rents in Coventry are higher than the West Midlands and UK average, reaching £8.17 per sq.ft. Strategic floorspace in Staffordshire is cheaper than the West Midland and UK average.

Figure 4.17 Strategic Logistics Floorspace Inflation Adjusted Average Rents (£/sq.ft)



Source: CoStar and Iceni Analysis

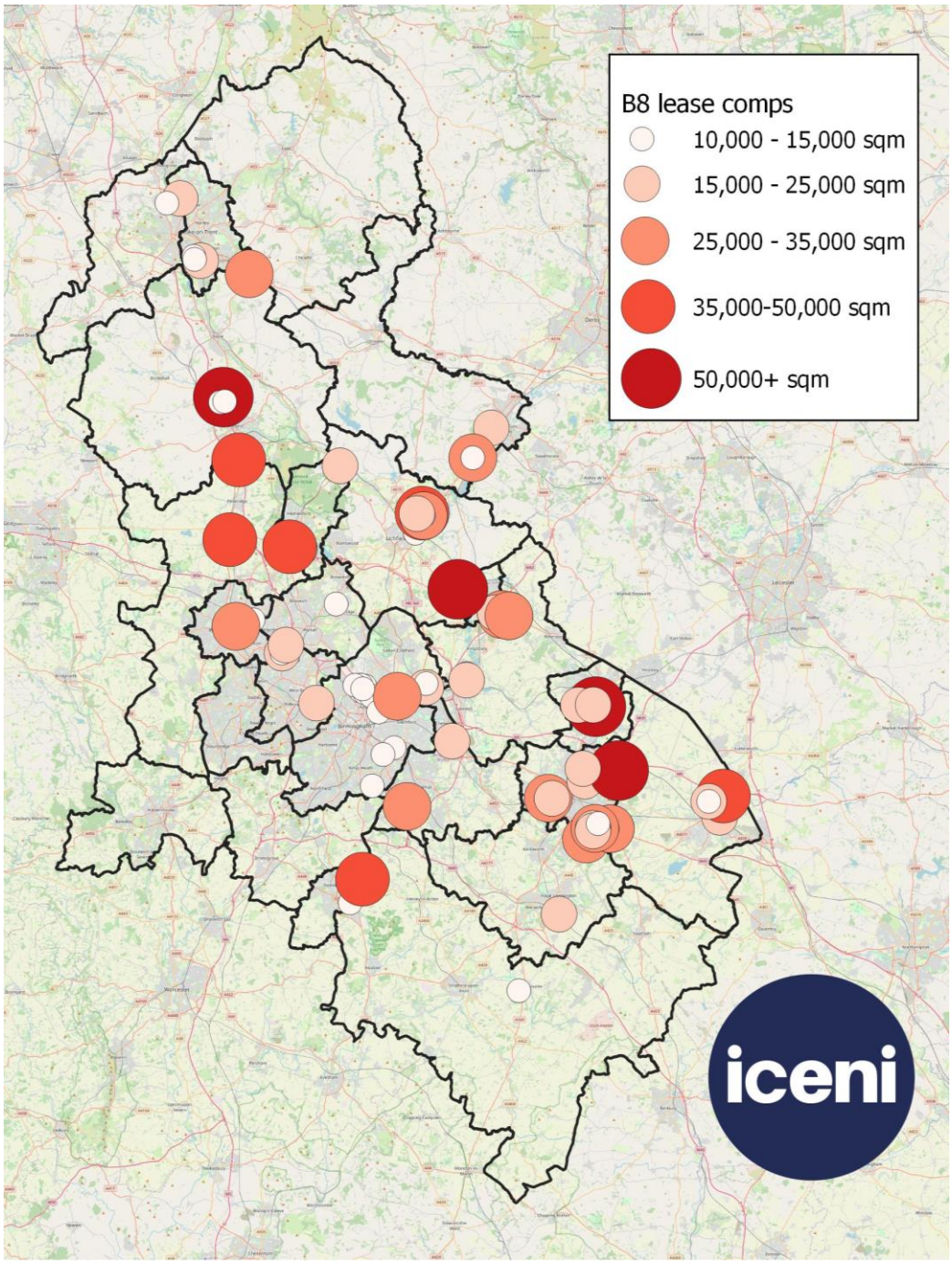
Logistics take-up

4.49 Take-up is defined as the leasing and occupational sales of floorspace, as recorded on CoStar. For the purposes of this assessment, only "Strategic" units over 9,000 sq.m (100,000 sq.ft) have been included. Take-up includes both new and existing floorspace.

4.50 Figure 4.11 below profiles the spatial distribution of strategic industrial transactions since 2018.

4.51 The deals are generally located alongside or in close proximity to motorways – the M6 around Stafford, through South Staffs, Birmingham and Coventry as well as the M42 Solihull up into North Warwickshire. Those not located on a motorway sit on the edge of major towns and cities such as around Coventry (south), Nuneaton and Bedworth and the A38.

Figure 4.18 Strategic Logistics Deals in the West Midlands (2018-2022)

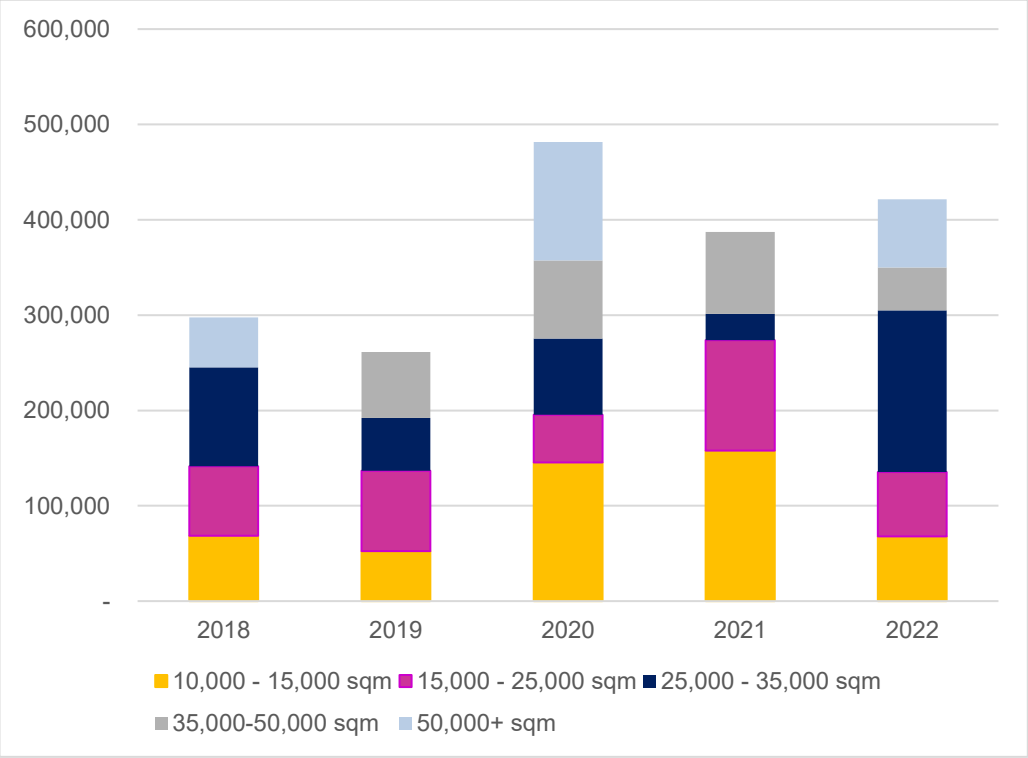


Source: CoStar and Iceni Analysis

4.52 Table 4.14 below presents the strategic logistics floorspace take-up by size band over the past 5 years. Take-up peaked in 2020 where 481,557 sq.m of floorspace was leased, most likely due to the rise of e-commerce during the pandemic. Table 1.15 shows that there were 97

strategic logistics floorspace deals of which 46 were for units 10,000-15,000 sq.m making up 27% of floorspace leased.

Figure 4.19 Strategic Logistics Deals in the West Midlands by year 2018-2022



Source: CoStar and Iceni Analysis

Table 4.6 Strategic Logistics Floorspace Gross Take-up and Deals 2018-2022

Size band	% of floorspace take-up	No. of deals	Floorspace leased (sq.m)
10,000 - 15,000 sq.m	27%	46	492,326
15,000 - 25,000 sq.m	21%	24	390,680
25,000 - 35,000 sq.m	24%	16	436,005
35,000-50,000 sq.m	15%	7	281,802
50,000+ sq.m	13%	4	248,029

Total	100%	97	1,848,842

Source: CoStar and Iceni Analysis

4.53 Large deals over the previous 5 years in the West Midlands include:

- 71,686 sq.m leased to Rhenus Warehousing on Coventry Road, Nuneaton in 2022
- 61,877 sq.m leased to Clipper Logistics at Goliath, Cross Point Business Park, Coventry in 2020
- 62,277 sq.m leased to Pets at Home at Staples Close, Stafford in 2020
- 92,716 sq.m leased to Jaguar Land Rover at Damson Parkway, Solihull in 2019

4.54 The table below breaks down strategic logistics floorspace take-up by local authority. Over the 5 year period all local authorities except Staffordshire Moorlands had take-up of strategic logistics floorspace. The greatest deal volumes were in Birmingham, Coventry, North Warwickshire and Rugby (over 200,000 sqm) and then Solihull, Lichfield and Nuneaton & Bedworth (over 100,000 sqm).

Table 4.7 Strategic Logistics Floorspace Take-up by Local Authority 2018-2022 (sq.m)

	Local Authority	2018	2019	2020	2021	2022	Total
Birmingham	Birmingham Core	97,622	72,896	66,726	32,342	18,886	288,472
	Bromsgrove	-	34,041	-	-	10,380	44,420
	Dudley	12,620	-	23,790	-	-	36,410
	Redditch	-	-	-	10,554	-	10,554
	Sandwell	-	-	34,339	43,849	17,769	95,957
	Solihull	-	114,522	24,351	-	-	138,873
	Walsall	-	10,966	14,307	-	-	25,273
	Wolverhampton	42,709	-	13,045	12,357	-	68,111
	Wyre Forest	-	37,996	-	-	-	37,996

	Birmingham Total	152,951	270,421	176,558	99,102	47,035	746,066
Coventry	Coventry	32,114	15,991	61,877	47,593	91,084	248,658
	North Warwickshire	81,973	14,941	29,841	59,089	68,441	254,285
	Nuneaton and Bedworth	-	-	21,403	-	91,141	112,544
	Rugby	50,245	25,926	62,140	29,191	74,921	242,422
	Stratford-On-Avon	-	-	-	-	9,887	9,887
	Warwick	28,831	48,185	-	14,653	55,507	147,175
	Coventry Total	193,163	105,043	175,261	150,526	390,981	1,014,971
	Cannock Chase	-	34,882	49,362	14,971	13,134	112,348
Stafford	East Staffordshire	-	-	-	25,534	58,096	83,630
	Lichfield	29,910	37,008	40,603	30,507	12,774	150,802
	Newcastle-under-Lyme	-	10,639	-	9,610	-	20,249
	South Staffordshire	-	-	-	85,748	-	85,748
	Stafford	-	-	84,946	-	-	84,946
	Staffordshire Moorlands	0	0	0	0	0	0
	Stoke-On-Trent	-	10,081	38,615	12,645	17,179	78,520
	Tamworth	52,189	-	-	12,597	-	64,786
	Stafford Total	82,099	92,610	213,526	191,612	101,183	681,029
		428,213	468,074	565,345	441,240	539,199	2,442,066

Source: CoStar and Iceni analysis (2023)

Strategic Logistics Sales

4.55 In terms of owner-user sales there were a total of 9 sales over the 5-year period, totalling 181,205 sq.m. Notable sales include:

- Zone A, Peddimore (60,386 sq.m) bought by Amazon in 2022
- Sunflex, Keys Park, Cannock Chase – 11,796 sq.m bought by Dunelm Group (2022)
- Jumbo Central, Gielgud Way, Coventry – 13,624 sq.m bought by Restore Plc (2018)
- AMK House, West Bromwich Street, Sandwell – 11,250 bought by Masterfreight

Direct Supply (Availability) – Strategic Manufacturing and Logistics Floorspace

4.56 Years supply is a ratio which calculates current available floorspace (over 100,000 sq. ft) divided by past average annual take-up (leased). It is one metric which helps demonstrate levels of availability in the market and indicates where the market is undersupplied. A 1-year supply, for instance, would mean that the advertised space is equivalent to one year of take-up. Available space is defined by CoStar as that being currently advertised for immediate or future occupation – but may differ from planning permissions / allocations that have not yet been brought to market.

4.57 There is 53,432 sq.m of manufacturing floorspace available across two units and 433,323 sq.m of logistics floorspace available across 26 units.

4.58 The analysis below reveals that based average 5 year take-up 2018-2022, there is 0.99 years of available space advertised across the West Midlands with 1.16 years space for logistics but only 0.45 for manufacturing. Overall this points to a considerable short term undersupply with a minimum of 2 years being required to ensure as take up continues that there is sufficient time for sites to be brought to market, or achieving a minimum of 5% vacancy / availability.

Table 4.8 Years of direct supply in the West Midlands by use

	Take up (average 2018-2022, sq.m)	Availability (sq.m)	Availability (%)	Years of availably advertised space
Manufacturing	118,645	53,432	1.0%	0.45
Logistics	374,951	433,323	4.3%	1.16
Total	**493,597**	**486,755**		**0.99**

Source: CoStar and Iceni analysis (Q1 2023)

4.59 As of Q1 2023 the warehouse units with space available are:

Birmingham Market

- Former Brintons Factory, Stourport Road, Wyre Forest – 38,087 sq.m (Manufacturing)
- Tyseley Park, Wharfdale Road Birmingham – 15,345 sq.m (Manufacturing)
- Unit 5, The Cofton Centre, Bromsgrove – 14,317 sq.m
- Nexus 122, Elliot Way, Birmingham – 11,319 sq.m
- Unit C, Electric Park, Birmingham – 9,941 sq.m
- DC5, Prologis Park Midpoint, Birmingham – 34,337 sq.m
- Aston Works, Cheston Road, Birmingham – 11,168 sq.m
- Block B and C, Woden Road, Sandwell – 13,992 sq.m
- Nationworld House, Noose Lane, Walsall – 14,529 sq.m
- Willenhall 246, Version Park, Walsall – 22,944 sq.m
- Parallel 113, Darlaston Road, Walsall – 10,558 sq.m
- Discovery Park, Wolverhampton – 37,161 sq.m

Staffordshire Market

- Two units at Hilton Cross, South Staffordshire – 13,369 sq.m and 10,542 sq.m
- FP108 – Fradley Park, Lichfield – 10,069 sq.m
- Ergo 354, Wood Lane, Lichfield – 32,873 sq.m
- Lichfield 117, Burton Old Road, Lichfield – 10,890 sq.m
- Units 15-48, Drayton Manor Business Park, Lichfield – 11,770 sq.m
- Stafford 128, Mustang Drive, Stafford – 11,970 sq.m
- Jupiter, Watling Street, Cannock Chase, 12,368 sq.m

Coventry & Warks Market

- Apollo II – Ansty Park, Rugby – 16,042 sq.m
- DC4, London Road, Rugby – 1 5,501 sq.m
- Lyons 106, Lyons Park, Coventry – 9,823 sq.m
- Unit 3, Puma Park, Coventry – 11,201 sq.m
- Triangle, North View, Coventry – 28,918 sq.m
- Tamworth 195, Trinity Road, North Warwickshire – 18,109 sq.m
- DC2, Prologis Parl Hams Hall, North Warwickshire – 24,273 sq.m

Summary

4.60 The UK industrial market is expected to benefit from the structural shift towards e-commerce and emerging green industries. Newer, more energy-efficient schemes are in high demand and will see higher rents.

4.61 There is currently 16,267,865 sq.m of strategic industrial floorspace in the West Midlands, 68% of which is for logistics use. Strategic floorspace has grown by 21% over the last 10 years

Manufacturing

4.62 Vacancy rates are at an all-time low (1.3%) due to a lack of deliveries in the past two years and positive net absorption. Rents have been increasing since 2014.

4.63 Over the past 5 years there were 31 lease deals resulting in 59,300 sq.m of strategic manufacturing floorspace take-up, peaking in 2019. Solihull saw the largest amount of take-up over the period, closely followed by North Warwickshire and Birmingham City.

Logistics

4.64 Strategic logistics floorspace has been growing year on year since 2013. Vacancy rates hit a low in 2021/22 but are beginning to creep up in Q1 2023.

4.65 Net delivery of floorspace has been strong but 3 consecutive years of greater net absorption 2019-21 has driven vacancy rates down. High net absorption indicates strong demand and the need for increased supply. Rents have continued to rise over the past 10 years to reflect this

4.66 There were 97 deals resulting in 1,849,000 sq.m of take-up. Take-up of floorspace is mostly evenly distributed across size bands, with the most deals in 100,000-150,000 band. Birmingham City had the greatest proportion of floorspace leased at 12% of the 5 year total.

4.67 Based on current availability there is only 0.99 years left of direct supply for strategic floorspace across both sectors.

5. Modern Requirements for Sites – Market Feedback

5.1 An understanding of the modern requirements for sites has been developed through the team's knowledge, wider literature reviews and stakeholder engagement.

5.2 Stakeholder engagement has been across developers, agents, local authorities and government bodies. Stakeholders include Federation of Small Businesses, Hodgetts Estates, IM Properties, JLL, LEPs, Nurton Developments, Prologis, Savills, Stoford, St Modwen, Tritax Symmetry, Turley, WMCA (Economic Development and Delivery), WM Growth Co., Warwickshire Skills and Employment Service.

Synthesis of stakeholder feedback

Current trends and outlook for the logistics sector

5.3 The end of 2021 / start of 2022 saw peak demand for large units, particularly e-commerce, due to the structural change after Brexit, the e-commerce pandemic boom and cheaper finance. There has since been some cooling due to interest rate rises, inflation and sentiment of the economy. Long-term demand is expected to persist in line with or above historic averages. Generally logistics type inquiries make up approximately 75% of requirements compared to manufacturing with e-commerce remaining a key driver.

5.4 The pandemic highlighted the importance of **supply-chains**. There has reportedly been an increase in domestic stock holding to improve delivery reliability and reference to onshoring in the industry – albeit evidence is limited on that latter.

5.5 **Stock renewal** remains a major driver of demand. There was significant volume of logistics development in the mid-90s which will need replacing within the next 20 years. However with low vacancy there are limited opportunities for redevelopment, which puts additional pressure on greenfield sites. Additionally, brownfield sites may be sub optimally located and may compete with residential vales depending on their location.

5.6 In terms of **unit size**, average demand has got bigger – 10,000 sq. m is no longer considered 'big box' with occupiers looking at least 20,000 sq. m and many +100,000 sq. m. As a result even larger sites can quickly reach build out capacity within 1-2 units.

5.7 One emerging pattern is that some businesses / occupiers are restructuring and looking to concentrate on one campus type site with 3-4 units on site e.g. John Lewis at Magna Park Milton Keynes, Iron Mountain at Symmetry Park Rugby. Strategic sites could encompass several smaller campuses.

5.8 **Office space** is increasingly an important element of the logistics park story. Occupiers often locate their HQs within the logistics buildings bringing in a diverse range of jobs, skills and occupations. With 5% of a typical floorplate, a 100,000 sq. m unit would cater for a substantial 5,000 sq. m of offices.

5.9 Stakeholders report a frustration with the ongoing **negative perception** of poor quality jobs in the logistics sector. The sector is reportedly increasingly diverse in its requirements, with the shift to automation or 'advanced logistics' reducing the need for less-skilled labour and provide higher value jobs e.g. managerial, technical. This is not to eradicate but rather reduce the proportion of lower skilled jobs. A number of case studies (and publications) have been cited demonstrating the economic potential of the sector, including in terms of helping those less readily able to access work, providing career

pathways, advancing skills and providing critical economic infrastructure.

5.10 Development is currently a 50:50 split between speculative development and build to suit. There has been a move away from owner/occupier development towards long leasehold / rental model. This does act as a deterrent for some occupiers particularly in manufacturing.

5.11 **Sustainability** is important to most major developers and occupiers. Meeting needs for modern space that have high ESG[14] requirements. There is a limited window for achieving major efficiency improvements, by 2030 existing buildings need to be EPC B and above.

5.12 More widely, highways issues remain a major challenge to bringing sites forward including allocations.

Current trends and outlook for the manufacturing sector

5.13 Feedback indicated that manufacturers are still taking up space despite the market being dominated by logistics. In general, manufacturing units are smaller than logistics i.e. 100,000 – 250,000 sqft rather than 1m sqft+.

5.14 There is **interest in gigafactories** however this is yet to take off in the UK in full – studies indicate a need for 6-8 factories nationally which might translate as 1-2 in the Midlands. This is considered central to support British car manufacturing. The transition to electric vehicles will be revolutionary in the automotive industry but will require significant investment. Other manufacturing specialist sectors such as vertical farming, food and drink, medical, robotics aerospace and modular housing building are also prevalent in the West Midlands.

[14] Environmental, social and governance – set of standards measuring a business's impact on society, the environment and how transport and accountable it is

5.15 Digitalisation and **automation** is continuing to breakdown the traditional relationship between jobs and floorspace. Manufacturing development is creating fewer but higher skilled jobs. Sector employment has declined in the long term both relatively and absolutely.

5.16 Manufacturing requirements are increasingly **big box based** rather than plant based. There is currently scepticism in the market around plant-based investment (outside of gigafactories). Manufacturing tends to be bespoke design and build, with specific requirements over a longer period whereas B8 is more generic and easier for developments to build out. Many manufacturing occupiers require some element of storage and distribution and so the lines become blurred between B2/B8 sites.

5.17 There are mixed views from stakeholders on earmarking sites for manufacturing. Sites such as i54 have worked well and manufacturing development secures greater job numbers. However some stakeholders expressed that designating a site with a use class prevents speculative development and damages marketing and investment. Designated B2 sites tend to take longer to build out.

5.18 Some manufacturers have a desire for **freehold**, especially European businesses, however many existing land options are held by funds that do not wish to complete freehold deals. Landowners can also look to hold onto land waiting for a higher value - the lands can then be overvalued when manufacturers are looking for a site. As a result, options for manufacturing occupiers are limited in the West Midlands.

5.19 There is a desire in the market for ‘clustification’ of manufacturing and specialist sectors such as MIRA and i54. Campus developments allow a building of skills and labour base in the area. However this is difficult with high land values that primarily only logistics companies are able to afford. As a result, manufacturers are driven to affordable land available, not creating clusters.

5.20 Manufacturers tend to have a greater preference for labour market proximity given densities are usually higher than for logistics, and typically there is greater importance of attracting higher skilled labour.

5.21 Some manufacturers (and other occupiers) place public transport accessibility high on the agenda. This means sites with public transport rail are highly desirable but are very limited in number.

Rail-served sites

5.22 A majority of freight movements are on the road rather than rail and stakeholders highlighted that demand for rail-served sites has been subdued. The move to electric / hydrogen-powered HGVs may further weaken the rail case albeit that port based freight movement will remain important.

5.23 Some occupiers that have access to a railhead do not use it. Some stakeholders argue that existing railhead capacity should be maximised before planning for further rail freight locations due to substantial embedded carbon. It may be the case that some logistics and manufacturing occupiers are sub optimally located at rail head locations for historical reasons / lack of alternatives and would be better relocated to free rail requiring space.

5.24 High infrastructure costs and large land needs make rail-served sites less competitive. There is a view that floorspace at West Midlands Interchange will be focused on a specific market segment catering for +500,000 sq. ft units rather than catering to mid / big box general demand. it may generate a further supply chain / sub market of its own that will require additional sites.

5.25 Birch Coppice and Hams Hall are reportedly underutilised due to a combination of 1) there not being sufficient on-site warehousing to generate multiple daily train loads to multiple destinations and 2) the rail access into Birch Coppice being an overly long routeing to get on WMCL heading north, despite WCML passing nearby, because of lack of ability to turn West at one junction (Whitacre junction)

5.26 Expansion of existing under-utilised facilities should be strongly welcomed since it will increase critical mass to generate new flows.

Suppressed demand and implications

5.27 It is consistently reported and generally accepted that the West Midlands has suffered many years of **supply restriction** and a lack of supply has driven up rents. Over the 2020-22 pandemic, developers for a period focused on peripheral locations or on non-strategic sites due to a lack of prime location supply. Ideally, the majority of strategic units would be well located to the strategic road network. More recently developers are increasingly refocusing on prime locations.

5.28 There is consistently reported to be a need for an injection of supply to improve choice and allow for some churn, increasing vacancy and therefore renewal of sites and stock. Many occupiers haven't been able to move in a number of years and there is a 'long list' of both logistics occupiers looking to locate in the region that have been turned away due to lack of supply, particularly around the Birmingham conurbation. There have also been enquiries from European manufacturers looking to locate in the Midlands – including electric vehicles and battery manufacturers – however they cannot find space. Being in a position to accommodate more demand coming through would boost economic growth – the UK is considered to be lagging behind its European counterparts in its inward investment offering.

Locational preferences and broad locations for growth

5.29 Stakeholders felt that the locations identified in the 2021 WMSESS report remain representative of market demand. Broad locations that saw take-up 20 years ago remain mostly the same today.

5.30 Logistics and manufacturing occupiers tend not to be very specific about their locational preferences – particularly in a supply restricted market - and therefore provide a broad location. These tend to be M6, M42, M1 as they allow for national distribution. The market needs a variety of locations to meet a range of occupier needs.

5.31 The M42 is considered a key location for growth, offering good access to Birmingham conurbation labour, SRFIs and a growing labour supply (including forthcoming housing allocations). The M6 corridor from Rugby through to Stafford contains a number of sub markets and key employment locations. The M6 Coventry / Rugby, Black Country and M40 are all perceived as strong for manufacturers given legacy skills offering. The M6 Toll generally less favourable due to operational costs.

5.32 Many occupiers want to be on the outskirts of Birmingham due to the access to labour supply.

5.33 Junctions that do not currently provide access in both directions are good opportunities for developer contributions to pay for infrastructure upgrades.

Occupier site criteria

5.34 Broadly a minimum site size of 25ha is supported, as this enables power and infrastructure investment – it is becoming harder to make smaller sites work for strategic units for a number of reasons:

- Biodiversity net gain / blue and green infrastructure need is driving the need for larger sites;

- Sites of 25 ha can be filled up in just 1-2 deals and therefore lack critical mass;
- Plot ratios are becoming smaller, currently around 25-35%.

5.35 As a result, sites of 50-60ha are preferable. Larger sites also allow for a mix of smaller and larger units – mid size manufacturers are well-placed to go on these larger investment sites.

5.36 Being adjacent to the strategic road network is a fundamental requirement – especially access to multiple strategic road networks as logistics occupiers need trip reliability and optionality. Manufacturers are able to locate in less prime locations with labour more of a priority.

5.37 Proximity to other occupiers is important to occupiers as it is more sustainable and provides benefits of agglomeration. However some occupiers prefer to be more isolated so they do not have to compete for labour.

5.38 Other logistics occupier trends include minimum 20m heights due to automation driving the need for taller units. Additionally, physical environment is becoming increasingly important in order to recruit and retain employees by offering well-being benefits.

Labour requirements

5.39 **Labour shortage** is an issue for both manufacturing and logistics occupiers and occupiers feel most comfortable where there is access to large pools of labour near main settlements.

5.40 In most cases where labour is concentrated there is a poor supply of sites due to Green Belt – notably around the Birmingham conurbation. When making investment decisions the labour market is a key factor. Advanced / high-tech manufacturing will seek high quality graduates – for example universities or legacy areas such as Coventry, Warwick, and Birmingham south.

5.41 As previously noted above, logistics is becoming increasingly high-skilled – robotics are playing more of a role, requiring engineers to service and maintain them. Logistics occupiers flagged that the reputation and perception of employment within the sector makes it difficult to attract talent.

5.42 There is an increasing focus on supplying skills for the logistics section. Best practice examples include:

- The Hub at Daventry International Rail Freight Terminal, one of the main locations for the Prologis Warehousing and Logistics Training Programme helping jobseekers gain the right skills and knowledge for a career in logistics; and
- The Centre for Logistics Education and Research (CLEAR) at Magna Park in Lutterworth, a collaboration between North Warwickshire and South Leicestershire College, Wincanton PLC and GLP offering training across planning and supply chain operations, engineering, business support, leadership and digital skills.

Power requirements

5.43 Power is provided by the network provider on a first come, first served basis – applications are submitted and national grid work through the list, therefore many developers have to address power issues before they have planning consent in order to have power in time for development. For allocations, the power network is alerted if a site is an allocation whereas speculative applications require speculative power banking. Allocating sites will therefore improve the timeliness of power availability – albeit costs and lead in times can still be significant.

5.44 Developers cannot always get clarity on how much power is available and how long it will take to deliver – this can be an occupier deterrent.

5.45 **Up to three times more power is needed** in new logistics premises than compared to 10 years ago due to the shift to automation. Move to

electric HGVs will up the power requirement further. Manufacturers in the automotive sector require a significant amount of power and therefore not many sites are suitable.

Case study – Overclockers, Stoke

5.46 Overclockers is a modern British logistics and e-commerce success story. Initially founded in 1999 as a web retailer of custom 'overclocked' PCs, Overclockers started life trading from a small, 400 sq ft warehouse in Stoke-on-Trent. In 2021, following phenomenal business performance during the pandemic, which saw record demand for high-performance computers, gaming hardware, and personalisation in the era of working from home, Overclockers grew to over 100 staff across three areas and will soon move into a new, 100,000 sq ft tech - warehouse.

5.47 Overclockers is a 'traditional' logistics business in the sense that it receives and ships products to and from Europe, and all over the world. However, it involves a technical personalisation service to customers – configuring powerful personal computers – so its workforce is highly skilled. A significant proportion of the team are hired as apprentices and trained on the job.

5.48 Clients include police forces, Formula One teams and universities, that have an increasing need for ever-more-powerful computers.

5.49 New premises offers three times the capacity of previous warehousing space the company had, which was spread over three sites in North Staffordshire. The business now builds, stores and ships products from under one roof, which in turn makes it a more efficient service for customers.

Figure 5.1 Overclockers UK, Stoke on Trent

Source: www.overclockers.co.uk

Distilling site requirements

5.50 Taking into account the range of stakeholder inputs as well as other comparable studies[15], the technical strategic site criteria are set out below.

- Good connections with the strategic highway network – close to a junction with the motorway network (ideally within 3km and up to 5km) or long-distance dual carriageway suitable for HGVs (reflecting the success of parks on the A1, A14 and other linking A-roads).

[15] Notably 'Warehousing and Logistics in the South East Midlands' 2022

- Sufficiently large and flexible in its configuration so that it can accommodate the range of sizes of distribution centre warehouse units now required by the market. Preferred plot ratios being a minimum of 0.35[16] and building sizes of over 9,000 sq.m which means a minimum of 2.5 ha, however ideally sites would be a minimum of 25ha and readily over 50ha which takes into account the landscaping and infrastructure involved in delivering sites of this scale as well as inclusion of smaller employment units where appropriate.

- Is served from an electricity supply grid with sufficient capacity to permit the charging of large fleets of battery-electric freight vehicles simultaneously / able to support high tech facilities, or part of the electricity supply grid which can be upgraded (network reinforcement) relatively easily and at a reasonable cost.

- Where relevant, is sufficiently large (+100 ha but often towards 300ha) and flexible in its configuration so that it can accommodate an intermodal terminal and internal reception sidings (for rail).

- Is accessible to labour, including the ability to be served by sustainable and/or active transport, and where appropriate being located close to areas of employment need.

- Is located away from incompatible land-uses (including residential) and has the ability to undertake 24/7 unrestricted operating hours and manage noise/lighting expectations.

- Is located such that the development does not significantly crowd-out alternative land uses, such as office and lab space, and

[16] Based on previous research – Warehousing and Logistics in Leicester and Leicestershire: Managing growth and change – Appendix F

ensures a balanced supply of commercial premises and strategic employment opportunities in the local area.

- The ability to deliver high-bay warehousing at least 20m height (recognising the landscape impacts and need for appropriate locations and / or mitigation).
- Has access to or potential for broadband capabilities and infrastructure.

5.51 The difference between the requirements for manufacturing and logistics sites is not wholly distinct. However in general it is considered that:

- Manufacturing sites are more likely to need enhanced access to labour markets, closer priority to urban areas and quality public transport.
- Logistics sites prioritise the strategic road network. Labour access is important but drive times of 30 minutes (or more) are considered.

6. Commitments and Allocations

6.1 This section considers the supply of strategic sites (+25ha) comprised of permission and allocations (rather than the supply of strategic unit (+9,300 sq.m) permissions). Whilst strategic unit data forms an important consideration for this study, ultimately the concern is regarding the supply of strategic sites.

6.2 Both the West Midlands Strategic Employment Site 2015 and 2021 studies and definitions in West Midlands Regional Spatial Strategy (to identify Regional Investment Sites and Regional Logistic Sites) confirmed that 25 ha remains a relevant threshold for strategic sites in most instances. Some concerns have been raised regarding the 'arbitrary' nature of a specific figure, as well as particularly that sites of smaller scale can readily deliver infrastructure investment and host strategic units which is evidently the case. However in reality it is more common to see much larger parcels able to deliver major investment opportunities of well over 50 ha such as Peddimore, West Midlands Interchange, Rugby Gateway, Antsy Park and Coventry Airport Gigafactory. Authorities will need to separately consider whether sites below the threshold set here are making a contribution to strategic need (see chapter 13).

6.3 Below, sites of 25 ha or over have been included in the supply pipeline, as well as commitments that are facilitating extensions of existing strategic sites (these may be under 25 ha). This is considered accurate to end monitoring year 22/23.

6.4 The table below shows a breakdown of commitments by local authority. This data has been provided and verified by local authorities. Overall there is a supply of 1,305 hectares. A comprehensive list of the commitments can be found in Appendix 3: Commitments.

6.5 The most notable supply for logistics and manufacturing is identified in the table.

Table 6.1 Strategic Commitments by Local Authority at April 2022

Local Authority	No of Sites	Supply (Ha)	Notes
East Staffordshire	2	19.8	Branston Locks and Burton Gateway Ext.
South Staffordshire	4	381.6	West Midlands Interchange, ROF Featherstone, i54 Ext
Stafford	2	77.3	Rehill, Meadford Power Station
Newcastle-under-Lyme	1	6.5	Lymedale Business Park
Birmingham	3	112	Peddimore, Washwood Heath and Longbridge
Solihull	1	39	Damson Parkway
Wolverhampton	1	2.8	
Bromsgrove / Redditch	1	13	Redditch Gateway
Coventry	1	25	
Rugby	5	137	Ansty Park, Prologis Park, Symmetry Park
North Warwickshire	4	59.5	Mira, Birch Coppice, Dordon and Hams Hall
Nuneaton and Bedworth	2	31.9	Faultands and Prologis Ext.
Stratford-on-Avon	1	100	Gaydon / Lighthorne Heath
Warwick	2	302.4	Coventry Airport Gigafactory
Total	**30**	**1,305**	

Source: Local Authority Monitoring, 2021/22

7. Traffic Growth & Replacement Demand Model (Need for Sites)

7.1 Consultancy MDS Transmodal (MDST) has produced a model of future strategic needs that incorporates demand from new network growth as well as replacement of older stock. This has been used for over 20 years supporting numerous comparable studies dating back from Regional Spatial Strategies and across Liverpool City Region and Leicester and Leicestershire.

Methodology – Background

7.2 Land-use forecasting for many commercial sectors, such as offices and retail, often seeks to relate employment growth to the need for additional floor space, using consistent and robust employment densities. This methodology is potentially unsuitable for the logistics sector for three reasons:

- Warehousing units have a much shorter functional or economic life than other types of commercial property (developers/investors will often write-down their assets over a 25-30 year timeframe). There is a consequent and continuing need to develop new units to replace existing capacity which becomes functionally or physically obsolete over time;

- There is no consistent or robust employment density ratio that can be applied to the B8 sector, where floor space requirements are driven by factors such as the commodities being handled (ambient, chilled, palletised etc..) and dwell times. This in turn dictates the employment need (numbers, skills etc..). Cargo with high throughput rates and picked at less than pallet-load quantities (such as grocery) requires higher employment levels when compared with slower moving lines re-distributed at pallet-

level. Consequently, warehouses with broadly the same quantum of floor space can have significantly different employment levels; and

- Increasing automation within warehouses, particularly for goods ordered via e-commerce, suggests future employment densities will be lower than today.

7.3 In order to overcome these apparent weaknesses, this land-use forecast methodology is derived from the following key factors relating to new logistics warehouse facilities:

- The continual need to build new large-scale warehousing as a replacement for existing capacity which, over time, becomes life-expired due to functional or physical obsolescence (replacement build); and
- Long-term increases in the demand for goods, principally driven by a rising population and growth in the wider economy, and the subsequent need for additional floor space in order to handle the consequent higher cargo volumes (growth build).

7.4 Existing warehouse capacity can be quantified from available data sources, with a view then reached as to the likely replacement ('churn') rate based on experience of the logistics sector. Freight traffic growth (a proxy for growth in the demand for goods) can be forecast using economic or traffic models, in this case the *MDST GB Freight Model* (used to produce forecasts for Network Rail and Midlands Connect among other bodies). The growth is then related to floor space using cargo storage density and throughput rates expected at a modern distribution centre. Adding the replacement and growth build elements together generates the forecast of future new-build rates.

7.5 The base line forecast year adopted for this forecast exercise is 2022. The key primary output is total new-build rates over a future time period (i.e. future demand for new-build units), measured as square metres of warehouse floor space. In this case, new-build rates up to 2035, 2040 and 2045 have been forecast. The forecasts are for the West Midlands region[17].

Existing Warehouse Capacity

7.6 Given the above, the starting point of the land-use forecasting process is therefore to quantify the existing supply of large-scale logistics and distribution floor space capacity within the West Midlands region. This has been sourced from MDST's warehouse database, which is derived from data contained within *Valuation Office Agency (VOA)* non-domestic Rating List records (a record of all commercial property in England and Wales by floor space function and location, collated for Business Rates purposes). The logistics and distribution floor space contained within the VOA Rating List records is considered to be:

- Floor space designated as 'warehouse' or similar within a building whose primary classification is 'Warehouse and Premises' i.e. a

[17] The study area accounts for circa 90% of the West Midland's existing large-scale capacity.

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’ where floor space is used to store and distribute goods manufactured at that site.

7.7 For this assessment, only those buildings where the total warehouse floor space (as defined) is greater than 9,000 square metres has been identified and extracted from MDST’s database. This is broadly equivalent to buildings around 100,000 sq.ft or larger, the logistics industry’s recognised definition of a large-scale distribution centre (aka large-shed or ‘big-box’).

7.8 The VOA Rating List is regarded as providing a reasonably robust source of data quantifying warehouse floor space capacity, however a number of caveats need to be understood, namely:

- The VOA is measuring floor space by function in order to calculate a property’s business rates (different floor space functions within the same property attract differing ‘rateable values’). The MDST database only details the ‘warehouse’ floor space (as defined) as recorded by the VOA, meaning other ancillary floor space designations within the building are not included e.g. office, workshops etc.. Consequently, the total ‘headline’ size of the warehouse will be greater once these other floor space functions are included. Other data includes this floor space e.g. CoStar or planning application records, meaning those sources will record the same unit as being larger. Likewise, these other sources may also include units which, at face value, exceed the 9,000 sq.m baseline, but are in fact smaller when only the warehouse element is only counted;
- Units which are currently not subject to business rates will not be included in the data e.g. units under refurbishment or being ‘fitted out’ ahead of occupation; and

- New or recently refurbished units will have yet to be recorded by the VOA and entered onto the Rating List.
- As noted previously, CoStar and VOA definitions on the primary use of space will vary, particularly regarding the separation of manufacturing / warehousing space (with CoStar estimating a higher quantum of large B8 space).

7.9 Different data sources are therefore not directly comparable in terms of total floor space capacity and the number of units. However, a key use of the of the MDST database is its link to freight traffic flows (e.g. GB Freight Model), meaning including any ancillary floor space would generate a false relationship. Also note that while the total quantum of 'warehouse' 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.

7.10 Given the very large scale of this study and its ultimate purposes, differences in stock accounting are considered acceptable.

England and Wales

7.11 With these caveats in mind, across England and Wales a total of 2,542 building units covering 53.8 million square metres of floorspace can be identified currently in warehouse use from the MDST database (end 2022). A breakdown of these figures by standard regions are presented in the table below. The equivalent commercial property data in Scotland is collated by the *Scottish Assessors Association (SAA).* For reference, Scotland currently accommodates around 1.4 million square metres of large scale warehouse floor space, of which around 1.1 million square metres is located in the 'Central Belt'.

Table 7.1 Current (2022) Large Scale Warehouse Capacity England and Wales, by Region

Region	000s sq.m	No. Units	Mean sq.m per unit
East Midlands	11,130	433	25,704
North West	8,472	428	19,794
West Midlands[18]	***7,982***	***406***	***19,660***
Yorkshire/Humber	7,224	341	21,185
East England	6,017	290	20,748
South East	4,333	211	20,536
South West	3,224	140	23,029
North East	1,946	90	21,622
London	1,914	126	15,190
Wales	1,563	77	20,299
Total	**53,805**	**2,542**	**21,166**

Source: MDST Warehouse Database, derived from VOA Rating List

Table 7.2 Current (2022) Large Scale Warehouse Market Share England and Wales, by Region

	Market Share (%)	
	Floor Space	**Number Units**
East Midlands	21%	17%
North West	16%	17%
West Midlands	***15%***	***16%***
Yorkshire/Humber	13%	13%
East England	11%	11%
South East	8%	8%

[18] Includes local authorities outside of the study area – Worcester; Herefordshire; Malvern Hills and Wychavon

South West	6%	6%
North East	4%	4%
London	4%	5%
Wales	3%	3%

Source: MDST Warehouse Database, derived from VOA Rating List

7.12 The table shows that the largest region, the East Midlands, hosts just over 11.1 million square metres of floor space across 433 commercial properties. In terms of total floor space it has a 21% market share, and a 17% market share when considering number of units. The West Midlands region has the third largest concentration of large-scale warehousing in England and Wales, with just under 8.0 million square metres (15% market share when measured by floor space). The average floor space per commercial property in the West Midlands is around 19,700 square metres, below the national average of 21,200 square metres per unit.

7.13 The West Midlands region records around 10% of the population of England and Wales, yet the data above shows that it currently accommodates 15% of total English and Welsh warehouse capacity. Similar to the East Midlands region, it has therefore attracted a quantum of warehouse floorspace significantly above that which its population and wider economy would imply; it is larger than required to handle the volume of cargo distributed into the West Midlands regional economy. This indicates that the region's floor space has a hinterland beyond that of the immediate region, undertaking both a pan-regional and national role.

Study Area

7.14 The table below presents a breakdown of large-scale warehouse floorspace within the study area by Billing Authority (i.e. planning authority level). The area currently records 7.2 million square metres of floor space across 365 properties. North Warwickshire has the largest concentration of warehousing in the region with just under 1 million

square metres of floor space across 38 properties. Much of this floor space is located at the two Strategic Rail Freight Interchanges (SRFIs) in the Billing Area, namely Hams Hall and Birch Coppice (374,000 and 406,000 square metres respectively).

Table 7.3 Current (2022) Large-Scale Warehouse Floor Space Study Area by Billing Authority

Local Authority	000s sq.m	Number Units
North Warwickshire	919	38
Birmingham	758	49
Stoke-on-Trent	704	27
East Staffordshire	627	25
Rugby	506	24
Coventry	453	24
Sandwell	440	33
Lichfield	339	16
Newcastle-under-Lyme	280	9
Stafford	248	13
Cannock Chase	233	9
Wolverhampton	225	11
Warwick	200	12
Nuneaton and Bedworth	192	10
Tamworth	190	10
Walsall	181	13
South Staffordshire	180	7
Solihull	131	8
Bromsgrove	100	5
Dudley	88	7
Redditch	84	5

Stratford-on-Avon	57	4
Wyre Forest	36	3
Staffordshire Moorlands	34	3
Total	**7,205**	**365**

Source: MDST Warehouse Database, derived from VOA Rating List

Replacement Build

7.15 As noted above, there is a continual need to build new large-scale warehousing as a replacement for existing capacity which, over time, becomes life-expired due to:

- Physical obsolescence – whereby an older building has become structurally unsound and requires demolition; and/or
- Functional obsolescence – where the building is no longer able to perform the operational functions in an efficient manner that it was originally designed to undertake.

7.16 Physical obsolescence is now less of an issue as many modern warehouse buildings in the 20-30 year age-range are still physically sound. However, many have become functionally obsolete and the below outlines the key drivers explaining this position:

- **E-commerce**. Many existing buildings cannot accommodate e-commerce fulfilment, or the ability to distribute to retail outlets and handle e-commerce deliveries under the same roof. They were designed to serve a retail market that has changed rapidly over the past few years. Many existing retailers have therefore commissioned more modern facilities (to service their e-commerce platforms) which have directly replaced older distribution buildings (e.g. Marks & Spencer at East Midlands Distribution Centre). Also, new floor space has been built for emerging e-commerce only retailers, such as Amazon or ASOS, much of which has effectively replaced floor space previously operated by 'bricks and mortar'

retailers which have either ceased trading or have radically downsized to address the fall in 'high street' sales.

- **Economies of scale from larger buildings**. Advances in modern ICT inventory management systems means it is now possible to efficiently operate much larger warehouses than was previously the case (20-30 years ago) As a result, many occupiers have sought economies of scale can through merging warehousing operations hitherto based at multiple sites to one new location.
- **Changing market conditions**. As trading conditions have changed overtime within specific companies/sectors and in the wider economy, warehouse operations have needed to relocate in order to remain competitive. Occupiers who previously sourced goods from domestic suppliers but now predominantly import from deep-sea markets may seek a new location at a rail-linked site (served from the deep-sea ports) or even within a port in order to remain competitive.
- **Decarbonisation and electrical power**. More recently, some operators have sought locations at rail-served sites in order to reduce transport costs from the deep-sea container ports and 'future proof' with regards to de-carbonisation. Also, many older buildings were located on electrical grids with insufficient capacity to power warehouse automation equipment or for charging fleets of battery-electric vans, thereby necessitating a new location where electrical capacity is available.

7.17 Essentially, buildings reach the end of their useful economic life and are no longer suitable for their original designed use; a more modern replacement facility is therefore required. Physically sound buildings can be substantially refurbished in-situ for new occupiers or uses. In other cases, it can be more cost effective to demolish the existing unit and 'recycle' the plot for a new building. However, a consequence of this process is that new sites need to be brought forward (or new plots made available at existing sites) in order to allow occupiers to re-locate

to new buildings, thereby releasing the existing facility for refurbishment or demolition. It is also the case that many existing sites do not have plots of the requisite size for a modern large distribution building, and are also located distant from intermodal rail terminals. This also necessitates the need to bring forward new sites with large plots and connections to the national railway network.

7.18 In order to estimate the 'replacement build' element up to 2050, the existing stock of large-scale warehousing in the West Midlands region needs to be considered. This has been undertaken and is detailed above. On the basis that the average useful economic life of a modern warehouse building is 30 years, up to 2035 we could expect around 43% of the existing warehouse stock in the region to require replacement (i.e. 13 years/30 years = 43%). Likewise, up to 2040 we could therefore expect around 60% of the existing warehouse stock to require replacement, and 77% being replaced by 2045.

7.19 This can be considered the 'central replacement build' scenario as we have also considered two further positions where the rate of replacement is either slower or faster when compared with historical trends. In the latter case, we have considered a position where the useful life falls to around 20 years (the 'high replacement' scenario). Alternatively, the 'low replacement' scenario extends the replacement rate to 40 years, meaning that only 58% of the existing warehouse stock in the West Midlands region will require replacement (i.e. 23 years/40 years = 48%).

7.20 The table below shows the estimated 'replacement build' rates to 2045 for all three scenarios for the West Midlands region.

Table 7.4 Replacement Build Rates to 2035, 2040 and 2045

Existing floor space - West Midlands	*7,982*	*000s sq.m*	
	000s sq.m		
	2035	**2040**	**2045**

High Replacement Scenario	5,188	7,184	9,179
Low Replacement Scenario	2,594	3,592	4,590
Central Replacement Scenario	3,459	4,789	6,120

	To 2035	To 2040	To 2045
High - % replacement assuming 20 years economic life	65%	90%	115%
Low - % replacement assuming 40 years economic life	33%	45%	58%
Central - % replacement assuming 30 years economic life	43%	60%	77%

Source: MDST Warehouse Database and estimated replacement rates

7.21 Analysis of CoStar data indicates that in fact based on their age, 85% all large units in the study area will be over 30 years old by 2045. This indicates that the central scenario would be a minimum position to plan for, whilst the high scenario may be over estimating the replacement element. This assumes the 30 year rule of thumb if 'correct'. In reality, units built in the 90s will align to this model as many are now no longer fit for purpose. Those built more recently are done so with the expectation of a much longer life span, but it will take some time before this becomes the dominant position.

Growth Build

7.22 The requirement to operate large-scale distribution centres results from an operational need to receive, consolidate/store and re-distribute cargo (alongside other added value activities such as final assembly and packaging). Therefore, as the volume of goods consumed increases over time, principally driven by a rising population and growth in the wider economy, this will subsequently generate an increasing requirement for additional warehouse floor space. Consequently, new

warehouses are constructed partly to accommodate growing traffic volumes over the long-term (the 'growth build' element).

7.23 In order to estimate the growth build element two factors need to be considered, namely:

- For those commodities which pass through large-scale distribution centres (i.e. excluding bulk and semi-bulk cargoes), the current (2022) volume of goods which are delivered directly to large-scale distribution centres in the West Midlands region; and
- Likewise, the volumes of goods (for distribution centre commodities) that can be expected to be delivered directly to large-scale distribution centres in the West Midlands in 2035, 2040 and 2045.

7.24 Both current and forecast volumes (as described) have been produced using the *MDS Transmodal GB Freight Model*. This is an economic freight demand model which can estimate existing freight flows (by origin-destination, mode, commodity and port for international traffic) and generate forecasts for future years (on the same basis) under different policy and economic scenarios. It has been used to generate forecasts for Network Rail, National Highways and Midlands Connect amongst others.

7.25 For consistency, the updated set of rail freight demand forecasts produced for Network Rail in 2020 (for the years 2023, 2033 and 2043, to inform their long term planning process) have been adopted for this exercise. Using the 'central' scenario (Scenario E), the relevant rail and road forecast traffic volumes as it relates to the West Midlands region were extracted[19]. Values for 2035, 2040 and 2045 were interpolated from the 2033 and 2043 outputs.

[19] While the Network Rail forecasts were for future rail freight demand, road freight forecasts are generated as part of the forecasting process (albeit not published by Network Rail).

7.26 The table below shows the total volume of cargo currently destined for the West Midlands (for commodities which pass through large-scale warehouses) alongside the proportion estimated to be delivered directly to large-scale distribution centres. Based on previous forecasting projects, we estimate this to be 45% of the total tonnage delivered for road freight[20] and all inbound containerised rail traffic. On the same basis, projected volumes for the forecast years up to 2045 are presented. These indicate that for the West Midlands region, an additional 21.8 million tonnes can be expected to pass through large-scale distribution centres in 2045 compared with 2022.

Table 7.5 Forecast Freight Traffic Destined for West Midlands Region

	000s tonnes-lifted			
	2022	**2035**	**2040**	**2045**
Road				
Total	133,503	154,386	165,346	176,306
To warehouse	60,076	69,474	74,406	79,338
Rail				
Total	2,492	3,539	4,279	5,019
To warehouse	2,492	3,539	4,279	5,019
Total to warehouse				

[20] In modern supply chains, goods are generally 'lifted' 2 to 3 times between production/import and delivery to the end user (such as a retail outlet). However the base data used in the GB Freight Model (from the DfT's Continuing Survey of Road Goods Transport or CSRGT) does not record at which stage in the supply chain the goods are 'lifted'. Consequently, the total figure displayed in the table is recording all goods each time they pass from manufacturer/port to distribution centre to retail outlet (e.g. one tonne of cargo lifted 3 times will be recorded as 3 tonnes). A 'filter' therefore needs to be applied in order to estimate the proportion being delivered direct to distribution centres, the balance being deliveries to stores or residential properties. Previous forecasting work estimated that around 45% of consumer commodities delivered by road into the Midlands were direct to large-scale warehouses. This was derived from an interrogation of the GB Freight Model road data, whereby delivery volumes were quantified for those O-D zones in the model which exhibited employment in transport services or warehousing.

	62,568	73,013	78,685	84,356
Growth v 2022		10,445	16,116	21,788

Source: MDS Transmodal GB Freight Model

7.27 The growth in annual traffic for each forecast year, when compared with 2022 levels, have subsequently been converted into the need for additional floor space i.e. the growth build element, using cargo storage density and throughput rates expected at a modern 'high-bay' distribution centre[21].

7.28 The tables below show the forecast traffic growth alongside the additional (growth build) floor space required to handle that growth.

Table 7.6 Forecast Traffic Growth and Additional Floor Space Required

	2035	2040	2045
Traffic growth v 2022 (000s tonnes)	10,445	16,116	21,788
Additional floor space (000s sq.m)	411	634	857

Source: MDS Transmodal GB Freight Model and Consultant estimations as described

Total New-Build and Land Requirements

7.29 By combining the 'replacement build' and 'growth build' elements, the total warehouse new-build which can be expected for each forecast year can be calculated. This is shown in the tables below for the various scenarios.

Table 7.7 Forecast New-build to 2045 (sq. m)

		000s sq.m	
	2035	2040	2045

[21] An average of 1.5 pallets per sqm, 0.8 tonnes per pallet, 18 stock turns per annum and 85% floor space utilisation.

High Replacement Scenario			
Replacement build	5,188	7,184	9,179
Growth build	411	634	857
Total	**5,599**	**7,818**	**10,037**
Low Replacement Scenario			
Replacement build	2,594	3,592	4,590
Growth build	411	634	857
Total	**3,005**	**4,226**	**5,447**
Central Replacement Scenario			
Replacement build	3,459	4,789	6,120
Growth build	411	634	857
Total	**3,870**	**5,423**	**6,977**

Source: MDS Transmodal GB Freight Model and Consultant estimations as described

Table 7.8 Forecast New-build to 2045 (Ha)

		Ha	
	2035	**2040**	**2045**
High Replacement Scenario			
Replacement build	1,482	2,053	2,623
Growth build	117	181	245
Total	**1,600**	**2,234**	**2,868**
Low Replacement Scenario			
Replacement build	741	1,026	1,311
Growth build	117	181	245
Total	**859**	**1,207**	**1,556**
Central Replacement Scenario			
Replacement build	988	1,368	1,749
Growth build	117	181	245
Total	**1,106**	**1,549**	**1,993**

Source: MDS Transmodal GB Freight Model and Consultant estimations as described

7.30 For the Central Replacement scenario, just under 7 million square metres of new large-scale warehouse floor space is forecast to be built by 2045. The high and low scenario forecasts are 10 and 5.4 million square metres of new floor space respectively by 2045.

Rail-Served Floor Space Demand and Supply

7.31 Currently, around 11% of the West Midland region's large-scale warehousing (in terms of floor space) is located at a rail-served[22] site. This is shown in the table below. Nationally, around 8% of large-scale floor space is located at a rail-served site, meaning the West Midlands is marginally ahead of the national level of rail connectivity.

Table 7.9 Rail-served Floor Space in the West Midlands Region

Location	Floor Space (000s sq.m)
Hams Hall SRFI	374
Birch Coppice SRFI	406
Prologis Park Coventry	121
Total – rail-served	**901**
West Midlands Total	**7,982**
% rail-served	*11%*

Source: MDST Warehouse Database, derived from VOA Rating List

7.32 Hams Hall and Birch Coppice SRFIs, where the intermodal terminals are operated by Maritime Transport, handle daily train services to/from all the major deep-sea container ports. Prologis Park in Coventry has sidings alongside some of the warehousing (for conventional box wagons), albeit currently there are no regular train services to the site. East Midlands Gateway and DIRFT SRFIs are located in the

[22] Defined as having access to an intermodal terminal within the same development or in very close proximity that allows container units to be transferred to/from the warehouse using 'works truck' type equipment, or warehouses with a railway siding alongside.

neighbouring East Midlands region, however their close proximity to the regional boundary means they are likely to play an important role in serving the West Midlands region. There are also two stand-alone intermodal terminals at Landor Street (Freightliner Birmingham) and Telford, though currently only Landor Street is handling trains on a daily basis. West Midlands Interchange, a planned SRFI to the north of Wolverhampton, received its Development Consent Order in May 2020 and is now under construction. It has consent to provide 743,200 sq.m of new floor space alongside an intermodal terminal.

7.33 The most recent national rail freight demand forecasts undertaken for Network Rail (alluded to above) assumed a much higher rate of new-build development at rail-served sites (SRFIs). The central scenario was produced on the basis that around 26% of future new-build would locate at a SRFI. This was understood to be broadly in-line with recent planning consents in England and Wales for large scale warehousing at the time the forecasts were produced.

7.34 The planning system should now be making provision for a much greater proportion of future large-scale employment new-build to locate at rail-served sites nationally over the medium-long term when compared with current capacity. This is due to the following reasons:

A. National planning policy, principally the National Planning Policy Framework (NPPF) and the National Networks National Policy Statement (NNNPS), clearly expects large scale freight developments to be built at locations which have access to the railway network (or ports/inland waterways). The National Networks NPS, for example, concludes that there is a ‘a compelling need for an expanded network of SRFIs’. This is reiterated in the recently published *draft* NNNPS (March 2023), which following consultation is expected to update and replace the currently designated document.

B. The large growth rates over the past decade in intermodal rail freight, particularly on flows from the deep-sea ports to the English Midlands and north of England. The national rail freight demand forecasts (alluded to above) suggest this growth will continue to 2043. It is worth noting that these forecasts have 'buy-in' from the wider freight industry and key stakeholders and can be considered the freight/logistics industry's long term demand forecasts.

C. The ability to access cost competitive rail freight services is becoming a key commercial requirement of the logistics industry, particularly for medium-longer distance trunk hauls between ports, NDCs and RDCs. The principal reasons are cost (full-length trains should offer a cheaper option between two rail-linked sites than road freight, even over relatively short distances) and HGV driver shortages. Examples of this trend include:

- Teesport and the Port of Liverpool have begun to contract their own train services to distribute maritime containers from their respective ports;
- Container road haulier Maritime Transport now directly contract train services as the primary means of moving containers from deep-sea ports to inland destinations (principally to mitigate shortages of HGV drivers). Maritime Transport are also the terminal operator at Birch Coppice, Hams Hall and East Midlands Gateway SRFIs, and they have concluded a deal to be the operator at the new Northampton Gateway development;
- Both Tesco and Sainsburys have established rail operations at DIRFT. Tesco operate three trains per day to Scotland, Dagenham and Magor (South Wales); and

- As alluded to above, *very.co.uk* selected East Midlands Gateway for their new NDC as it gave them direct access to an intermodal rail terminal, initially to reduce transport costs from the deep-sea container ports. The development of rail-linked strategic distribution sites is a crucial component in delivering the ability to access cost competitive rail freight services.

D. Perhaps most importantly, the decarbonising agenda and the long-term need to decarbonise road and rail freight is becoming a key issue for the sector. While the increasing use of rail freight has to date been driven by cost, decarbonisation is likely to become a key driving factor going forward. It is recognised that decarbonising HGVs will be challenging; battery-electric HGVs are unlikely to provide the distance range currently provided by diesel powered freight vehicles, E-highways will require a significant investment, meaning they would only cover the strategic network, while there are significant issues concerning the production and distribution of hydrogen (for fuel cells).

7.35 Electrically hauled rail freight is currently the only proven technology than can transport freight over long distances with zero greenhouse gas emissions (assuming the electricity is generated by zero-carbon means). The ability to haul freight over long distances by rail to large-scale warehouses, where it can then be transferred to battery-electric powered HGVs/LGVs for shorter distance final deliveries is therefore likely to become a key requirement for the logistics sector. The development of competitive rail-linked strategic distribution sites is a crucial component in meeting this requirement. Rail freight capacity is also key element of the ability of rail routes to suitably carry freight, as is track gauge.

7.36 Taking this into account, we have therefore considered three scenarios with respect to future warehouse new-build in the West Midlands at rail-served sites (SRFIs). The first scenario considers new-build rates at rail-served sites in-line with the current West Midlands regional capacity

i.e. 11% of future floor space development. Clearly, this does not 'raise the bar', so the remaining scenarios consider a much greater proportion of future large-scale new-build locating at rail-served sites, when compared with the current capacity, to satisfy these policy, commercial and de-carbonising requirements.

7.37 The second scenario has considered the size of warehouse unit that has to date been developed at the existing SRFIs across the Midlands[23] (namely DIRFT, Hams Hall, Birch Coppice and East Midlands Gateway) and those consented for Northampton Gateway[24]. In this case, the average (mean) size of unit is just over 31,000 square metres, and it is units this size and above that are considered to be attracted to the rail facilities available at a SRFI (the volume and nature of the cargo handled having a propensity to move by rail). Currently, 35% of large-scale warehouse floor space across the West Midlands region is accommodated in units greater than 31,000 square metres. On the basis that this level continues going forward, the second scenario therefore assumes that 35% of future new-build in the study area will be attracted to a SRFI location. The third scenario consequently considers a mid-point position between these two 'bookends', namely 23% of future new-build in the study area will be attracted to a SRFI location.

7.38 The table below quantifies the three scenarios described, based on the Central Scenario plus margin outputs. Again, the *'land required'* figure is simply the gross area of land required to accommodate the new-build forecast (35% floor space to plot footprint ratio) and takes no account of existing consents or local plan allocations.

[23] Source: MDST warehouse database (VOA Rating List)

[24] Derived from the DCO Masterplan

Table 7.10 Forecast New-build and at Rail-Served Sites (SRFIs) to 2045

% Rail-served - Central Scenario			
	000s sq.m		
	2035	**2040**	**2045**
Existing West Mids - 11%	426	597	767
> 31,000sq.m - 35%	1,354	1,898	2,442
Mid-point - 23%	890	1,247	1,605
	ha		
	2035	**2040**	**2045**
Existing - 11%	122	170	219
> 31,000sq.m - 35%	387	542	698
Mid-point - 23%	254	356	458

Source: VOA, GB Freight Model and Consultant estimations as described

7.39 We have considered the quantum of floor space which will potentially be brought forward at SRFIs up to 2045 (supply), as follows:

- Existing rail-served sites with B8 consents where there are vacant plots or completed units that have yet to be let; and
- Sites where consent has recently been awarded but development/occupation has yet to commence.

7.40 *West Midlands Interchange* (promoted by Oxford Properties and Logistics Capital Partners) was granted its DCO in May 2020. On a site covering 297ha, the scheme provides for 743,200 square metres of warehouse floor space alongside a new intermodal terminal connected to the West Coast Main Line (Wolverhampton to Stafford branch). Infrastructure is currently being installed, though an opening date has yet to be publicly confirmed.

7.41 There are no other consented schemes in the West Midlands. An expansion site adjacent to Birch Coppice (on the north side of the A5 in North Warwickshire) is currently the subject of a planning application to the local authority. Being promoted by *Hodgetts Estates*, it would provide around 100,000 sq.m of new warehouse floor space with access to the intermodal rail terminal at Birch Coppice (an overnight HGV parking facility is also planned as part of the scheme). However, at the time of reporting, planning consent has not been granted.

7.42 Logistics operator *Pentalver* (now part of the Freightliner group) was known to be promoting a stand-alone intermodal terminal scheme at their Cannock operating depot (alongside the Walsall-Rugely TV railway line). However, it has yet to be developed and there is no associated warehousing planned for the scheme, albeit there is a significant quantum of brownfield land on an adjacent site.

7.43 The tables below consequently compare the forecast rail-served new-build to 2045 with the anticipated supply as described. The expected short-fall (i.e. where projected supply is not able to meet the forecast demand) is also shown, indicating a need for one new rail-served site.

Table 7.11 Rail-served consents (2022)

	'000s sq.m	ha
Rail-served plots with consents	743	297

Table 7.12 New-build at Rail-served Sites Supply-Demand Balance to 2045, West Midlands

	'000s sq.m		
	2035	**2040**	**2045**
Central scenario - mid-point	890	1,247	1,605
Current supply	743	743	743
Shortfall	-147	-504	-862
	ha		

	2035	2040	2045
Central scenario - mid-point	254	356	458
Current supply	297	297	297
Shortfall	43	-59	-161

8. Completions (Need for Sites)

8.1 Local authorities provided data for completions of units of 9,000 sq. m (c. 100,000 sq. ft) and above from monitoring years 2011/12 to 2021/22. Where data entries were missing, this data was supplemented with data from CoStar.

8.2 The table below shows a summary of strategic unit completions from 2011/12 to 2021/22 by local authority. Over the 11-year period, a total of 3.9m sq.m of floorspace was built out. A large proportion of completions were within North Warwickshire which saw 1.1 million sq. m of floorspace completed across 16 units. Rugby and Birmingham also saw significant completions across the period with 473,000 sq.m and 329,000 sq.m built out respectively.

Table 8.1 Strategic Unit (+9,000 sq.m) Gross Completions by Local Authority (2011/12-2021/22)

Local Authority	No. of Units	Floorspace (sq. m)
Coventry	5	172,792
North Warwickshire	16	1,100,707
Nuneaton and Bedworth	1	21,403
Rugby	15	472,697
Stratford-on-Avon	3	182,589
Warwick	3	47,292
Birmingham	18	328,740
Bromsgrove	1	34,080
East Staffordshire	5	186,105
Lichfield	8	201,018
Redditch	0	0
Solihull	10	256,395
Tamworth	1	12,597

Wyre Forest	0	0
Shropshire	0	0
Cannock Chase	0	0
Newcastle Under Lyme	0	0
South Staffordshire	6	267,323
Stafford	4	253,343
Staffordshire Moorlands	0	0
Stoke on Trent	16	291,820
Dudley	0	0
Sandwell	3	64,517
Walsall	1	16,000
Wolverhampton	2	26,057
Total	**118***	**3,935,475**

Source: Local Authority Monitoring Data and CoStar (2023)

*Some completions consisted of multiple units over 100,000 sq.ft but have been counted together if under the same consent.

8.3 On average, 357,770 sq. m of floorspace was completed per annum. This has been rolled forward over the 23-year forecast- period to 2045, indicating a need of 8.2m sq. m, equivalent to 2,351 ha of land. A plot ratio of 0.35 has been used recognising that 0.4 is likely to underrepresent the scale of land required to deal with larger sites, as reported in the 2021 Leicestershire Warehousing Study.

8.4 The relationship between large unit and large site completions is dealt with in section 10.

Table 8.2 Strategic Floorspace Need – Gross Completions Trend

	Floorspace (sq. m)	**Land (Ha)***
Average annual completions (2012-22)	357,770	102
Floorspace need (2022-2045)	8,228,720	2,351

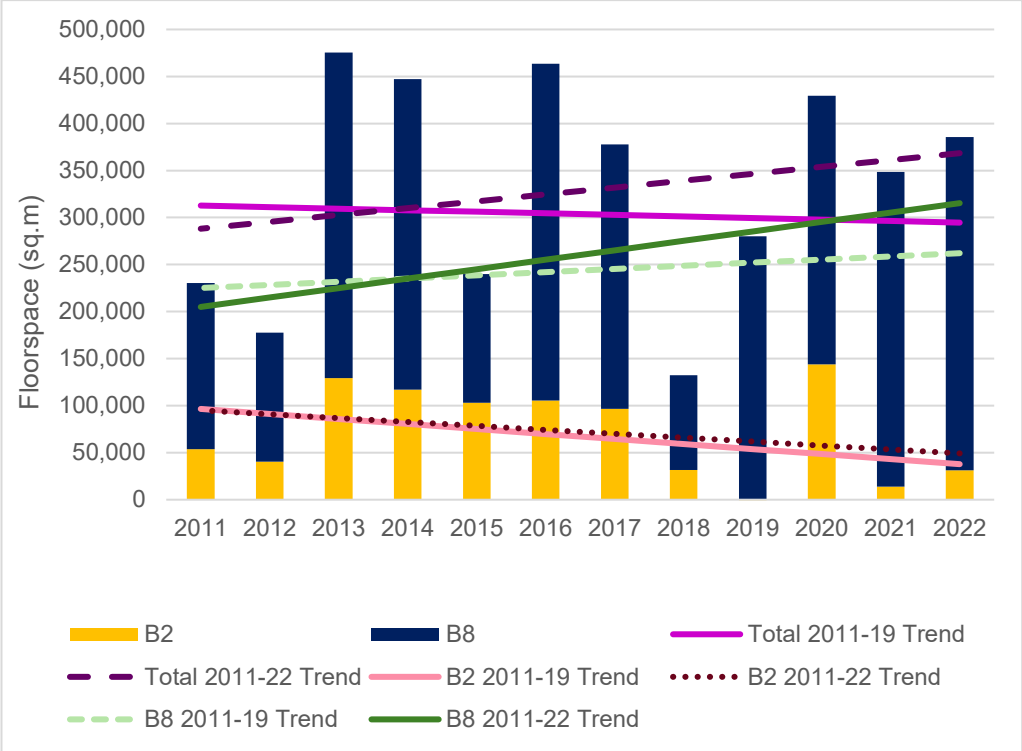
*plot ratio 0.35

9. Net Absorption - Need for Sites

9.1 CoStar provides data on net absorption, a useful market indicator. As noted previously this is the change in total space occupied, the balance between the amount of space moved into and moved out of (i.e. Net absorption = Move ins – Move outs). It provides an indicator of the strength of demand although encompasses demand (and move outs) of secondary space as well as new space. Net absorption can be supply restricted. Data in this section is not adjusted for any implications of supply restriction which is considered in section 10. Net deliveries are the difference between floorspace delivered (i.e. constructed and brought onto the market) and demolished (or otherwise taken out of use and removed from the market).

9.2 The figure below shows the trendlines for net absorption for the 2011-19 and 2011-22 periods representing the trend in year on year growth. The graph shows total net absorption for all strategic units and then net absorption broken down into B2 and B8.

Figure 9.1 Strategic Net Absorption Trend 2011-19 vs. 2011-22 (sq.m)



Source: Iceni Analysis of CoStar (2023)

9.3 Years 2020-22 saw increased levels of net absorption, reflected by the steeper trendline for the 2011-22 period compared to the 2011-19 period which is effectively stable.

9.4 Breaking down the net absorption by use class indicates that the uptick in net absorption is unsurprisingly driven by the logistics market rather than manufacturing. Higher net absorption levels 2020-22 were driven by an increased demand for e-commerce during the pandemic. The manufacturing sector has a negative trendline for both periods and this declining take up in manufacturing (which is still reflects a growth position) will be influenced by move outs of businesses of older stock, which is slowing, and masks a gross demand for new stock.

9.5 The 2011-22 trend effectively contains the two differing growth periods of 2011-19 (low to medium demand) and 2020-22 (high demand). It may be realistic to think that absorption will stabilise in the post pandemic period after the spike. Expectations are that manufacturing

demand will be steady whilst population growth, changing business functions and shopping habits will continue as drivers for e-commerce. The demand rate post pandemic is now stabilising towards the pre pandemic rate. In the longer term (post 2030 to 2040) there is uncertainty on where demand will stabilise with potential levelling off of online retailing. This would need to be reviewed in future evidence base updates.

9.6 According to CoStar, average net absorption for large scale industrial and warehouse units between 2011 and 2022 was 328,293 sq.m per annum, equivalent to 94 ha. This has been rolled forward over the 23-year forecast period, providing a floorspace need of 7.6 million sq. m or 2,157 ha. The difference in the two periods of analysis (2011-19 and 2011-22) is not significant.

9.7 Again, the relationship between large units and large sites is dealt with in section 10.

Table 9.1 Forecasted Need – Net Absorption (sq.m)

		2011-19	2011-22
Average Net Absorption	B2	75,171	72,158
	B8	238,581	260,143
Floorspace need (2022-45)	B2	1,728,943	1,659,625
	B8	5,487,364	5,983,282
Total sqm		7,216,307	7,642,907
Ha		2,062	2,184

Source: Iceni Analysis of CoStar data (2023)

10. Need for sites – Conclusions and requirements by type and size

10.1 The models in the previous chapters (7-9) have provided a range of indicative forecasted floorspace (i.e. unit based) needs for the 2022-45 period, however there are a number of adjustments that need to be considered such as:

- Suppressed demand
- Margin for flexibility
- Relationship between strategic units and strategic sites
- Recycling of sites

10.2 The land need indicated in this chapter refers to gross site areas, accounting for the need for infrastructure, landscaping etc. Floorspace need is converted to land need using a plot ratio of 0.35 for road sites and 0.25 for rails which has been developed through case studies of existing strategic sites and used in other strategic sites studies such as Leicester and Leicestershire (2021). There may be instances where these ratios are lower taking into account specific landscape issues or accommodating biodiversity net gain.

Suppressed Demand

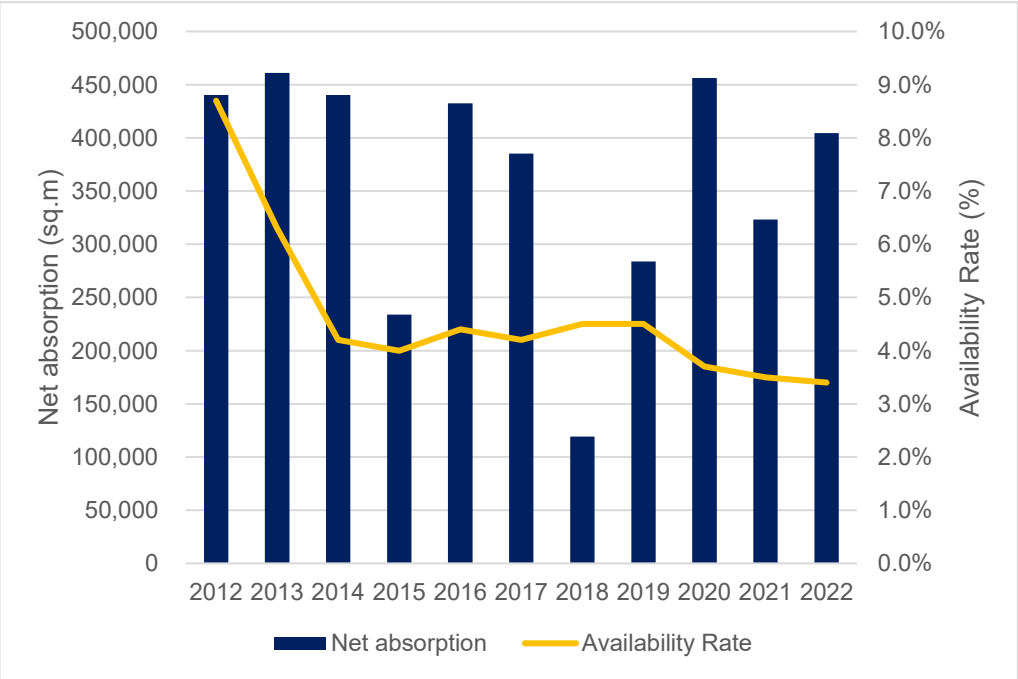
10.3 When there is insufficient supply in the market, demand cannot be accommodated for and therefore can be considered ‘suppressed’ with prospective occupiers unable to find suitable space. Ongoing supply shortages can deter inward investment and growth.

10.4 Using forecast trends for metrics such as completions and net absorption in markets where there has been long term supply shortage can therefore under-estimated future demand, as the ‘true’ market demand is not reflected in historical trends.

10.5 As noted previously, it is widely considered[25] that a minimum of 5% vacancy (and availability) is needed for a healthy market, to allow for new occupiers to move into the market and existing occupiers to find new space or expand.

10.6 The figure below shows the historic availability rate (space advertised rather than vacant) and net absorption for strategic units in the West Midlands study area. The availability rate has been below 5% since 2014 and since 2019 has been below 4%, indicating that the market is supply constrained. As a result net absorption has been suppressed as some occupiers looking to move into or within the West Midlands are unable to find space, so have either 'not expanded' or gone elsewhere in the UK / abroad. This persistent position is a brake on the economy of the West Midlands.

Figure 10.1 West Midlands Strategic Units - Net Absorption and Availability Rate (2012-22)



[25] Found in a number of publications, including GLA's Land for Industry and Transport Supplementary Planning Guidance (SPG) and British Property Federation Levelling up of Logistics 2021

Source: Iceni analysis of CoStar

10.7 A ‘suppressed demand’ model has been developed by Savills and set out in the British Property Federation’s Levelling up of Logistics 2021 report[26]. This ‘tops up’ historic take up to where it would have been at 8% availability. Whist the model is not established in Planning Practice Guidance, and not been adopted in Plan evidence, it is considered useful as a sensitivity scenario in this WMSES study where the market appears to have been consistently suppressed below even 5% availability over a number of years. It does assume that the market ‘wanted and will want’ this level of take up consistently, which may not necessarily be the case.

10.8 Savills’ preference for the availability ‘target’ is 8%, with 5% being a recognised minimum. However for strategic units and strategic sites this 8% is considered more optimistic than the wider market, partly as build to suit rather than spec build is more common for very large units which would certainly mean typically lower vacancy and potentially lower availability depending on marketing and pre-let strategies. For example, a number of permitted schemes remain unadvertised via availability indication on CoStar but have been confirmed as seeking pre-let. Furthermore, Savills analysis[27] (published April 2022) estimates that the all unit (small and large) market suppressed demand uplift in Birmingham and Coventry is 29% and 21% respectively, compared to a 97% uplift associated with the regional strategic market suppression at 8% as assessed herein. As a result, it is considered that a rate lower than 8% is a reasonable minimum and an availability rate of 5% has been carried forward under a ‘Low’ scenario and an 8% rate under a ‘High’ scenario suppressed demand scenario. The ‘High’ model

[26] https://bpf.org.uk/our-work/research-and-briefings/

[27] https://www.savills.co.uk/research_articles/229130/326438-0

provides a more optimistic sensitivity than for example the completions trend. The steps involved in the calculation are:

- Available floorspace (C) is calculated by multiplying the inventory by the availability rate.
- To calculate the floorspace required to achieve an 5/8% availability rate for each year, the availability rate (B) is taken away from 5/8% and the residual is multiplied by the inventory (A). This produces the figure in column F.
- The ratio of net absorption and available floorspace is calculated for each year (E = D/C) and the average is produced.
- For each year that the availability is below 5/8%, the average ratio (57%) is multiplied by the floorspace required to reach 5/8% availability to estimate each year's suppressed net absorption (G=X%*F) and then the average of this is calculated.

10.9 The suppressed demand need at 5% and 8% availability has been run and the results are detailed in table 10.2, with the full models detailed in Appendix 5. The average annualised suppressed demand is rolled forward over the planned period (multiplied by 23) to provide a 'top-up' of:

- 1.6 million sq. m or 446ha of need under the 'Low' scenario (5% availability) and
- 7.3 million sq.m or 2,100 ha under the 'High' scenario (8%).

10.10 This is in addition to the base historical net absorption trend and represents a 97.3% uplift at 8% and 4.2% at 5% historic top up.

Table 10.1 Suppressed Demand Net Absorption Top-Up (2022-45)

	5% - Low Scenario		8% - High Scenario	
	Sq. m	Ha	Sq. m	Ha
Average suppressed demand	67,936	19	319,379	91
Suppressed demand (2022-45)	1,562,523	446	7,345,723	2,099

Margin

10.11 A margin for flexibility has been added to the forecasted future floorspace need, as is common practice in such studies. This is for three principal reasons:

- In recognition of the potential error margin associated with the forecasting processes; and
- To ensure a 'safety margin' to account for potential delays in individual sites or plots being coming forward for development.

10.12 In this case, a margin of just under 1.8 million square metres has been added, this floor space quantum equating to 5 years of completions in the study area drawn from a 10 year average.

Traffic Growth / Replacement Demand Manufacturing Adjustment

10.13 Due to the nature of the Traffic Growth / Replacement Demand model (section 7) it only provides a forecast for warehousing (B8) floorspace. This then needs to be adjusted to reflect the potential demand for manufacturing (B2) floorspace (whereas the completions and absorption trends already encompass this). In the context of this part of the methodology, a ratio uplift is applied.

10.14 We note there is a difference in B8 floorspace in the table below to the 7,982,000 sq.m of West Midlands floorspace in in Table 7.1. The

floorspace figures in section 7 are derived by VOA datasets, whereas the below is derived from CoStar market data. The variation is due to different data gathering methods. To some extent the CoStar data is an overestimation as in some cases properties that over 100,000 sq. ft but have been segmented into small units and multi-let have been included.

10.15 Despite the discrepancies between the VOA and CoStar datasets, the B2 to B8 floorspace ratio is considered reasonable given stakeholder feedback. According to CoStar, 33.5% of current large scale unit floorspace in the West Midlands is classified under B2 type uses, the remainder B8. Net absorption ratios using CoStar classifications report a 28:72 ratio of manufacturing to logistics. Discussions with stakeholders report that typically a 70:30% split is seen on occupancy between B8 and B2 users. On balance, it is considered appropriate that a 30% uplift be applied to the Traffic Growth / Replacement Demand forecast need as below. This aims to support a land supply on high quality sites to support manufacturing sector investment and growth.

Table 10.2 West Midlands Strategic Floorspace Use Split

	B2 Floorspace	B8 Floorspace	Total Floorspace
Stock (sq.m)	5,452,874	10,805,877	16,258,752
% of total stock	33.5%	66.5%	

Source: CoStar (2023)

Future Needs Summary

10.16 The table below summarises the modelled strategic floorspace needs for 2022-45, with the adjustments discussed above applied.

10.17 As set out previously, the Traffic Growth / Replacement Demand ‘central’ scenario is presented rather than the ‘high’ or ‘low’, as the modelled assumptions around age and replacement of stock best align with the ‘real world’ tested stock age via CoStar.

10.18 The suppressed demand ‘top-up’ is only applied to the net absorption model due to the specific relationship between the net absorption and suppressed demand calculations.

10.19 The Traffic Growth / Replacement Demand model (central scenario) indicates that 18.7% of need is rail-based. This ratio has been used to split the total floorspace needs between road and rail.

10.20 The range of scenarios for floorspace is therefore in total 7.6m to 14.9m sq.m to 2045.

Table 10.3 Summary of Forecast Strategic Floorspace Needs 2022-45 (sq.m)

	MDST Central Scenario			Completions	Net Abs. /SD - High	Net Abs. /SD - Low
	Road (B8 only)	Rail (B8 only)	Road and Rail + 30% B2 Adjustment			
Forecasted Need (2022-45)	6,977,000	1,605,000	11,156,600	8,228,720	7,550,730	7,550,730
Suppressed Demand					7,345,723	319,379
5-year Margin			1,788,852		N/A	N/A
Total			**12,945,452**	**10,017,572**	**14,896,454**	**7,870,109**
Road-based Need*			10,485,816	8,114,233	12,066,128	6,374,788
Rail-based Need*			2,459,636	1,903,339	2,830,326	1,495,321

*Based on the MDST model road to rail split of 81% / 19%

Source: Iceni Analysis

10.21 The table below reports the land based requirement. This assumes that road based need is a 0.35 plot ratio whilst rail is 0.25, as indicated by evidence elsewhere[28] (and 0.25 reflecting the WMI ratio).

Table 10.4 Summary of Forecasted Strategic Floorspace Needs 2022-45 (Ha)

	MDST Central Scenario	Completions	Net Absorption - High	Net Absorption - Low
Total (0.35 plot ratio)	**3,699**	**2,862**	**4,256**	**2,249**
Road Need 81% (0.35 plot ratio)	2,996	2,318	3,447	1,821
Rail Need 19% (0.25 plot ratio)	984	761	1,132	598
Total, road / rail aggregate	**3,980**	**3,080**	**4,579**	**2,419**

Source: Iceni Analysis

10.22 The models above show a range of 2,419 ha to 4,579 ha with net absorption – low scenario model being the lower end and net absorption - high scenario model being the upper end.

10.23 It is recommended that a narrower range is considered appropriate, with the **Completions trend model being the preferred lower end of the range and the Traffic growth / Replacement Demand Central Scenario providing the upper end of the range**. The historic completion rates appear not to have met demand, and even with a margin (which is significant) may continue to fail to do so, therefore the need forecasted under this completions model is considered a minimum requirement.

[28] Warehousing and Logistics in Leicester and Leicestershire: Managing growth and change, Appendix F

10.24 The net absorption models with a suppressed demand uplift have been discounted because:

- The absorption rate with lower 5% suppressed demand rate sits below the completions trend, which in itself has yielded sub optimal low availability and vacancy rates for much of the last decade. Therefore pursuing this strategy appears counter intuitive and misaligned with stakeholder feedback.

- The absorption rate with higher suppressed demand at 8% builds in a rate of availability which is likely to over estimate the nature of the strategic sector requirement, particularly when combined with the shorter term exceptional demand influence associated with the pandemic.

10.25 The recommended range for large units is therefore **3,080 ha to 3,980 ha**, which requires further adjustments as below to translate to strategic sites.

Strategic units vs strategic sites

10.26 The figures above produce forecasts for strategic floorspace (units of +100,000 sq. ft), however the focus of this study is strategic sites. Strategic sites contain strategic units, but for the purpose of this study, are only considered strategic if 25ha and over in size. Therefore there are a number of considerations that need to be taken into account to reconcile modelled forecast need of strategic units and the true need for strategic sites, these include:

- Not all strategic units are located on strategic sites;
- Most strategic sites contain some smaller, non-strategic units;
- And - some need can be met by recycling existing brownfield sites (particularly in the context of the significant replacement demand element).

Strategic Units on Non-Strategic Sites

10.27 Not all strategic units (+100,000 sq.ft) in the West Midlands are located on strategic sites (+25ha). Many strategic units are located on smaller industrial estates, not located on the strategic road network as they serve local need rather than regional or national facing occupiers, or for other reasons including historic or specific choices or a lack of alternatives.

10.28 Using CoStar, all strategic units across the study area were identified and classified based on whether they were (or not) located on a strategic site. This data is detailed by local authority in Appendix 6. The table below summarises the findings, indicating that 36% of strategic units built from 2000 onwards are located on non-strategic sites.

10.29 Stakeholder feedback implied that because of the high demand and shortage of supply, an increasing amount of strategic units are being built on sub-optimal, non-strategic sites. For sensitivity, large units built 2000-2012 were compared to those built post-2012. This revealed that a greater proportion of strategic floorspace built 2000-12 was located on non-strategic sites (43%) than floorspace built post-2012 (28%), indicating that constraint does not appear to have had a significant impact on the overall market.

10.30 Overall, a reduction of 35%[29] has been applied to the forecast strategic floorspace need for the strategic sites, to reflect that a proportion of large unit need does not have to be located on strategic sites.

Table 10.5 Post-2000 Strategic Units – Non-Strategic Sites

	Total Strategic Floorspace (sq. m)	Strategic Floorspace on Non-Strategic Sites	
		No.	%
Built 2000-2012	3,386,362	1,451,412	43%

[29] Rounded

Built Post-2012	2,983,465	820,893	28%
Total	6,369,826	2,286,621	36%

Source: Iceni Analysis of CoStar Data (2023)

Small units on Strategic Sites

10.31 Strategic sites do not strictly contain strategic units and in many cases have several smaller non-strategic units. The floorspace needs modelling does not take account of the additional land needed to accommodate these smaller units and therefore underestimates the overall land need for strategic sites.

10.32 There are benefits to locating smaller units on strategic sites such as allowing smaller occupiers to benefit from the agglomeration effects of strategic sites i.e. attracting labour and sharing infrastructure. Additionally, smaller occupiers are required to support the supply chain and operation of strategic occupiers.

10.33 In order to estimate the uplift needed, assessment was carried out of case studies on a number of strategic sites within the study area, see Appendix 7. This revealed that around 10% of total floorspace on strategic sites is generated by smaller (<100,000 sq. ft) units. Consequently, we have applied a 10% uplift to the forecasted modelled strategic sites need.

Brownfield Recycling

10.34 As noted previously, the need to replace older stock is an important driver of demand, particularly within the MDST model in which it drives 88% of the road need. This means that existing strategic sites should yield opportunities for redevelopment and intensification – although this will require an improved vacancy rate in the market before it can occur.

10.35 Whilst newer stock will have a 40+ year lifespan, it is assumed that a majority of current stock needs replacing approximately every 30 years (even if this changes in the future) so consequently by the end of the study period (2045), stock built pre-2015 will need to be replaced. Changes in EPC rating requirements are likely to play a role in driving this.

10.36 It is assumed that 20% of the road replacement build and 20% of the total rail need within the MDST model can be replaced on site, which is applied to all strategic stock (large units) on strategic and non-strategic sites. The results of this are shown in the table below – the overall need for road and rail is reduced by 626 ha, from 3,980ha.

Table 10.6 20% Recycling Adjustment MDST Model

	Road		**Rail**	**Total**
	Replacement Build - Road	Growth Build - Road		
B8	6,120,000	857,000	1,605,000	8,582,000
+30% B2 adjustment	7,956,000	1,114,100	2,086,500	11,156,600
-20% recycling	6,364,800	1,114,100	1,669,200	9,148,100
5-year margin	1,488,970		339,882	1,788,852
Total	8,927,870		2,009,082	**10,976,952**
Need (Ha)*	2,551		804	**3,354**

*0.35 plot ratio for road, 0.25 for rail

10.37 As noted the adjustment above applies a 20% recycling rate to **all** large units on **strategic and non-strategic sites**. There is considered to be a greater probability of on site recycling at strategic sites which are more likely to be in optimum locations.

10.38 There is 4.2 million sq. m of strategic floorspace located on existing strategic sites[30], of which 2.7 million sq. m was built pre-2015 and therefore may need replacing during the study period. Overall this is equivalent to 65% of strategic stock (figures differ from that of the age of units when taking into account non-strategic sites where they are typically older).x

10.39 Taking into account refurbishment potential, it has been assumed that 50% of the pre-2015 stock on strategic sites will yield opportunities for recycling future demand for strategic sites. It is assumed other stock not recycled will go to other uses or be broken down into smaller units. This is in part because some historic strategic sites are in sub-optimal locations. This 50% yields c.1.4 million sq.m of floorspace, equivalent to 390 hectares, which can be netted off the overall need for new sites.

10.40 The MDST model has already had a 20% brownfield recycling adjustment applied for all sites and therefore a further 30% (234ha) of pre-2015 floorspace is netted off to total 50% overall, equivalent to 860ha in total.

Table 10.7 Strategic Unit Stock on Strategic Sites by Age Band

Period Built	Floorspace (sq. m)	Proportion of current stock
Pre-1980s	182,706	4.4%
1980-1990	403,588	9.6%
1990-2000	680,932	16.2%
2000-2005	498,423	11.9%
2005-2010	494,248	11.8%
2010-2015	472,343	11.3%
Pre-2015 Total	**2,732,238**	**65.1%**
2015+	1,465,262	34.9%
Total	**4,197,500**	

[30] This counts only strategic units (+9,300 sq.m) units that are located on sites larger than 25ha in strategic locations

Source: CoStar (2023)

Demand – supply balance

10.41 The table below takes into account the various steps and adjustments discussed above to reconcile the initial demand forecasts with the known supply, summarising the demand-supply balance.

10.42 As discussed above, the appropriate range is identified as between the completions trend model which sets a minimum need and the MDST central scenario setting a preferred growth target. Taking into account the steps above, **the adjusted need is in the range of 1,920- 2,282 ha,** of which the road need is 1,555-1,848 ha and the rail need 365-435 ha**. This is considered to be the need for strategic sites across the West Midlands Study Area 2022-2045**.

10.43 Accounting for existing supply, the residual needs **is 548-841 ha of land for road needs and from 67 ha to 135 ha for rail**, indicating a need for a new SRFI site later in the study period.

Table 10.8 Supply-Demand Balance Summary (Ha)

	MDST	Completions
Forecasted Need 2022-45 with adjustments and margin	**3,354***	**3,080**
Strategic sites adjustment (-25%)**	2,516	2,310
Brownfield recycling adjustment***	2,282	1,920
Adjusted Road Need****	1,848	1,555
Adjusted Rail Need****	433	365

Commitments [31]	1,305	
Road Shortfall	841	548
Rail Shortfall	135	67
Shortfall (Ha)	**977**	**615**

*includes 20% recycling adjustment

**downwards adjustment of 35% for strategic units not on strategic sites and upwards 10% adjustment to allow for small units on strategic sites.

*** -390 ha completions model (50%), -234ha MDST model (30%)

****Based on the MDST model road to rail split of 81% / 19%

Source: Iceni Analysis

Quantum and type of sites

10.44 Consideration is given here to

- Phasing of need
- The road / rail split
- Manufacturing and logistics

Road / Rail split

10.45 The position on the road – rail balance has been outlined above in this section, which effectively indicates that one additional (beyond WMI) new rail freight interchange (RFI) in the study area should be operational by 2045. The case for this is both in terms of future demand but also 'policy on' in terms of sustainable goods movements.

[31] Of which 298ha is rail-served (West Midlands Interchange)

10.46 Using the method in this study, if a RFI fails to materialise for any reason (lack of demand or suitable sites) then technically the overall requirement in land terms falls, due to differing infrastructure and plot ratio requirements.

10.47 With WMI currently under construction (2023/24) this is expected to fulfil the 'medium term' rail need of around a decade until at least 2030. However with a broad expectation of a further RFI requirement to be on stream by 2035 and supporting the 2035-2045 period, preparation and planning for this would be underway in the 2025-30 period.

10.48 Bringing forward a RFI is more complex than a road-based site, given the Development Consent Order process, and the significant size, cost and infrastructure requirements. The 'market' will need to drive this and the appetite to do so is likely to be less forthcoming than for road-based sites.

10.49 Potential broad locations based on rail gauge width are set out later in this report.

10.50 If a SFRI is not delivered then the residual rail-need will need to be met at road-based sites with good accessibility to existing SFRI, known as 'satellite' sites.

Size of sites

10.51 As clearly indicated the minimum site size for consideration is typically 25 ha. Across a recommended road need for 548 to 858 ha this is the equivalent of 22 – 34 sites of this size. However, it is far more common now for sites to be upwards of 50 ha, which provide more viability in terms of infrastructure investment. At this scale the range of sites required would be 11-17, which is still considerable. Sites below this 25 ha threshold in the right location and with the right attributes may still meet the needs of strategic sites.

10.52 This study cannot pre-empt the final mix of site sizes and count as in most instances the market will need to identify sites. Some sites will be

delivered as 10 ha extensions to existing, some at 25 ha or below, some of 50 ha and a number will be larger. Ideally at least half of the future strategic sites (6-9) will be at the upper end of the scale i.e. 50ha+ which maximises opportunity for major inward investment and infrastructure. Through the site testing exercise undertaken through this work, which did not consider ownerships boundaries, the average size of site was 80 ha.

10.53 It is important to note that in reality some sites may be below the 25 ha threshold when in the right location and with the right attributes that still meet the needs for strategic sites. Given the scale of the need this would increase flexibility and achievability of authorities in being able to meet this need.

10.54 **As a minimum, it is recommended that at least 11 new strategic sites are planned for across the region in addition to the current pipeline.** This is considered in more detail in section 12.

Manufacturing and Logistics

10.55 As previous it is estimated that around 30% of supply will be required by manufacturing and 70% by logistics based on ratios of stock, take up and market sentiment. This may be distorted by one off single occupier requirements such as a large gigafactory.

10.56 For the total road-based need, of 1,555 to 1,848 ha (from table 10.9) this indicates broadly:

- manufacturing need of around 500-600 ha; and
- general B-class need including logistics 1,100 to 1,300 ha.

10.57 This is complicated by differences in dedicated manufacturing / plant-based manufacturing and general manufacturing at strategic sites.

10.58 At present the dedicated committed strategic manufacturing sites are:

- Peddimore – (40ha out of total 71ha);

- MIRA (42 ha);
- Antsy Park (49ha);
- i54 extensions (44.8 ha);
- JLR Lighthorne Heath (100ha);
- Coventry Airport Gigafactory (127 ha);
- Longbridge (17 ha);

Total: 418 ha

10.59 This meets a significant portion of the 500-600 ha but does indicate the potential for further growth in manufacturing space over the next 20 years of around 200 ha. It is notably that the majority of current supply is in the Coventry and Warwickshire area and not north of Birmingham in Staffordshire other than i54 (which in itself underlines the importance of i54) although there are smaller B2 type sites in Staffordshire. The south of Birmingham focus largely reflects a historic base with manufacturing legacy in Coventry, South Warwickshire and Birmingham conurbation. There is a continued case, as with i54, for policy on support for manufacturing north of Birmingham to support regeneration.

10.60 Additionally, a significant portion of the supply is earmarked for a specific use. Land at Lighthorne Heath (100ha) is earmarked for Jaguar Land Rover / Aston Martin Lagonda only and Coventry Airport (127ha) is reserved for battery manufacturing only. These demands would not be reflected in any 'modelled' need from in past trends, but are rather inward investment. This reduces the general B2 supply to 191ha and the residual need rises to around 300-400ha.

10.61 Much of the further B2 need (300-400 ha) is likely to take place on general strategic sites rather than on dedicated manufacturing / advanced manufacturing zones. Of the remaining further B8 / mixed use road strategic supply, being 589 ha, it would be reasonable assume around 30% or 176 ha will be for manufacturing, this then meets around half of the residual B2 type need of c.300-400 ha. The manufacturing

position appears reasonably well provided for and best served in the first instance by improving the general strategic sites supply, across the region as a whole.

10.62 However there remains a case for further dedicated E(g)/B2 areas with a number of issues reported in the need for and supply of B2 sites (Class E(g)(ii/iii) / B2 with office as ancillary). This includes a preference for freehold sites which are not always available via the major industrial park developer portfolios. This would therefore require sites where infrastructure is provided but plots made available for sale most commonly from under public ownership, as with i54 and Peddimore. More generally, manufacturers may be priced out of the land market.

10.63 Given the B2 concentration to the south of Birmingham, arguably there might be a case for more dedicated B2 investment area in the Staffordshire area notably Stoke / Stafford, although there are already dedicated areas for investment of a non-strategic scale.

10.64 Regarding mixed sites including for logistics, based on the assumptions herein, with a strategic logistics need of 676ha to 994 ha overall, and a broad supply of 589 ha (some 30% of which may be required for manufacturing) there appears to be a considerable shortfall in space following several years of high demand. Of note the Coventry and Warwickshire area is responsible for around half of the current large general strategic sites supply (i.e. non B2), notably Coventry Gateway and Symmetry Park Rugby. Coventry, Rugby and North Warwickshire are at the southern fringe of the logistics ‘golden triangle’ benefitting from M1 / M6 / M42 national connectivity being optimum for a distribution catchment.

Phasing of need

10.65 Phasing is considered in more detail in section 12 drawing on current supply for each area.

10.66 An annualised phasing of total need suggests around 80 ha per annum (road) across the region overall through the period, or 400 ha per 5 years.

10.67 With around 1,000 of ha of current supply, there is around a decade of overall supply, which is less than a Local Plan lifespan. This will vary for local authorities and Opportunity Areas (see section 12) but indicates a strong need to plan for more sites through the 2030s and beyond.

10.68 For general sites, including logistics, the current supply will be less than a decade, and could be around 5 years at the regional level although this is not evenly distributed, indicating more space needs to be planned for.

11. Areas of search: Site Identification and Site / Junction Assessment Methodology

11.1 This section sets out the methodology used to assess the potential of locations for accommodating future strategic sites.

11.2 This assessment partly informs recommendations on ‘broad locations for growth’ (the following chapter) which involves other considerations including market dynamics.

11.3 This assessment has focused primarily on road based sites. Whilst broad parameters are known and considered in the following chapter, the investment decision making and complexity of infrastructure delivery for rail is beyond the scope of this work.

11.4 The purpose of this assessment is to test:

- Whether realistic sites exist to accommodate growth, and how they perform on a range of factors.
- How ‘motorway junctions’ perform under assessed criteria, including those where potential sites exist.

11.5 It is not intended that the assessment of sites be published due to concerns about contesting of results, which would not be beneficial given that the assessments do not inform the recommendations on ‘broad locations for growth’. Detailed site issues are expected to be explored through the preparation of local plans and through the consideration of individual planning applications.

11.6 The assessment should not be construed as providing an employment land availability assessment nor one of site suitability. It is strategic in nature and used to refine areas of search which could potentially accommodate strategic development subject to further testing. Land

availability can only be tested through a call for sites process or using existing site promotions.

11.7 Necessary ‘rule of thumb’ evaluations in this work may have different outcomes when more detailed studies are undertaken, particularly regarding transport modelling as only high-level observations are used to inform this work.

11.8 Taking the above into account, the assessment work broadly follows the steps:

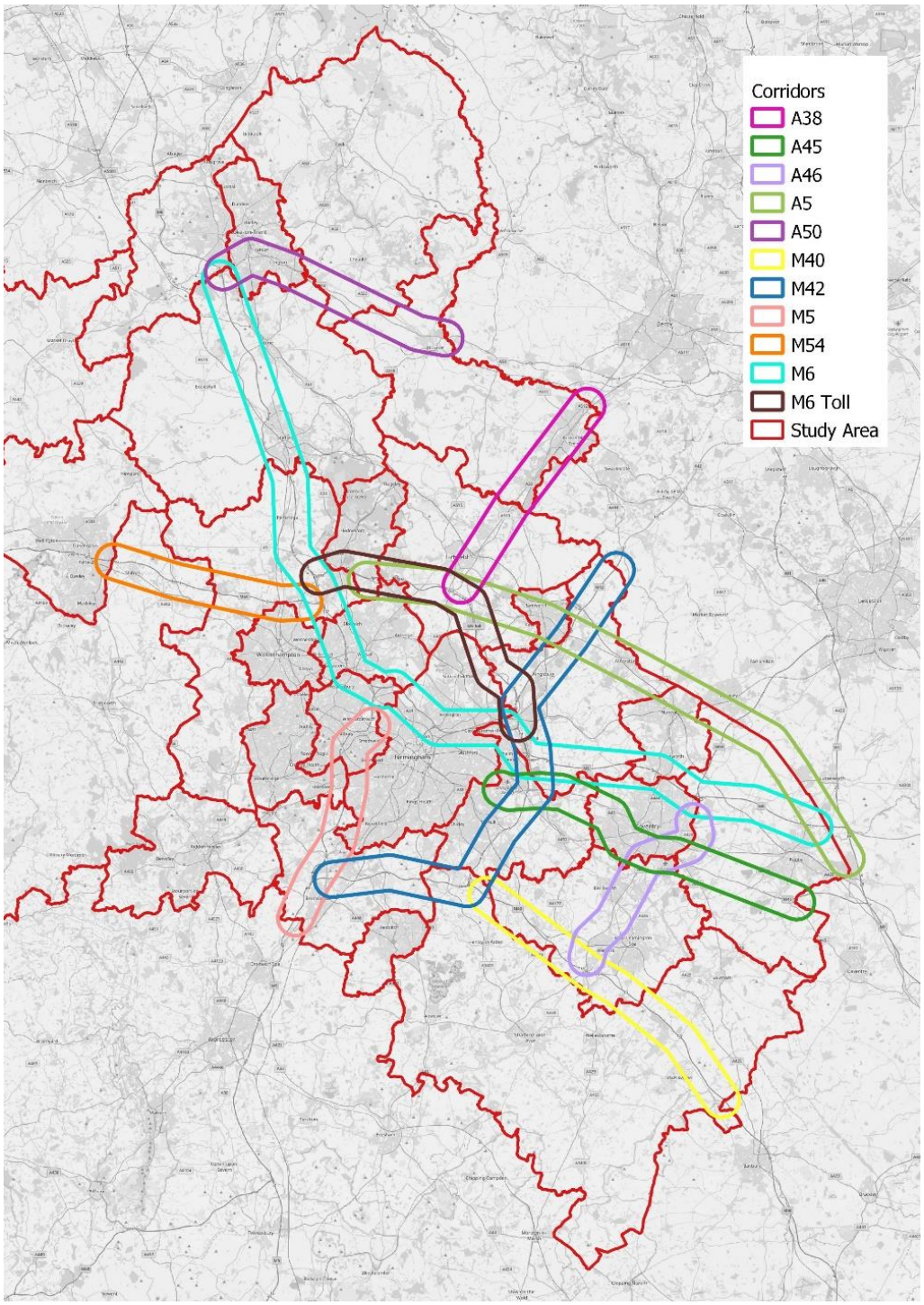
- Defining the Areas of Search (i.e. road corridors);
- Filter out absolute planning constraints;
- Identify residual land parcels (‘sites’) near junctions;
- Filtering out unsuitable junctions or sites (i.e. red flagged capacity constrained junctions, unsuitable / unachievable access);
- Undertake scoring of junctions and sites.

11.9 These are detailed below.

Stage 1: Define Areas of Search

11.10 The motorway and major A-road corridors on the strategic road network have been considered as the starting point for the areas of search for strategic sites. The corridors considered are illustrated on the map below.

Figure 11.1 Corridors of Search

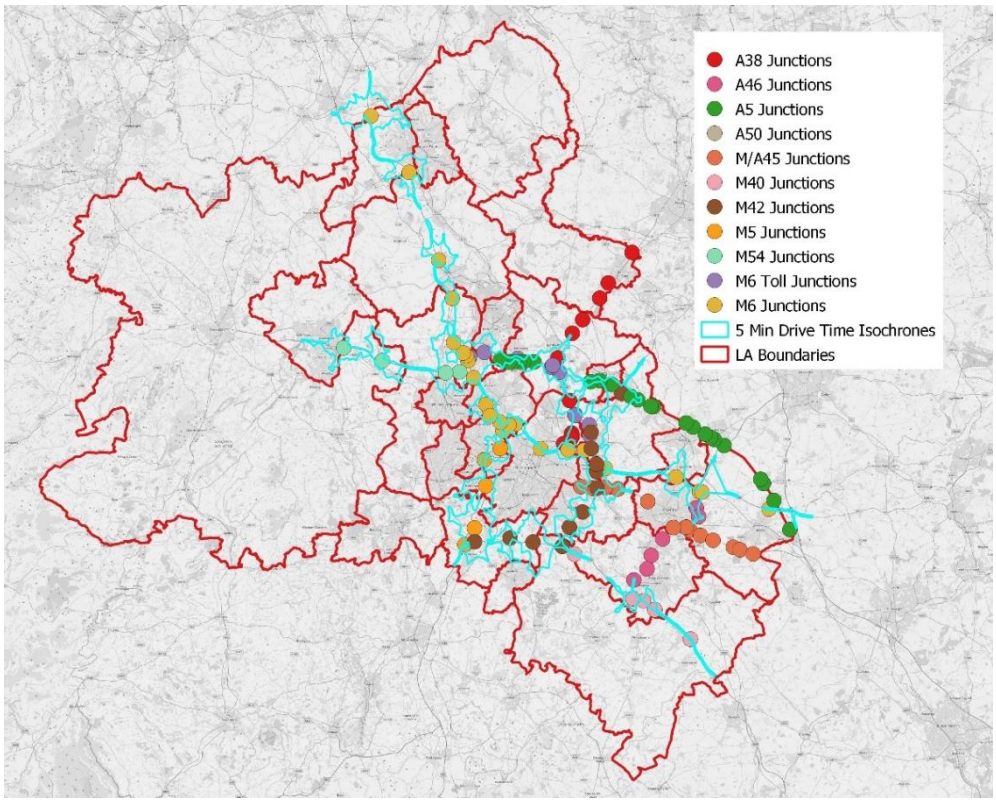


Source: Iceni Projects

11.11 Within the above corridors of search, all junctions were identified. These are listed in full in Appendix 8. Opportunities to provide new motorway junctions have not been considered as this is outside the scope of the study.

11.12 Road access is one of the most important factors for strategic occupiers The area of search has been defined as a 5-minute drive time buffer from junctions where junction connects to A-road; and a 1 km buffer around junctions where A-roads connect to B-roads. This maps below illustrate the junctions identified and the buffers used to identify the area of search.

Figure 11.2 Junctions within Corridors of Search and 5 Minute Drive Time Buffer



Source: Iceni Projects

Figure 11.3 1km Buffer and 5 Minute Drive Time Buffer Example

Source: Iceni Projects

Stage 2: Filter out 'Absolute Constraints'

11.13 The next stage was to 'filter out' land within junction assessment areas that has an 'absolute planning constraint'. These are constraints which are considered to preclude land from strategic B2 and B8 development. The Green Belt is not considered as an absolute constraint under this methodology as a 'policy-off' approach has been taken. Using GIS software, land covered by these types of constraints was removed. The 'absolute constraints' are:

- Environmental designations – SSSI, Conservation Area, National and Local Nature Reserve, Country Park, Ancient Woodland, National Forest, Ramsar
- Flood zone 3 – functional floodplain

- Heritage designations – Scheduled Monument (including archaeological sites), Registered parks and gardens, Registered battle fields, Conservation Areas, Listed buildings
- Air Quality Management Areas (AQMA)
- Utilities – Overhead power lines, High pressure gas pipelines, permitted waste sites
- Existing development (unless known to be poor quality or easily relocated)
- Permissions, adopted housing / employment allocations and strategic allocations / sustainable urban extensions.

Stage 3: Testing Land Parcel Capacity

11.14 The next step, once the 'absolute constraints' were excluded, was to manually identify indicative land parcels within the junction buffer zones defined at stage 1. This was not an employment land availability assessment nor one of site suitability. Land parcels could include multiple adjacent fields, irrespective of ownership boundaries. Manually drawn parcels were intentionally indicative only for the purpose of considering the notional capacity of any particular junction area. A minimum site size of 25ha was used to identify new sites and 10ha when the site is an extension of an existing distribution park. The 25 ha / 60 acre threshold was considered the typical minimum to generate sufficient value to support the delivery of enabling infrastructure.

11.15 When mapping land parcels, physical boundaries such as roads and rivers were taken into account, but land ownership was not. For the purpose of this exercise, it is assumed that land assembly would be possible – which it may not be. This does not prevent alternative sites, including outside the areas of search, being explored in due course.

Stage 4: Junction Sifting

11.16 The next stage involved ruling out of junctions from the final scoring due to identified issues including:

A. The junction is an interchange and cannot be exited;

B. No land capacity at junction;

C. Junction is located in built up / residential areas (i.e. residential on multiple boundaries) which would not be suited to routing large volumes of HGV traffic;

D. Access to the land parcel identified cannot be provided for HGV traffic;

E. The land parcel or junction is within an Air Quality Management Area.

11.17 The junctions ruled out are summarised in the table below. Junctions may be ruled out for a combination of the reasons above however the absence of a land parcel over 25 hectares has taken precedence for the reason in the table below. A total of 66 junctions were sifted out at this stage.

Table 11.1 Junctions Ruled Out During Sifting Stage

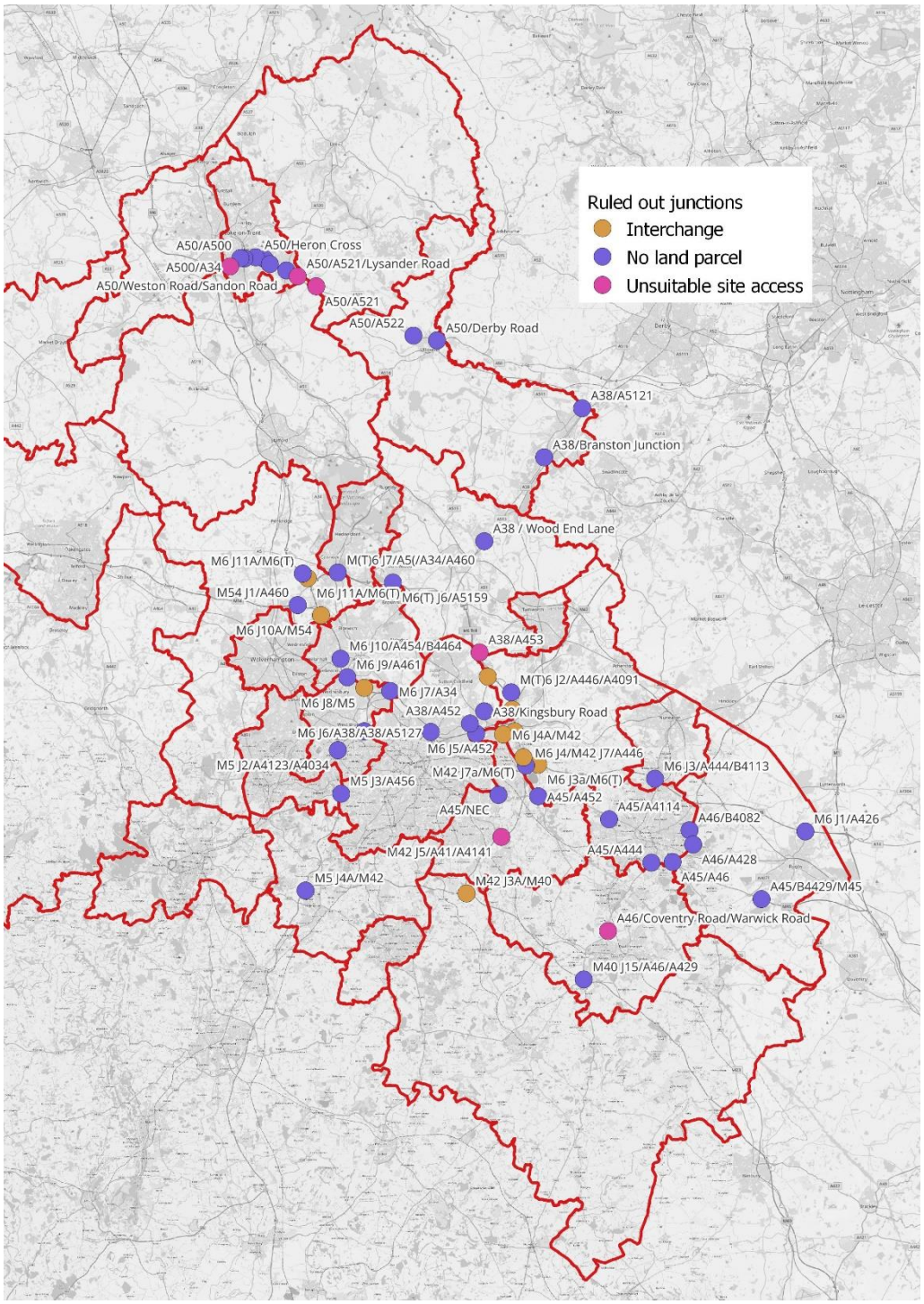
Interchange – no exit	
M6 J10A/M54 M6 TOLL J3/A38 M6 J8/M5 M6 J4A/M42 M6 J3a/M6 TOLL	M6 J11A/M6(T) M42 J8/M42/M6(T) M42 J7A/M6/M6(T) M42 J3A/M40 M6 TOLL J1/M42
No Land Parcel	

• A38/A452 • A38/A5121 • A38/Branston Junction • A38/Kingsbury Road • A38/Midpoint Blvd • A38/Peddimore • A38/Wood End Lane • A45/A4114 • A45/A444 • A45/A452 • A45/A46 • A45/B4429/M45 • A45/NEC • A46/B4082 • A46/A428 A46/Stoneleigh Road • A5/A452 • A5/A5195 • A5/DIRFT Extension • A5/Gypsy Lane/Long Street	• A5/Hammonds Way • A5/Long Street • A5/Spon Lane/Boot Hill • A5/White Horse Road/The Parade • A50/A500 • A50/A522 • A50/Baths Road/Foley Road • A50/Derby Road • A50/Heron Cross • A50/Trentham Lakes Jct • A50/Weston Road/Sandon Road • M40 J15/A46/A429	• M5 J1/A41 O/A4252 • M5 J2/A4123/A4034 • M5 J4A/M42 • M54 J1/A460 • M6 J1/A426 • M6 J10/A454/B4464 • M6 J3/A444/B4113 • M6 J4/M42 J7/A446 • M6 J5/A452 • M6 J6/A38/A5127 • M6 J9/A461 • M6 TOLL J2/A446/A4091 • M6 TOLL J7/A5/A34/A460 • M6 TOLL J6/A5159 • M5 J3/A456
Unsuitable Site Access		
A46/Coventry Road/Warwick Road A50/A521 A50/A521/Lysander Road A500/A34	M42 J5/A41/A4141 M6 J7/A34 A38/A453n	

11.18 The map below illustrates the junctions not progressed to the scoring stage.

11.19 Future work by authorities or promoters may come to different conclusions through alternative methodologies.

Figure 11.4 Map of Ruled out Junctions



Stage 5: Junction Scores

11.20 The junctions that remain after the sifting stage have been assessed and scored. Junction scores are based on:

- junction capacity;
- labour accessibility by car; and
- labour accessibility by public transport.

Junction Capacity

11.21 The scope of this study did not include technical transport assessment or modelling. This has relied on engagement with officers to inform the results. Engagement has been with:

- National Highways, Warwickshire County Council, Staffordshire County Council, Black Country Transport and Transport for West Midlands.

11.22 This collated information for each of the junctions covering known issues at the junction and adjoining road network including: junction capacity; the impact of allocated and permitted development; and potential mitigation that would unlock the junctions for strategic development.

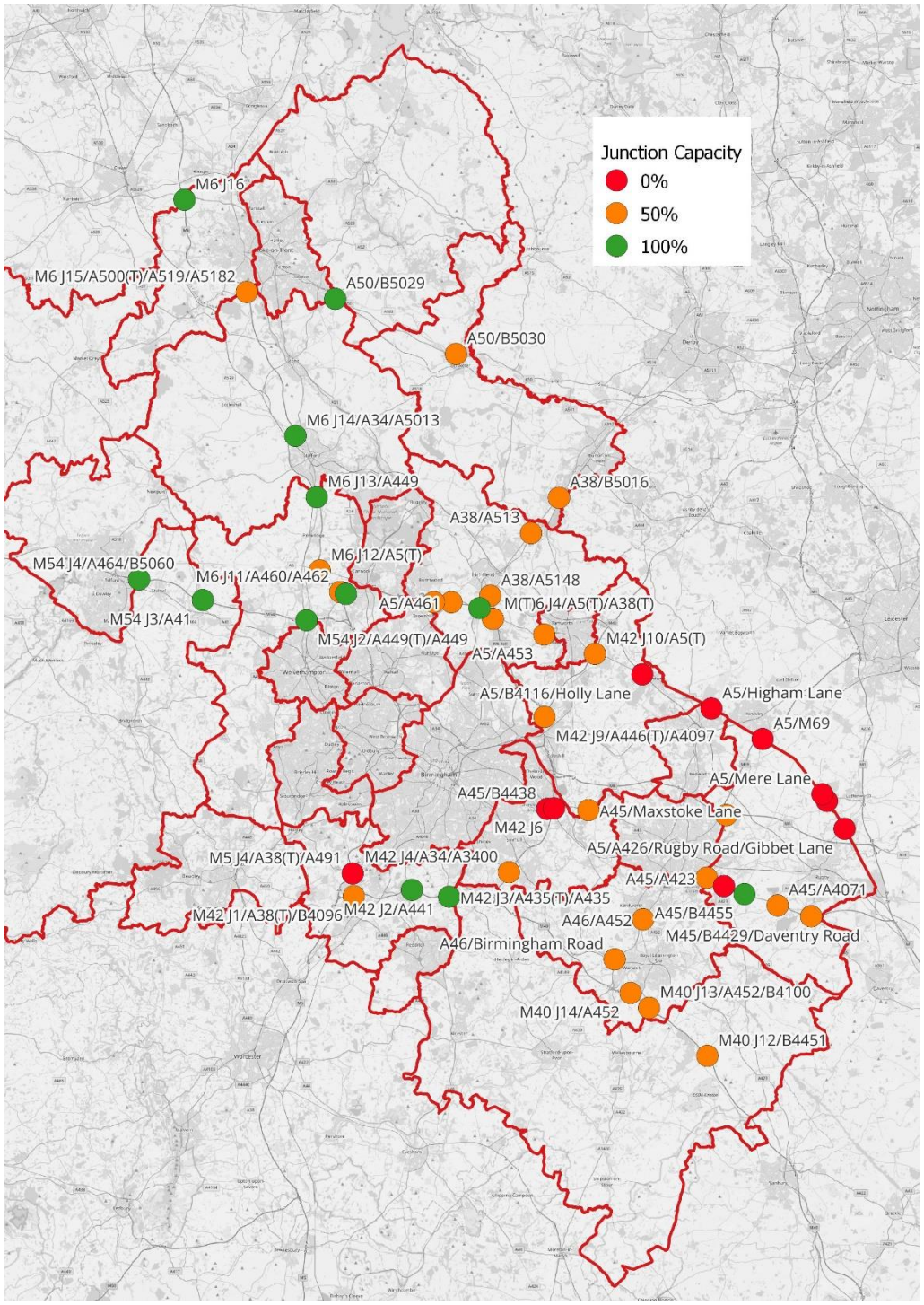
11.23 This information was used to rank the junctions as red, amber or green following the criteria below:

- Green (100%): No major capacity issues at the junction. The development of a strategic site would not have a severe impact. Minimal mitigation needed;
- Amber (50%): Moderate to severe capacity issues at current time or taking pipeline development into account. The junction has the potential to be unlocked for strategic development with developer funded improvements or planned highways improvements;

- Red (0%): The junction is severely over capacity. Planned improvements will only relieve existing or incoming capacity issues associated with allocations or commitments. There is not considered to be achievable mitigation that can be funded by the private sector to unlock the junction for strategic development.

The map below illustrates the junction capacity scores. The fallibility of this assessment is recognised, in so far as mitigation and improvement may be readily possible on junctions identified as amber – or even red in some instances. It is beyond the scope of the work to test the scale and viability of such upgrades. However the scoring of any location is not definitive in terms of the recommendations regarding broad locations for growth and does not pre determine any future outcomes or assessments.

Figure 11.5 Junction Capacity Scores



Red Flag Junctions

11.24 Junctions scored as red are not considered appropriate for strategic development as they require major infrastructure investment (i.e. National Highways Road Investment Strategy).

11.25 M42 J6 will be affected by planned development at the National Exhibition Centre, Arden Cross (HS2) and employment commitments at Damson Parkway. The expectation is that this junction has no further capacity once commitments are taken into account. There is a new junction 5a planned however it is not clear at this time that it will assist in facilitating any further growth.

11.26 The A5 junctions from J10 M42 (Birch Coppice) down to M1 J18 (DIRFT) have been given a red flag rating based on stakeholder feedback. With existing constraints worsened by allocated / permitted housing and employment sites.

11.27 There is currently uncertainty around infrastructure improvements and funding. Infrastructure improvements to the A5 identified in the Road Investment Strategy (RIS), have been scaled back to minor improvements, however following the cancellation of the HS2 northern leg in October 2023, the government published the 'Network North: Transport British Transport' which committed to invest £9.6 billion in the Midlands key projects, one of which is:

11.28 'Committing funding to fix two major pinch points on the A5 between Hinckley and Tamworth, a road serving over 1 million people. We are also providing funding for improvements to the A50/500 corridor between Stoke and Derby, reducing congestion for the 90,000 drivers who use the road each day and ensuring smoother journeys for drivers and freight around Magna Park, Rolls Royce, Toyota and other major local employers.'

11.29 These improvements have the potential to unlock strategic sites along the A5 between Birch Coppice and DIRFT and therefore junctions within this corridor have not been excluded from the study. However, due to the early stage of these improvements there still remains uncertainty and so have been given a red flag score in line with officer recommendations.

Labour Accessibility – Car and Public Transport

11.30 Accessibility to labour is a top locational factor for manufacturing and logistics occupiers. In particular, the availability of more skilled labour is a growing consideration, with the rise of automation providing more technical, engineering and managerial roles. Demographic and skills profiles need to be taken into account to avoid a mismatch between jobs and population and reduce the need for long distance commuting.

11.31 Growing net-zero and environmental requirements have increased the demand for sustainable labour access. Stakeholders report that some occupiers are particularly concerned about public transport accessibility to meet these requirements.

11.32 Both labour accessibility by car and by public transport are assessed. Transport for West Midlands (TfWM) designed an employment catchment methodology to provide comparative labour access metrics for each junction via both car and public transport. Details of the overall methodology can be found in Appendices 10 and 11.

11.33 We note that this scoring metric is based on existing population catchments assessing current achievability and does not take account of planned settlements or housing allocations as this is outside the scope of the study. Future population supply would need to be considered through the local plan process.

Distance to a Rail Freight Interchange

11.34 This is factor for some occupiers and also in terms of sustainable goods movements. However there may be some disconnect between occupiers at a rail served site not using the rail head, with others in a wider proximity utilising the facility. Recognising it is not an important criteria in all circumstances, it is provided as a separate scoring.

11.35 Based on rail operator discussion, the catchment area is up to a 45 minute drive time or a 20 mile radius. Sites closer to rail freight

interchanges are therefore more attractive as they reduce journey times.

11.36 For each junction we have measured the distance to the nearest rail freight interchange. Those included are Hams Hall, Birch Coppice, East Midlands Gateway, DIRFT and West Midlands Interchange[32]. Relative percentage scores are produced by taking the inverse of the RFI distance of the selected junction as a proportion of the largest RFI junction distance.

Weighting

11.37 The following weightings were used to produce an overall score for each junction. Public transport labour accessibility has been weighted higher than labour accessibility by car to highlight the importance of sustainable labour access. Junction capacity scoring takes account of road-based factors both in terms of labour accessing sites at the junction and logistics activity.

11.38 Distance to a rail freight interchange scores do not form the part of the overall weighted score but is considered separately.

Table 11.2 Junction Score Weighting

Factor	Weighting
Junction Capacity	27.5%
Public Transport Labour Accessibility	45%
Car Labour Accessibility	27.5%

11.39 The overall junction scoring results are set out below. Junctions are given a green or amber rating based on whether they are above or below the median score (40% for the overall score).

[32] Although not currently completed it will be operational during the course of the study period.

11.40 The green rated junctions perform best in terms of labour and transport factors. It is important to recognise that these scores are indicative only, as:

- It may be possible to improve junction capacity through mitigation and investment
- Public transport labour accessibility can also be improved through investment in new services
- Future changes in development patterns such as housing allocations will also influence general labour market accessibility
- Scores are relative, so labour access scores for sites further from urban locations are much lower (for example, M42 J6 proximity to Birmingham labour market vs A5 sites proximity to Nuneaton / Hinckley).

11.41 Given the above, the scoring is a broad guide and not intended to define a growth strategy. Scores do not dictate overall outcomes of apportionment and are used to identify feasible locations and a high level overview of performance. This is explained in more detail in later sections.

Table 11.3 Junction Scores

Junctions	District	Labour Accessibility		Junction Capacity	Distance to RFI	Overall score
		Public Transport	Car			
M54 J2/A449 /A449	South Staffordshire / Wolverhampton	33%	82%	100%	85%	73%
M6 TOLL J8/ A460/A4601	South Staffordshire	0%	79%	100%	91%	63%

M6 TOLL J5/A5 /A5127/A5148	Lichfield	21%	66%	100%	73%	63%
A5/A453	Lichfield	55%	75%	50%	86%	62%
M54 J4/A464 /B5060	Shropshire	37%	52%	100%	15%	60%
M42 J2/A441	Bromsgrove	2%	62%	100%	54%	56%
M6 J2/M69/A46/ A4600	Rugby	37%	69%	50%	68%	54%
A45/Maxstoke Lane	North Warwickshire / Solihull	39%	68%	50%	66%	54%
M42 J3/A435 /A435	Bromsgrove / Stratford-on-Avon	3%	50%	100%	59%	51%
M42 J4/A34 /A3400	Solihull	40%	60%	50%	53%	51%
M6 J14/A34 /A5013	Stafford	26%	37%	100%	30%	51%
M42 J10/A5	North Warwickshire	27%	64%	50%	66%	50%
M6 J11/A460 /A462	South Staffordshire	0%	79%	50%	93%	49%
M42 J9/A446 /A4097	North Warwickshire	0%	77%	50%	83%	48%
M54 J3/A41	Shropshire	0%	46%	100%	33%	48%
A50/B5029	Stafford	37%	24%	100%	52%	48%
A5/A461	Lichfield	24%	54%	50%	72%	44%

A5/Barracks Lane	Walsall / Lichfield	24%	54%	50%	69%	44%
M6 TOLL J4/A5 /A38	Lichfield	0%	66%	50%	69%	43%
M6 J13/A449	South Staffordshire	0%	35%	100%	87%	43%
A45/B4438	Solihull	61%	61%	0%	75%	43%
M42 J6/A45	Solihull	61%	61%	0%	75%	43%
A38/A5148	Lichfield	0%	63%	50%	74%	42%
M6 J12/A5	South Staffordshire	0%	60%	50%	87%	41%
M42 J1/A38 /B4096	Bromsgrove	7%	55%	50%	34%	40%
M6 J16	Newcastle-under-Lyme	2%	27%	100%	0%	40%
A45/B4455	Rugby	2%	23%	100%	75%	38%
M40 J16/A3400	Stratford-on-Avon	29%	37%	50%	27%	38%
M40 J13/A452 /B4100	Warwick	21%	37%	50%	59%	36%
M40 J14/A452	Warwick	21%	37%	50%	38%	36%
A38/A513	Lichfield	0%	43%	50%	65%	33%
A45/A423	Rugby	5%	37%	50%	56%	32%

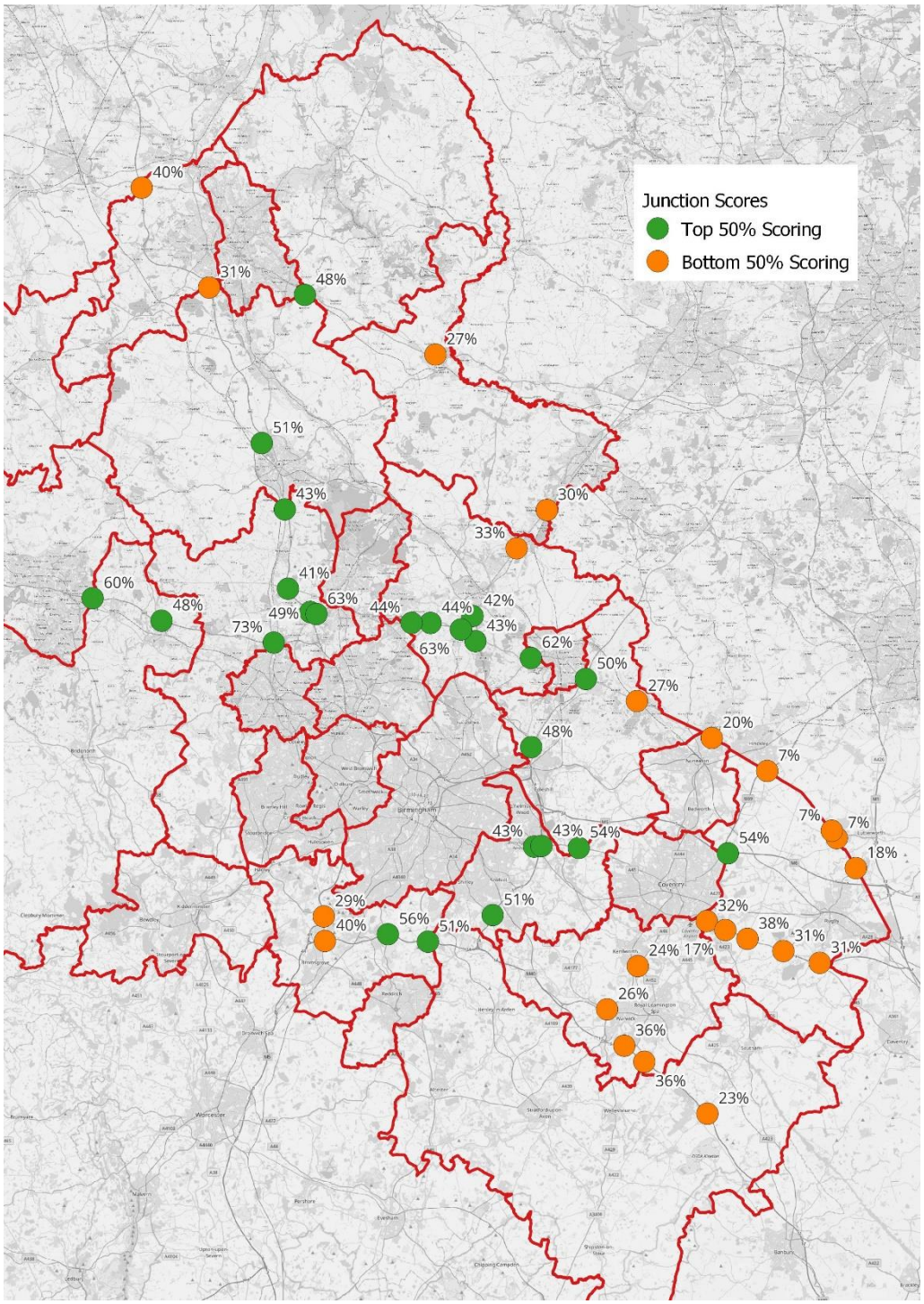
M6 J15/A500 /A519/A5182	Stafford	19%	28%	50%	54%	31%
M45/B4429 /Daventry Road	Rugby	36%	17%	50%	47%	31%
A45/A4071	Rugby	25%	23%	50%	79%	31%
A38/B5016	East Staffordshire	0%	36%	50%	57%	30%
M5 J4/A38/A491	Bromsgrove	11%	58%	0irs%	66%	29%
A5/B4116 /Holly Lane	North Warwickshire	54%	30%	0%	92%	27%
A50/B5030	East Staffordshire	24%	16%	50%	51%	27%
A46/Birmingham Road	Warwick	0%	28%	50%	40%	26%
A46/A452	Warwick	7%	19%	50%	51%	24%
M40 J12/B4451	Stratford-on-Avon	9%	16%	50%	54%	23%
A5/Higham Lane	Nuneaton and Bedworth	31%	26%	0%	81%	20%
A5/A426/Rugby Road/Gibbet Lane	Rugby	15%	32%	0%	88%	18%

A45/A445 /Warwick Road	Rugby	0%	37%	0%	71%	17%
A5/A4303/B4027 /Coal Pit Ln	Rugby	9%	9%	0%	84%	7%
A5/M69	Rugby	9%	9%	0%	72%	7%
A5/Mere Lane	Rugby	9%	9%	0%	72%	7%

NB: Scores shaded green are above the median score

11.42 The map below illustrates the location and overall scores of the junctions.

Figure 11.6 Map of Junction Scores



Source: Iceni Projects

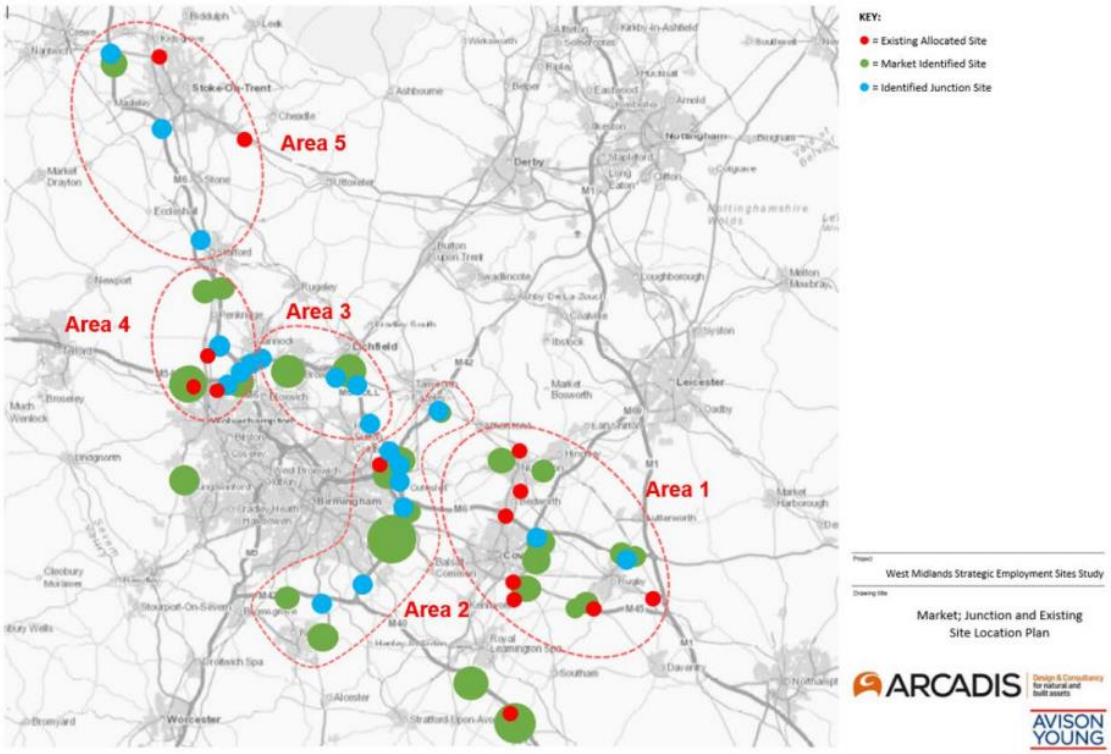
12. Recommendations on locations for growth

12.1 This section considers advice on appropriate growth locations for strategic employment sites.

12.2 The 2021 West Midlands Site Study provided a useful start point in terms of broad market locations for strategic sites (as below). Stakeholders in 2023 generally felt that this remains helpful. Comments indicated that arguably the role of the A38 and M40 corridors are underplayed.

12.3 However the 2021 market locations are generally considered too large to provide a steer on assisting with the development of local plans and lacked advice on the distribution of quantum, phasing and type.

Figure 12.1 2021 WMSESS - Market Locations for Future Sites



Source: Avison Young / Arcadis

12.4 Comparable studies elsewhere, notably in Leicestershire, used an 'Areas of Opportunity' approach derived from a combination of rail corridors and road corridors, drawing on established criteria. This is considered to broadly be an effective way in identifying appropriate growth locations and is therefore taken forwards.

12.5 Overall the approach herein to opportunity area (OA) development encompasses:

- Rail-based locations, focused on a combination of appropriate gauge track, connections and highway network proximity (discussed in full later).
- Road-based locations, focussed on:

V. The strategic highway network routes, given the centrality of this as an investment requirement.

VI. Locations contained in the main market areas, which reflect demand.

VII. Reasonable access to labour, which has reprofiled the OAs around the urban areas rather than the highway network - particularly for Coventry / Rugby and South Staffs / Stafford. This enables breaking down of some of the main highway routes into labour catchments.

VIII. Reflects the junction assessment work undertaken – in terms of broad achievability of sites (but not availability considerations). Suitability and availability will need to be assessed in full through Local Plan processes rather than the high-level work set out in this study.

Road based Opportunity Areas

12.6 The road-based OAs are summarised below and discussed in more detailed later:

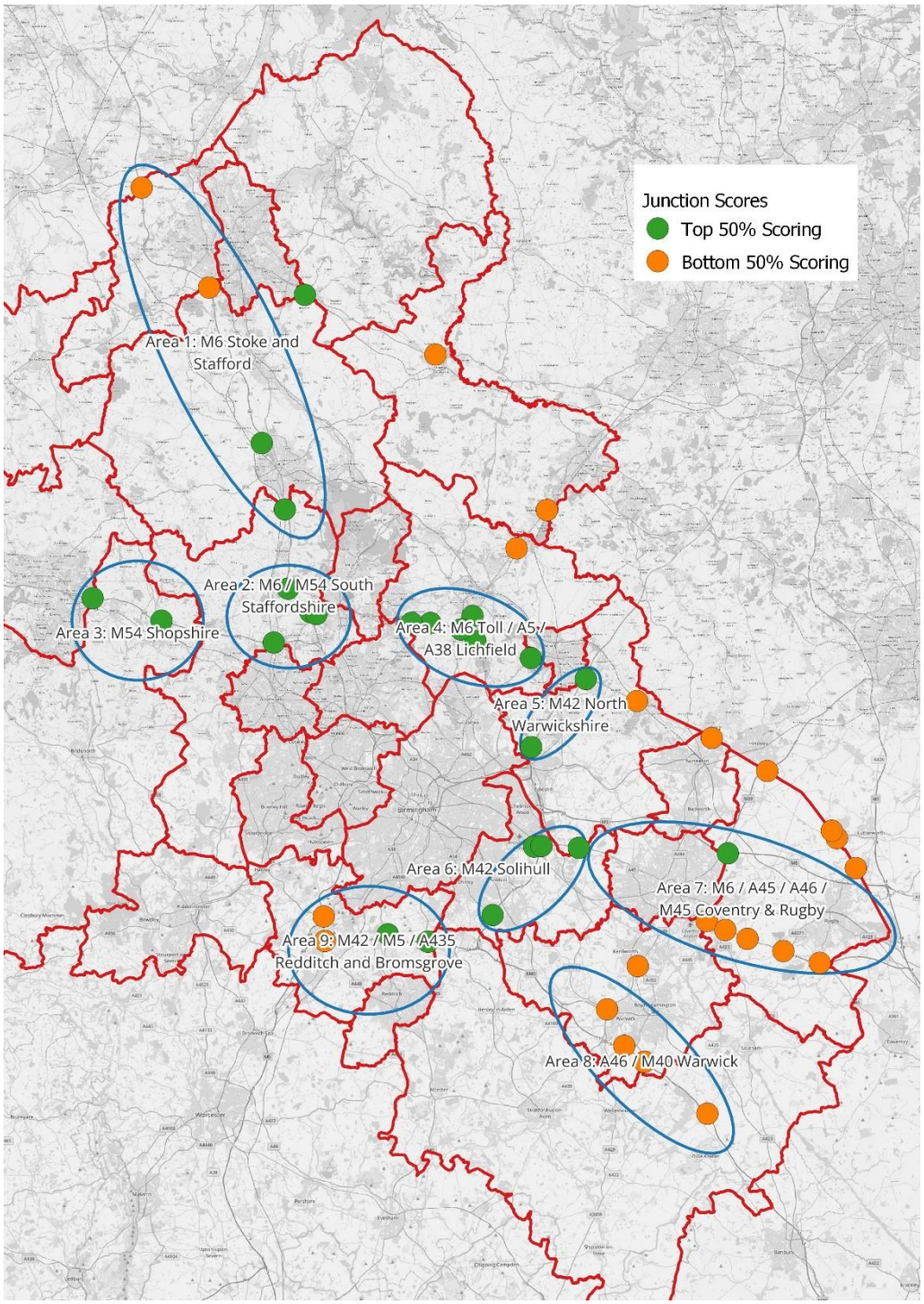
- Area 1: M6 Stoke and Stafford
- Area 2: M6 / M54 South Staffordshire and Black Country
- Area 3: M54 Shopshire
- Area 4: M6 Toll / A5 / A38 Lichfield
- Area 5: M42 North Warwickshire
- Area 6: M42 Solihull
- Area 7: M6 / A45 / M45 / A46 Coventry / Rugby
- Area 8: A46 / M40 Warwick
- Area 9: M42 / M5 / A435 Redditch and Bromsgrove

12.7 Half of the OAs effectively ‘ring’ the Birmingham conurbation along the highway network, reflecting both its scale in terms of the economy, labour market and resulting market demand.

12.8 Perhaps notable by its absence is the A5 corridor, and to a lesser degree the A38 and A50. Regarding the A5, consistent concerns have been raised by highways officers regarding the lack of dualling of the road and capacity constraints. Whilst this is an important corridor, it is not prioritised for growth here for these reasons.

12.9 These OAs are shown on the map below. Note the boundaries are not precisely defined or delineated, and they are shown for illustrative purposes only.

Figure 12.2 WMSESS Road Opportunity Areas



Source: Iceni Projects, MDS Transmodal, Knight Frank, MACE

12.10 These OAs are considered therefore to provide a guide on optimum locations for future (road based) strategic employment sites. This is not to say that sites will not come forward through allocations or

applications in other locations, and where this is the case they would still be considered to contribute to any ‘need’ at the regional level. However the above represent preferable locations in commercial terms and based on assessment work herein.

12.11 In terms of considering how the ‘need’ might be distributed, the two primary factors are considered to be (i) existing supply commitments and (ii) market demand. Through the Local Plan making process further considerations will be required to be assessed, not least the suitability and achievability of sites, therefore the ‘apportionment’ strategy below is intentionally simplistic and high level.

Supply

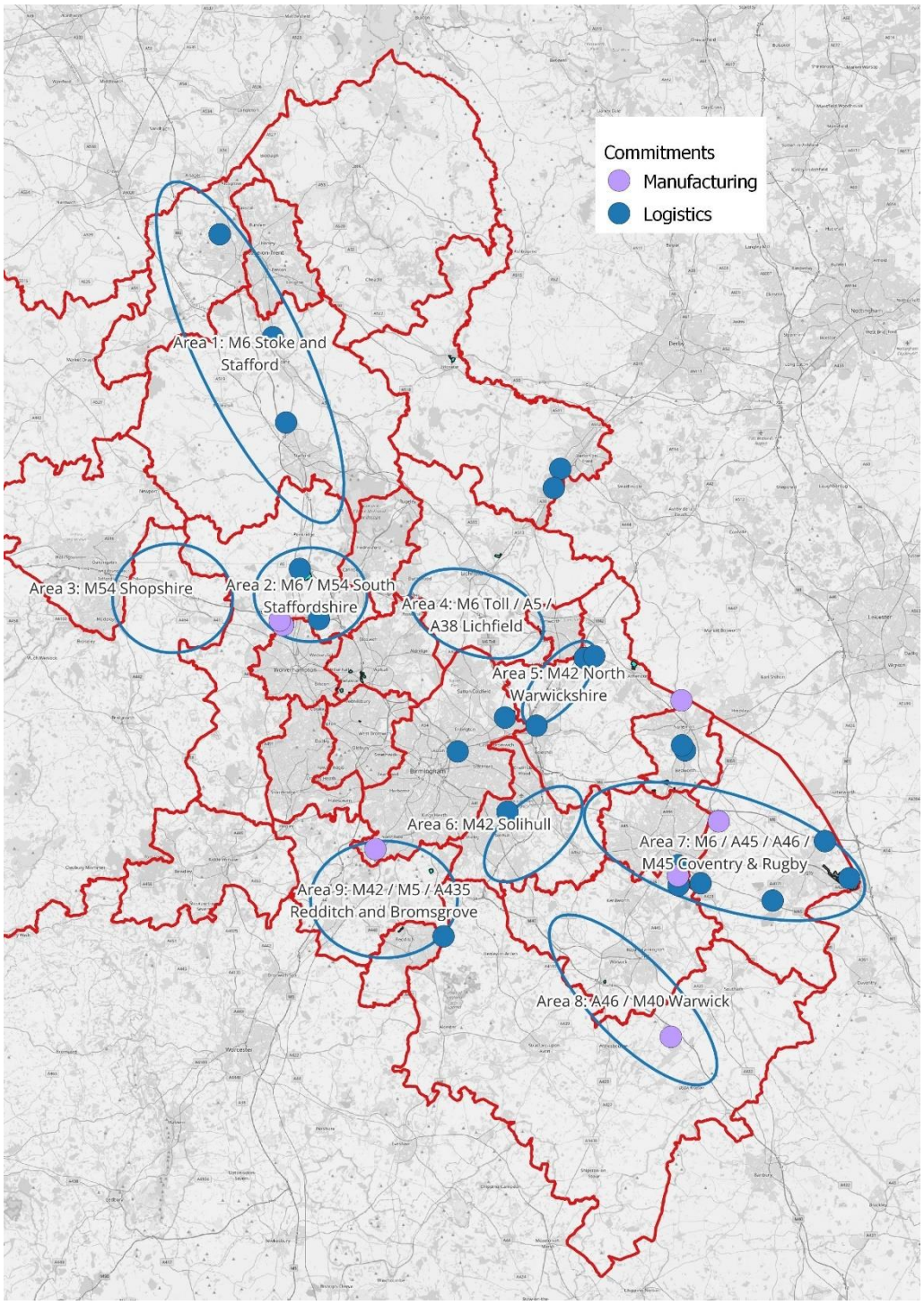
12.12 At present supply is not distributed evenly across the region due to a combination of historic legacy, market demand and policy constraints.

12.13 At the main market / county level (i.e. Staffordshire, Coventry & Warwickshire, Greater Birmingham) Coventry & Warwickshire reports 50% of supply and Staffordshire 36%, including WMI.

12.14 Greater Birmingham has a smaller contribution, which is inevitable given much of the area is urban and supply constrained.

12.15 Around half of the Coventry / Warwickshire supply is B2 dedicated, with the largest general supply at Coventry Gateway South and Symmetry Park Rugby.

Figure 12.3 Commitments and Opportunity Areas



12.16 The table below shows the committed supply of land for strategic development by OA. The only supply in ‘other’ (i.e. outside of the defined OAs) is in East Staffs and Birmingham’s Washwood Heath. Peddimore and MIRA are included in the Area 5 supply and Nuneaton and Bedworth supply included in Area 7.

12.17 For B2 and Mixed/B8, the indicative number of years supply has been calculated for each opportunity area by dividing the committed supply by the historic average 10-year net absorption (take-up). This is not a perfect metric, with past supply constrained areas inevitably reporting a weaker historic take up, and is factored into the recommendations on future supply.

12.18 Due to low historical take-up, Area 8 has a significant oversupply of B2 land, however this reflects JLRs historical presence and the opportunity for expansion. Area 7 has 23 years of B2 supply – distorted by the Airport which would be taken up in a short space of time - and 20 years of Mixed/B8 supply – which may over estimate based on market feedback. Areas 3 and 5 have no supply, reflecting their role as potential new strategic locations.

Table 12.1 Years Supply by Commitments (Ha)

	Area 1: M6 Stoke and Stafford	Area 2: M6 / M54 South Staffordshire and Black Country	Area 3: M54 Shopshire	Area 4: M6 Toll / A5 / A38 Lichfield	Area 5: M42 North Warwickshire	Area 6: M42 Solihull	Area 7: M6 / A45 / A46 Coventry and Rugby	Area 8: A46 / M40 Warwick	Area 9: M42 / M5 / A435 Redditch and Bromsgrove	Other
B2 Supply (Ha)	0	44.8	0	0	82	0	174	100	17	0
B2 – Average Take-up (sq.m)	6,280	7,020	2,541	1,891	3,565	1,229	26,493	1,769	1,093	
B2 – Average Take-up (Ha)	1.8	2.0	0.7	0.5	1.0	0.4	7.6	1	0.3	
B2 Years Supply Ha	**0**	**22**	**0**	**0.0**	**81**	**0**	**23**	**198**	**55**	
Mixed / B8 Supply (Ha)	83.8	38.8	0	0	48.5	39	322.2	0	13	43.8
B8/Mix – Average Take-up (sq.m)	37,028	14,682	1,736	15,461	34,620	16,564	54,900	10,000	9,982	
B8/Mix – Average Take-up (Ha)	10.6	4.2	0.5	4.4	9.9	4.7	16	3	2.9	
B8 / Mixed Years Supply Ha	**8**	**9**	**0**	**0**	**5**	**8**	**20**	**0**	**5**	

Source: Iceni Analysis of Local Authority Monitoring Data (2023)

Market rank and indicative site apportionment

12.19 In order to assist in guiding the apportionment of need by OA, a high-level exercise has been undertaken to balance current commitments against market attributes.

12.20 This includes:

- A ‘market rank’ of ABC (high to low) which Knight Frank have applied. This is based on market strength in terms of rents and take up. This reflects that in some areas demand will be very high, whereas others may struggle to or more slowly deliver substantial quantum;
- Consideration of the size of the area of opportunity / number of LPAs within; proximity to SFRIs; acknowledged Green Belt constraint;
- Balancing the shortfall in supply against the market rank and other factors identified;
- Assuming a road need of 848 ha (upper bound) - (1,855 ha minus supply of 1,007 ha);
- An indicative site count assuming 50 ha sites for mixed use sites and 25ha for B2 sites; and
- Indicative phasing based on the following assumptions:
    (a) A process of identifying pipeline sites to aid delivery in the near term before 2030;
    (b) There is some supply but further delivery from 2030 would be beneficial;
    (c) Further supply in the 2030s is required
    (d) Supply should be considered for the end of the period towards 2040s

12.21 The table outcomes below would achieve 575 ha to 975 ha of supply across 13 – 23 sites against a road shortfall of up to 841 ha. The below can only be considered notional due to unknown future site sizes and having regard to future Local Plan making processes which this evidence does not supersede or usurp.

12.22 Reflecting the potential for manufacturing discussed in section 10, specific locations are identified below. These come with the caveat that achievability may challenging without public sector intervention and combining as part of general supply may be way of attracting broader investment. Evidence has not been provided to indicate that ‘very large’ B2 sites should be considered that would support single occupier large scale requirements, but equally mixed sites would be able to accommodate such an investment.

12.23 Brownfield sites remain a priority, however recycling has already been factored into the needs position which may mean that new sites are more likely to come forward in greenfield locations, and most prime brownfield sites have already been redeveloped.

Table 12.2 Indicative Site Distribution by Opportunity Area (Ha)

	Notional supply – years (hatching=current committed supply)					Market rank	Indicative phasing	Indicative additional strategic site requirement at B8/mixed c.50ha - E(g)/B2 dedicated c.25ha	Narrative – market rank / performance, scale (no. LPA), site supply, SRFIs, Green Belt
Opportunity Area	Type	0-5	5-10	10-15	15-20				
Area 1: M6 Stoke and Stafford	B8/ Mixed					B	C	2	Large OA. Market supply at present but potential for two sites through study period.
	E(g)/B2						B	0-1	Has existing manufacturing focused supply – but non-strategic (sub 25ha). Blended sites may be preferable.
Area 2: M6 / M54 South Staffordshire and Black Country	B8/ Mixed (road)					B	D	1	WMI providing major strategic supply. Potential for additional road based supply later in the period. Constrained GB area.
	E(g)/B2						D	1	i54 has existing supply but potential for extension later in period – not all take up strategic. Constrained GB area
Area 3: M54 Shopshire	B8/ Mixed					C	A	1-2	OA with demand overspill from Black County on M54. Part constrained GB area.
	E(g)/B2						-	0	i54 expected to absorb demand.
Area 4: M6 Toll / A5 / A38 Lichfield	B8/ Mixed					B	A/B	1	Part GB constrained OA. A5/M6Toll route not established location.
	E(g)/B2						-	0	Not established location, preferable alternatives.

Area 5: M42 North Warwickshire	B8/ Mixed					A	B	1-2	Part GB constrained OA. High demand established location. Supply requirement later in study period. Two existing SRFIs.
	E(g)/B2						-	0	Existing supply at MIRA considered sufficient.
Area 6: M42 Solihull	B8/ Mixed					A	C	1-2	Constrained GB area. High demand location with good labour market proximity.
	E(g)/B2						B	0-1	Anticipated market / occupier potential.
Area 7: M6 / A45 / A46 / M45 Coventry & Rugby	B8/ Mixed					A	C/D	1-2	Large OA. Highest existing supply. High demand location. Part GB constrained OA. Supply requirement later in study period.
	E(g)/B2						C/D	1-2	Highest existing supply although Coventry Airport is a single occupier site that may shorten supply period. Further supply at Ansty Park. Potential to attract further investment.
Area 8: A46 / M40 Warwick	B8/ Mixed					B	A	1-2	Large OA. Existing supply is in Warwick but at Coventry, identified in Rugby/Coventry OA.
	E(g)/B2						C/D	1	Existing JLR/AML supply concentrated for single occupier. Potential for further manufacturing agglomeration.
Area 9: M42 / M5 / A435 Redditch and Bromsgrove	B8/ Mixed					C	B	1-2	Large OA. GB constrained OA.
	E(g)/B2						C/D	0-1	High manufacturing labour concentration. Existing supply but potential for further supply if take up increases.
Total	B8/ Mixed							10-16 (500-800ha)	
	E(g)/B2							3-7 (75-175ha)	

12.24 The results above are indicative and are not intended to pre-empt any Local Plan processes. It is recognised that in some, if not all, of the OAs it will be very challenging to deliver the level of supply indicated, given Plan processes and wider constraints including Green Belt. In reality, sites will be of differing sizes; and land constraints and wider policy considerations will influence capacity. However, the high level policy-off capacity work undertaken for this study does suggest that in broad terms these numbers could be theoretically achievable.

12.25 Each of the OAs is discussed briefly below, covering brief market attributes and opportunities.

Area 1 M6 Stoke / Staffs

12.26 This is a strong market sitting equidistant between Manchester & Birmingham on the M6 corridor and is well established in the big box market. The market has seen significant amount of take up on sites in recent years and there is currently a scarcity of pipeline sites in the market. St Modwen Park Stoke Central has been particularly active and St Modwen Park Meaford forms a major part of supply.

12.27 Both Stoke and Stafford have around 15% manufacturing employment whilst Stoke has a higher rate of transport employment. Stafford tends to show higher occupation and skills compared to Stoke-on-Trent.

Area 2 M6 / M54 South Staffordshire and Black Country

12.28 South Staffs adjoins the Black Country which is a major employment market in the West Midlands and home to a significant number of long established national and regional businesses. The majority of stock in the market is made up of older industrial stock, which no longer meets the requirements of modern logistics & manufacturing and i54 has helped to bring forward new stock. West Midlands Interchange will be a step change in the market, catering for the largest occupiers. Looking to 2045 the opportunity area is expected to require additional sites to meet both manufacturing and logistics need.

12.29 Parts of the Black County have relatively high levels of unemployment and a lower skills and occupational profile; and new strategic employment site provision can contribute to addressing unemployment/ deprivation.

Area 3: M54 Shropshire

12.30 The Shropshire market is well established with significant number of occupiers who took space in the 1990s. The area is home to a number of manufacturers who sought to take space in the UK, many of which benefitted from grant funding and low land values. Telford is home to c.22m sq.ft of industrial stock and benefits from 3.7m people within 1 hours drive time so is well supported in terms of labour. The market serves the region and is well access via the M54 which leads directly to the M6 Motorway. In recent years there has been little speculative development, but there has been a number of build to suit pre-lets.

Area 4: Lichfield A5 / M6 / A38

12.31 Lichfield sits well in the West Midlands market, offering a discount to prime Golden Triangle locations, whilst benefitting from excellent road connectivity to the M6, M42 and M6 Toll via the A38. The M1 is also accessible via the A50 which links Stoke to Derby. The location shows a significant discount to other Birmingham locations, but still being within the key drivetime parameters. Fradley Park is the key park in the area. The site is almost at full capacity – although other locations are not known to be available at this time.

12.32 Lichfield tends to higher occupational employment and lower unemployment than other areas although Tamworth tends to be more focused towards lower occupations.

Area 5: M42 North Warwickshire

12.33 The North Warwickshire market is one of the strongest within the West Midlands, owing to their superb connectivity to the motorway network and access into major towns and cities including Birmingham.

12.34 In recent years, rents achieved here have been some of the strongest in the market, with some key deals being achieved at Hams Hall Distribution Park. To the west, Amazon have opened their new centre at Peddimore. Looking ahead, there continues to be a scarcity of development options for occupiers in this market deliverable within the medium term.

12.35 Economic activity tends to be high in North Warwickshire and the district displays higher than average levels of employment in transport and storage. There is in-commuting from other areas, but key locations are accessible from the conurbation.

Area 6: M42 Solihull

12.36 The market is a prime location given the Birmingham proximity and is home a variety of large manufacturing companies together with a large distribution base. With scarce land supply many of the recent developments have taken place on brownfield infill developments. In the short term there are very few consented development sites capable of any form of large-scale development. The potential release of the Damson Parkway site is anticipated and will help release some supply if achieved.

12.37 This opportunity area is expected to accommodate strategic typically non B2/B8 employment opportunities in the form of a mixed use scheme at Arden Cross and the regionally significant HS2 Interchange Station. The 140ha Arden Cross is expected to accommodate c.900,000 sq m of development, the employment floorspace of which is likely to be focussed on office and R&D uses.

Area 7: M6 / A45 / M45 / A46 Coventry & Rugby

12.38 Coventry and Rugby continue to be the key markets in the Midlands and continue to see high levels of demand and resulting take-up. The market is positioned firmly within the “Golden Triangle” with immediate access to the M6/M1 interchange. One of the last major developments

in the area was dominated by SEGRO at Rugby Gateway, completed in 2017. More recently Tritax Symmetry has commenced Symmetry Park Rugby with a number of pre lets to Iron Mountain.

12.39 Rents achieved are some of the highest in the Midlands market and developable land in the short term is reducing quickly, SEGRO Coventry Gateway being the primary opportunity alongside the Gigafactory at Coventry Airport as dedicated manufacturing.

12.40 Coventry has seen strong take up in recent years with some major landmark schemes achieving significant lettings. Most recently JP Morgan & Berictote have developed out the former Toys R Us site at Junction 2, whilst the SEGRO have kicked off the development of their Coventry Gateway site on the A46 with initial pre lets agreed.

12.41 Coventry has relatively high levels of unemployment and elementary occupations, levels of employment in manufacturing and transport tend to slightly lower than in other parts of the West Midlands. Whereas Rugby displays slightly higher than average levels of employment in transport and storage.

Area 8: A46 / M40 Warwick

12.42 The M40 corridor has developed into a strong market in recent years, offering an alternative route into the London and South markets, to the M1 corridor. There has been strong rental growth and levels of demand we have seen continue to grow as occupiers see a discounted rental levels and increased levels of supply to fulfill requirements. The largest potential supply at Lighthorne Heath is not available to the general market as it is reserved for AML/JLR. This location is undersupplied in labour market terms until increased residential delivery occurs and as such would be a less sustainable employment location in the near term.

12.43 Both Warick and Stratford report higher occupational levels and higher skill levels compared to other areas.

Area 9: M42 / M5 / A435 Redditch and Bromsgrove

12.44 The Worcestershire market has performed well in recent years with a number of pre-let and speculative developments successfully transacting to well know occupiers looking to take advantage of the West Birmingham corridors.

12.45 The two key markets in the region include Redditch and Worcester, with rents quickly catching up with its Birmingham neighbours. The areas also benefit from the large labour pools which occupiers are keen to utilise.

12.46 Redditch shows notably higher than average levels of employment in manufacturing, Bromsgrove tends to have higher skill levels.

Rail based Opportunity Areas

12.47 In terms of expanding the quantum of rail-served large-scale floor space, ideally new land should be identified and allocated in the following sequential order, namely:

1. The extension of existing SRFIs where there is spare capacity available at the existing rail freight terminal or capacity can be enhanced as part of any extension;
2. The development of satellite sites which are able to access the existing rail freight infrastructure at the core SRFI site on broadly similar operational terms, again where spare capacity is available at the existing rail freight terminal or capacity can be enhanced;
3. Identifying suitable new strategic sites on previously developed land – if available; and
4. Identifying suitable new strategic sites on greenfield land.

12.48 Give then scale of requirements considered in the long term, it is likely that a new strategic site will be required.

12.49 Identifying potential new sites to meet the forecast shortfall in rail-served land will broadly follow a two stage process, namely:

- In the first instance, identifying broad areas of search, these being areas which will potentially contain commercially attractive sites that are suitable for accommodating SRFIs; followed by

- Identifying and then assessing specific sites within the broad areas of search.

12.50 As noted, this second stage does not form part of this study, and would most likely be left to the market to come forward with suitable proposals, either in the form of seeking allocations in local plans or specific scheme applications e.g. DCO. However, it is appropriate in this case to identify a number of broad areas of search where planners can expect future market interest to be focused. Commercially attractive sites that are suitable for accommodating SRFIs are considered to be ones which meet the following criteria:

- Good connections with the strategic highway network – close to a junction with available capacity on the motorway or long-distance dual carriageway network (e.g. A14), or within a few kilometres of such a junction via a highway capable of accommodating significant volumes of HGV traffic;
- Appropriately located relative to the markets to be served;
- Is served by a railway line offering a generous loading gauge (minimum W8), available freight capacity and connects to key origins/destinations directly without the requirement to use long circuitous routes;
- Is sufficiently large and flexible in its configuration so that it can accommodate an intermodal terminal, internal reception sidings and large 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.

12.51 These criteria have been set out in numerous planning and policy documents over the past few decades, most recently within the National Planning Statement for National Networks (NPSNN). Logically,

therefore, broad areas of search for new commercially-attractive sites can be identified as follows:

- Served by the strategic highway network;
- Served by a railway line offering a generous loading gauge (minimum W8); and
- Appropriately located relative to the markets to be served.

12.52 It is within these areas of broad search that appropriate sites meeting the above criteria are likely to be located. The remaining criteria (including the elements relating to highway junction or railway capacity) would then be applied when seeking it identify and assess specific sites within any broad areas of search which are subsequently brought forward.

12.53 For reference, loading gauge refers to the physical definition of the maximum height and width in cross section of a railway line. The size of the loading gauge of a particular section of track will determine the size of rail freight wagon (or combination of intermodal platform wagon plus intermodal unit) that can be conveyed on that section of line. The size of the loading gauge is determined by lineside features such as overbridges, tunnels, overhead power lines, signal gantries and platform edges. The minimum requirement for intermodal traffic i.e. that which would be handled at a SRFI, is the *W8 loading gauge profile*.

12.54 The map below shows the West Midlands region, with those railway lines which are currently gauge cleared to at least W8 loading gauge profile highlighted in blue lines. In summary, these are the West Coast Main Line and its various branches, the Leicester-Nuneaton-Birmingham line, Coleshill to Doncaster via the East Midlands and the Nuneaton-Coventry-Leamington route towards Oxford and the south coast. Also indicated on the map are the existing SRFIs in the Midlands, West Midlands Interchange which is currently under construction and the proposed Hinckley RFI (currently subject to a DCO Examination).

12.55 Broad areas of search across the West Midlands will therefore be where these railway lines coincide with the strategic highway network and are appropriately located for serving both the regional market (i.e. close to the main urban conurbations) and a national hinterland. This suggests four broad areas of search for new commercially attractive sites, namely:

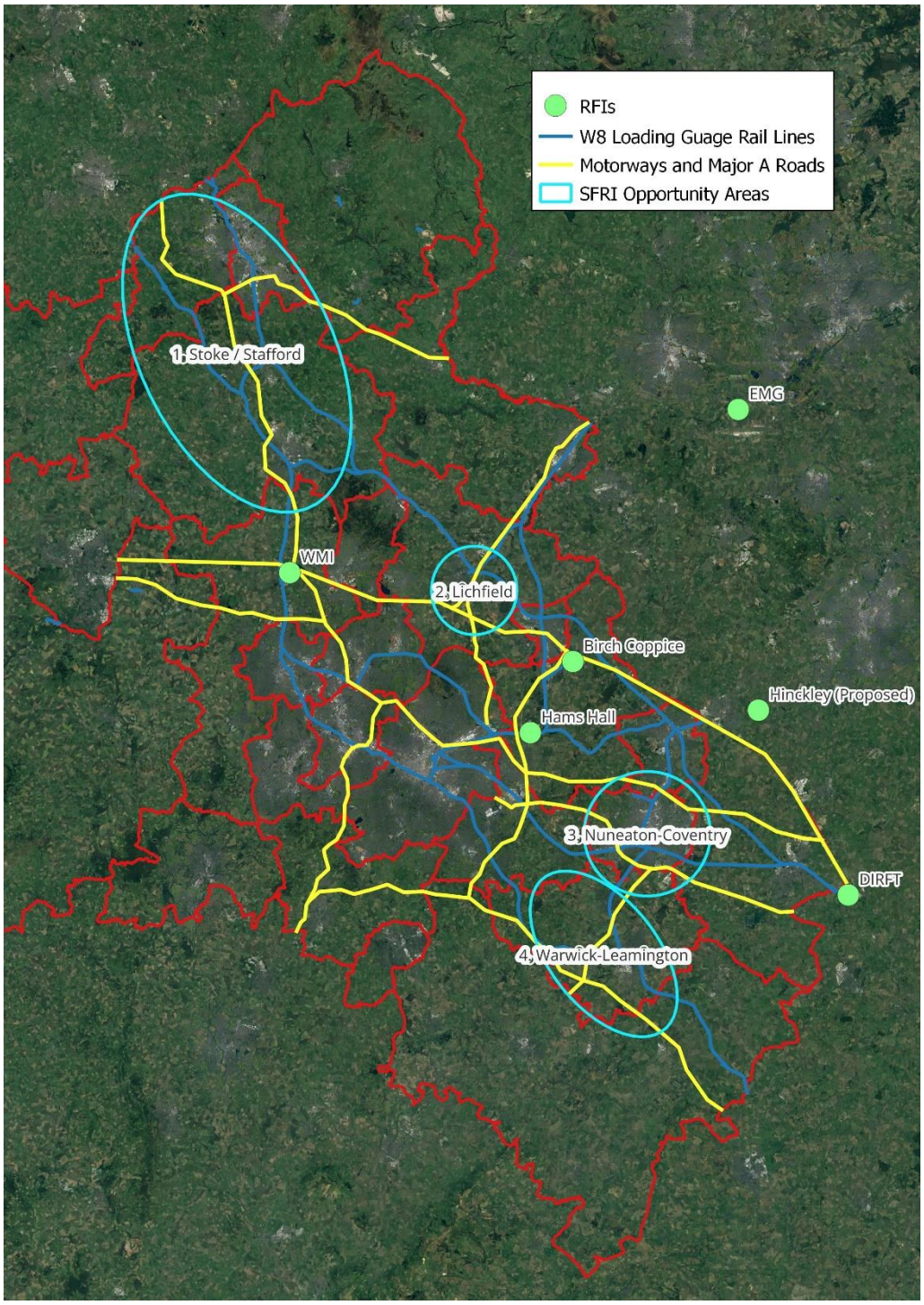
- Stoke / Stafford;
- Lichfield;
- Nuneaton-Coventry; and
  Warwick-Leamington.

12.56 Solihull also sees the freight gauged rail cross with the M42 but insufficient land is considered available for the delivery of a site of suitable scale.

12.57 These sites are shown on the map below. Note the boundaries are not precisely defined or delineated, and they are shown for illustrative purposes only.

12.58 Further work, anticipated to be undertaken by the development market, would need to be developed to test the achievability of these locations including physical capacity and infrastructure viability.

Figure 12.4 West Midlands SFRI Opportunity Areas



Source: Iceni Projects, MDS Transmodal, Knight Frank, MACE

13. Policy Recommendations

13.1 This section considers:

- Relationship with EDNAs
- Take up of land for non strategic uses
- Identifying, allocating and delivering strategic employment sites
- Monitoring

Relationship with EDNAs

13.2 Individual planning authorities are required to undertake separate economic development needs assessment studies (EDNAs) (in their various guises) to accord with the latest planning practice guidance. Some authorities undertake individual studies and some are combined with other authorities in their functional economic market area (FEMA).

13.3 There are 25 local planning authorities in the WMSESS study area, as well as Shropshire, and around 17 different employment and economic studies dating from 2013 to 2022. It is not expected that the outcomes of this WMSESS will be readily reconcilable with local EDNAs due to the different methodologies involved and the influence of cross boundary working.

13.4 EDNAs are required by the PPG to consider labour demand, labour supply, market signals and completions trends, assessed at the local level. They should also consider the needs of the logistics sector as a specific matter (Reference ID: 2a-031-20190722).

13.5 Whilst it is important to consider and triangulate PPG requirements, there may be instances where the relationship between labour demand forecasts and floorspace needs is weakened due changes in productivity, market fluctuation and the need for replacement sites. This

can affect floorspace density assumptions, notably for manufacturing but also logistics. Negative forecasts in manufacturing may counter market signals and should be viewed with caution. These models do not deal readily with the important issue of replacement demand, with new sites in preferred locations needing to replace suboptimal stock elsewhere, nor of inward investment opportunities that may arise.

13.6 Local level (or FEMA) completions trends are more commonly used for EDNA studies regarding B2 and B8 space. It is however not so common for the trend in larger unit deliveries be separated from smaller units, technically differentiating local and strategic need. EDNA requirements may therefore be likely to encompass local and strategic need. They are also susceptible to past policy and land supply constraints.

13.7 It is recommended that EDNAs do look to provide analysis and differentiation between larger unit and smaller units trends and requirements in the LPA or study area. It is also recommended that EDNAs look at both the issue of their strategic and non strategic sites, which can be identified via the characteristics noted elsewhere in this report.

13.8 The need for sites identified in this study, and sites that may subsequently be identified to meet such need, can still respond to both the local need identified in EDNAs as well as the WM strategic need, given that local trends will feed into overall strategic needs. The justification for this will depend on the way local EDNAs have developed their needs model. Sites for local and strategic need should meet the various criteria identified herein including of scale or of extensions to existing large parks or new sites.

13.9 This WMSESS considers pan regional methodologies for ‘need’. With urban areas including the Birmingham conurbation have constrained supply particularly for large sites, the findings for this WMSESS are likely to be higher than local or FEMA studies.

Identifying, allocating and delivering strategic employment sites.

13.10 In order to meet the recommendations for delivering new sites and achieving economic growth, namely the identification of new sites in the OAs identified, it will be necessary to bring additional sites through the Local Plan system. Authorities may elect to work independently on responding to the need or may choose to work at their local FEMA level (or other appropriate strategic geography). Given OA boundaries are intentionally indicative, it may provide a more sustainable response for LPAs to work at the FEMA or similar level to consider most appropriate sites and balance of sites.

13.11 In some of the OAs sites are already being promoted or planning applications are under consideration. This work has not been prepared with any regard to such sites and each will need to be considered on its merits.

13.12 The steps to develop and maintain a portfolio of strategic sites is recommended as:

- Undertaking a call for sites as a part of the Local Plan process, in the context of plans being reviewed at least every five years (NPPF para 32). As above, this may be at LPA or collectively at the FEMA / OA level.
- The call for sites process may consider specifically identifying the need for strategic sites. These sites should meet the criteria set out I section 5, in summary being:
    - Good connections with the strategic highway network (for road)
    - Sufficiently large and flexible - ideally sites would be a minimum of 25ha and readily over 50ha - however in practical terms there will be strategic sites that do fall below the 25ha threshold as they meet other criteria herein, even if they are not extensions to existing parks.

- Is or can be served from an electricity supply grid with sufficient capacity.
- Is accessible to labour and includes a clear sustainable transport solution for the local road network.
- Is located away from incompatible land-uses.
- The ability to deliver high-bay warehousing

- These sites will need to be assessed through the Local Plan process to ensure that they meet the above criteria and other local sustainable appraisal requirements taking into account issues of landscape, biodiversity and network capacity.
- In Green Belt areas it may be necessary to consider testing alternative options and undertaking a review of the Green Belt.
- The benefit of operating at the OA or FEMA level will enable LPAs to develop a consistent narrative for duty to cooperate proceedings / memorandum of understanding and ensure they have a clear response to the overall recommendations.
- Progress sites through the Plan stages towards adoption.

13.13 It is of note that the site allocation process can affect site access - there may be opportunities to remedy some of the accessibility issues identified in section 11 by leveraging demand from multiple sites which might be proximate to/clustered with each other, existing sites, and/or in corridors of new/existing sites. There are examples of this such as Ansty Park in Coventry where a bus route services a range of sites, supporting people from as far afield as Leicester.

13.14 Sites will need different mitigations, notably transport, depending on their use and their location. Getting the policy hooks in local planning as early as possible can help to target these mitigations in the right way as applications come forward and ensure resources can be secured (e.g. through developer contributions) to deliver them. At the time of allocating any of these sites for employment use it should be known

what financial contributions and infrastructure are needed to enable public transport and active travel provision and this included within the site specific policy.

13.15 Early identification can also improve the prospects of improved power being made available to sites early in the development process and being planned for by providers, contrasting with speculative applications which may take longer to bring forward power.

13.16 A challenging factor will be the realisation of manufacturing E(g)/B2 specific sites which are less likely to be brought forward by the private sector due to assumed protracted take up period and potentially weaker values. There is some market failure in this regard with freehold and other B2 requirements going unmet. Where land is required for freehold occupation the most practical remedy is for land to be brought under public control thus ensuring availability for future owner occupier sale and development. Authorities may also elect to use planning policy to restrict Use Class, unit sizes (i.e. sub 100,000 sqft B8 only) or total floorspace by Use Class (max X% of site floorspace to B8) to ensure provision for manufacturing occupiers for a select number of sites, even if up to 50% or 70% is B8 which might be anticipated on mixed sites. Similarly, a proportion of a strategic site floorspace could be restricted to non strategic units (i.e. 10%) as is commonly found on many sites, although in reality the majority of non strategic users will need separate allocations in alternative locations. This study would constitute evidence to justify such approaches as the restriction of Use Classes.

13.17 The allocation of strategic sites may also have implications for housing needs and delivery, where sites could lead to a labour market imbalance. Future local plan evidence should consider the effect of labour demand and supply from employment as well as taking into account commuting patterns that may influence more than one authority (see for example Solihull HEDNA 2020 regarding Arden Cross or Bassetlaw HEDNA Addendum 2022 regarding Apleyhead Junction strategic site).

Take up of land for non-strategic uses

13.18 It is recognised that in some instances large-scale strategic employment sites see the take-up of land for non-strategic uses, for example car-sales or other sui-generis operations.

13.19 Sites allocated specifically for B2 may be more vulnerable to such applications as these tend to take longer to achieve full occupation. Similarly sites in sub optimal locations which are less attractive to the market.

13.20 In part this highlights the importance of maintaining a good range of land across the plan portfolios to ensure choices for other non strategic uses including open storage and sales. This incudes separate allocations for mid sized and smaller industrial areas more suited to diverse uses. These uses may also be less well suited to the criteria needed for strategic sites, preferring proximity to population density and urban areas over the strategic network.

13.21 Allocations should utilise the B2, B8 and E(g) Use Classes including of note the E(g) sub division distinctly from broader Class E definition (see for example the Regulation 19: Pre-Submission Draft of the Shropshire Local Plan 2016 to 2038 SP13. Delivering Sustainable Economic Growth and Enterprise which differentiates a. Primary employment uses in Classes B2, B8, E(g)(i),(ii),(iii) and Sui Generis; from b. Secondary employment uses in Classes E(a),(c),(d),(e), C2, C2A, and Sui Generis Waste Material Recovery Facilities, Retail Warehousing and Sales).

Monitoring

13.22 In order to effectively and consistently monitor the development of strategic sites across the West Midlands, it is recommended that data monitoring and collection are actively pursued beyond the individual authority level. The most useful area to be considered would be the

regional level and at a minimum the county level (Shopshire/Staffs, Cov&Warks, Greater Birmingham, Worcestershire). This process has been effectively deployed in Leicester and Leicestershire.

13.23 The roles and responsibilities for this need to be defined with a particular organisation and/or individual collecting and managing data – potentially WMCA. The individual planning authorities will need to feed in data to the appointed managing organisation.

13.24 The following data sets are recommended for collation, the majority of which should be obtainable through the development control officers or planning policy teams:

- Collate existing supply data in terms of allocations and permissions (information Appendix A3 of this report provides a starting point);
- Identify new allocations and applications for employment sites facilitating the delivery of units 9,000 sqm plus and taking account of the scale of the site and other factors noted previously including proximity to the strategic road network to reflect its suitability as a strategic site;
- Validation date, permitted date;
- Whether allocated / unallocated site; whether Rail / Non rail serving; whether in an opportunity area or not; whether Greenfield / brownfield type and if brownfield the nature of previous use;
- Any known employment data provided with applications;
- Any applications involving losses of existing floorspace;
- Record completed SQM floorspace (i.e. completions) - including mezzanine - and Ha of plots,

13.25 The single most important aspect of the monitoring is the new supply through allocations and applications permitted (rather than completions data).

13.26 If an online system is developed for collecting information it may be possible for officers to enter the data at the point of receipt, for example, at the same time they upload to the local planning portal.

13.27 Otherwise, it is recommended that the data is collected quarterly to provide a useful tool for considering large scale allocations / applications region the county and informing policy review on an ongoing basis.

13.28 It would also be useful for officers to understand the marketplace in terms of take-up of units, net absorption (total additional occupied space in a year after new occupants and lease breaks) and availability across the West Midlands.

13.29 A number of large agents produce regular reports on the state of the regional industrial / warehouse markets which are published free of charge.

13.30 It is recommended that future updates to this work be commissioned at an indicative 5 year interval. This will enable:

- A review of progress on delivery
- An update to market conditions
- A review of future need including market take up, completions and traffic growth / replacement demand – the replacement component for which may be decreasing

14. Conclusions

14.1 This study sets out to provide an assessment of the need for large scale employment investment sites across the West Midlands study area, typically being those of over 25 ha and focused on large units typically of 9,300 sqm and above. The study reports on broad locations for growth, phasing and type, taking into account the current supply portfolio, a review of broadly achievable locations and having engaged with a wider range of stakeholders.

14.2 There is a supply at 2023 of around 1,300 ha of strategic sites, of which c.300ha is rail-served, against an estimated need of up to 2,300 ha by 2045. There is therefore a significant shortfall across the supply portfolio. It is recommended that in the long term there will be a need for an additional rail freight enabled location (of around 140 ha) and a selection of further strategic 'road' based sites that would amount to around a further substantial 850 ha.

14.3 Achieving the levels of supply recommended in this report will be challenging in the context of Local Plan making including the wide range of policy considerations, not least Green Belt. However without a portfolio of investment opportunities, the region will continue to turn away occupiers and constrain economic growth.

14.4 The headline message and conclusions of this study are as follows.

Market

14.5 The COVID-19 pandemic saw demand increases driven by e-commerce against an already strong trajectory although the market has now cooled towards the long term average.

14.6 Vacancy rates for large units have remained sub optimally low since 2014, putting pressure on rents and land values and reducing choice for

business growth and inward investment. Whilst a restricted supply can be beneficial in encouraging brownfield recycling, the market has typically been so over occupied that there is insufficient space to allow for redevelopment.

14.7 The market evidence points to a strong need for additional investment sites to be brought forward across the region to support growth.

Market requirements

14.8 Considerable engagement has been undertaken in developing this study. The key messages regarding strategic sites include:

- Distribution type inquiries make up approximately 75% of requirements compared to manufacturing.
- Ageing stock renewal remains a major driver of demand.
- In terms if unit size, average demand has got bigger – 100,000 sq. ft is no longer considered ‘big box’ with occupiers looking at least 250,000 sq. ft and many +1 million sq. ft. In general, manufacturing units are smaller than logistics i.e. 100,000 – 250,000 sqft rather than 1m sqft+.
- Office space is increasingly an important of the logistics units.
- Sustainability is important to most major developers and occupiers. Meeting needs for modern space that have high ESG requirements.
- Manufacturing specialist sectors include vertical farming, food and drink, medical, robotics aerospace and modular housing building.
- Manufacturing requirements are increasingly big box based rather than plant based. There is uncertainty around plant-based investment (outside of gigafactories).

- There is consistently reported to be a need for an injection of supply in particular logistics, to improve choice and allow for some churn, increasing vacancy and therefore renewal of sites and stock.
- Labour shortage is an issue for both B2 and B8 occupiers and occupiers feel most comfortable where there is access to large pools of labour near main settlements.
- Up to three times more power is needed than compared to 10 years ago due to the shift to automation. Move to electric HGVs will up the power requirement further. Manufacturers in the automotive sector require a significant amount of power and therefore not many sites are suitable. Current power infrastructure is poor in many areas and is provided by the network provider on a first come first served basis.

Future requirements for strategic sites – quantum

14.9 This study uses three main models to assess needs, which are first assessed in terms of large units and then translated to large sites in sqm and ha. The key methods are:

- Completions trends: a recognised method but does risk under estimating future needs given historic undersupply
- Traffic growth and replacement demand: which considers logistics freight based forecast needs plus a replacement of older stock, adjusted for manufacturing requirements (as a proportion of total space)
- Absorption trends (change in space occupied reported via leases): which is also sensitive to past supply side constraints

14.10 Several adjustments are made to these models to take account of:

- Margin for flexibility – 5 years of past completions

- Recycling of sites – assessed at existing strategic sites
- Relationship between strategic units and strategic sites – recognising not all large units are on strategic sites, but some smaller units will be
- Suppressed Demand – applied as a sensitivity on the net absorption scenario.

14.11 Taking into account the steps above, the need for strategic sites is in the range of 1,920 – 2,282 ha, of which the road need is 1,555-1,848 ha and the rail need is 365-433 ha.

14.12 It is recommended that the completions trend set the lower bound absolute minimum need and the MDST Central Scenario model the upper bound, a target stretch. The latter avoids continuing past trends of under supply presented in the completions model**. Therefore accounting for existing supply, the recommended residual need for road range is 548-841 ha of land and rail need 67-135 ha**, indicating a need for a new SRFI site.

- **Supply-Demand Balance Summary** (Ha)

	MDST	Completions
Forecasted Need 2022-45 with adjustments and margin	**3,354***	**3,080**
Strategic sites adjustment (-25%)**	2,516	2,310
Brownfield recycling adjustment* **	2,282	1,920
Adjusted Road Need******	1,848	1,555
Adjusted Rail Need******	433	365
Commitments [33]	1,305	

[33] Of which 298ha is rail-served (West Midlands Interchange)

Road Shortfall	841	548
Rail Shortfall	135	67
Shortfall (Ha)	**977**	**615**

*includes 20% recycling adjustment

**downwards adjustment of 35% for strategic units not on strategic sites and upwards 10% adjustment to allow for small units on strategic sites.

*** -390 ha completions model (50%), -234ha MDST model (30%)

****Based on the MDST model road to rail split of 81% / 19%

Source: Iceni Analysis

Size of sites

14.13 As clearly indicated the minimum site size for consideration is typically 25 ha. Across a recommended road shortfall of ha this is the equivalent of 22 – 34 sites of this size. However, it is far more common now for sites to be 50 ha or more, which provide more viability in terms of infrastructure investment. At this scale the range of sites required would be 11-17, which is still considerable. **As a minimum, it is recommended that at least 11 new strategic sites are planned for** across the region in addition to the current pipeline for the period to 2045. It is recognised that there will be sites below 25ha that otherwise meet the characteristics of strategic sites and can be considered to contribute to the need.

Manufacturing and Logistics

14.14 It is estimated that around 30% of supply will be required by manufacturing and 70% by logistics based on ratios of stock, take up and market sentiment.

14.15 Current manufacturing dedicated supply at c400 ha meets over half of the 700 ha - but some is occupier specific and sitting outside of general

need. This does indicate the potential for significant further growth in manufacturing space over the next 20 years. Much of the further B2 need is likely to take place on general strategic sites rather than on dedicated manufacturing / advanced manufacturing zones. However based on market feedback, whilst improving general supply support manufacturing, there is likely to be some market failure with lack of freehold sites and pricing out of manufacturers, justifying specific E(g)/B2 sites or policies ensuring protection of manufacturing dedicated floorspace.

14.16 Regarding mixed sites including for both distribution and manufacturing, there appears to be a considerable shortfall in space following several years of high demand. Of note the Coventry and Warwickshire area is responsible for around half of the current large general strategic sites supply (i.e. non B2), notably Coventry Gateway and Symmetry Park Rugby.

Phasing of need

14.17 With around 1,000 of ha of current road-based supply, there is around a decade of overall supply, which will vary by area but indicates a strong need to plan for more sites through the 2030s to 2045.

Testing infrastructure

14.18 Work has been undertaken to consider the achievability of new sites across the study area. Due to the scale of the geography involved, this has been a mechanical approach and does not attempt to provide definitive recommendations at the site level. This assessment has focused primarily on road based sites to test:

- Whether realistic sites exist to accommodate growth, and how they perform on a range of factors.
- How ‘junctions’ perform, including those where potential sites exist.

14.19 It is **not** the intention that the junction / capacity testing work be used to guide Local Plan strategy, because of the simplistic methodology used (including relative scoring) and the need to evaluate locations on their merits as part of a wider range of factors. It does however highlight the potential of a wide range of locations to support new strategic sites.

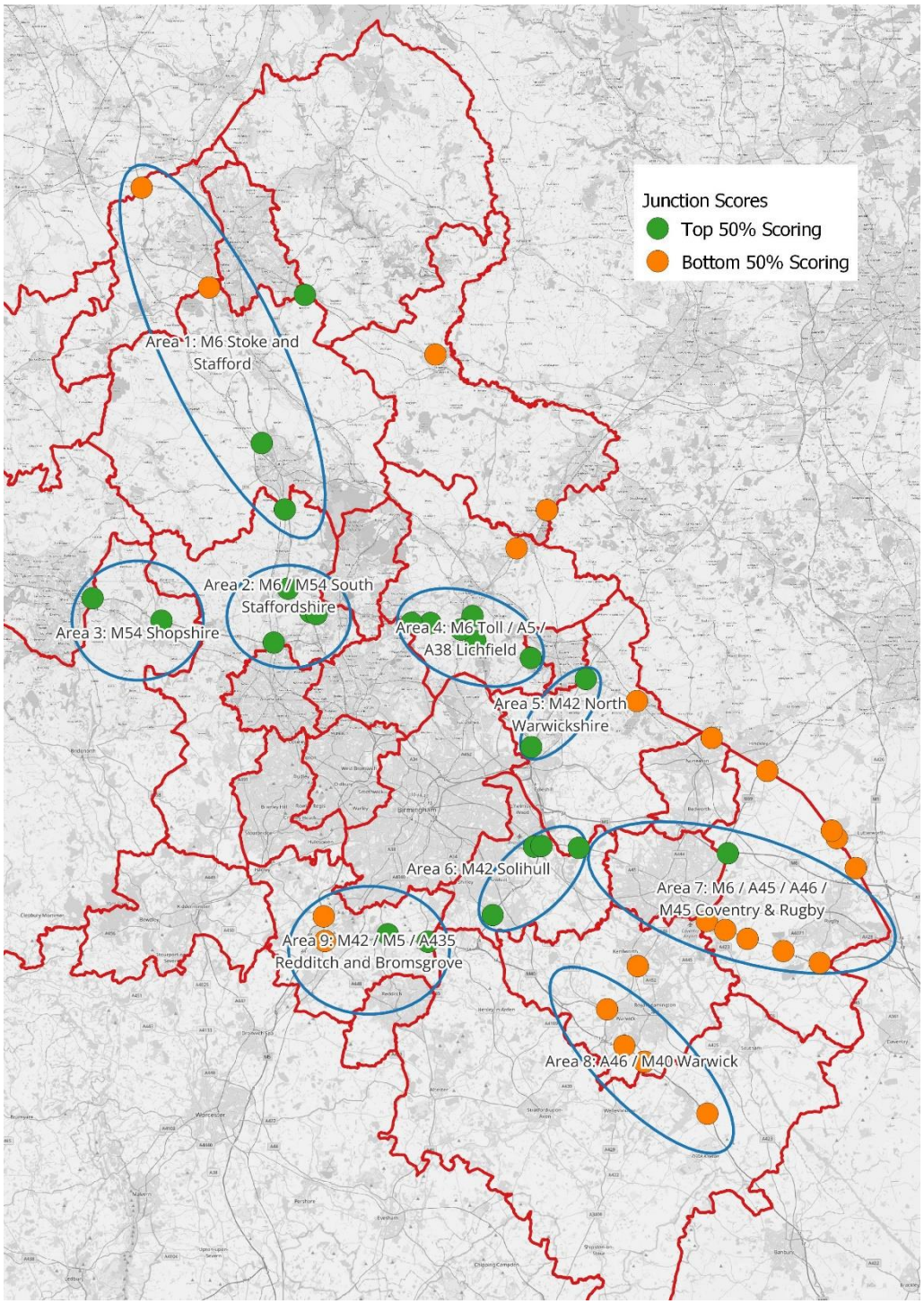
Future requirements for strategic sites – locations for growth

14.20 Comparable studies elsewhere, notably in Leicestershire, used an 'Areas of Opportunity' approach derived from a combination of rail corridors and road corridors, drawing on established criteria. This is considered to be a broadly effective way in identifying appropriate growth locations.

Road based Opportunity Areas

14.21 The 9 road based OAs are set out in the following diagram (which also identifies the junctions scores as previous). Half of the OAs 'ring' the Birmingham conurbation along the highway network, reflecting both its scale of economy, labour market and resulting market demand. Note the boundaries are not precisely defined or delineated.

Figure 14.1 WMSESS Road Opportunity Areas



14.22 These OAs are considered therefore to provide a guide on optimum locations for future (road based) strategic employment sites. This is not to say that sites will not come forward through allocations or

applications in other locations, and where this is the case they would still be considered to contribute to any 'need' at the regional level.

Indicative apportionment

14.23 In order to assist in guiding the apportionment of need by OA, a high level exercise has been undertaken to balance current commitments against market attributes.

14.24 This includes:

- 'Market ranking' of ABC (high to low) which Knight Frank have applied.
- Consideration of the size of the area of opportunity / number of LPAs within; proximity to SFRIs; noted Green Belt constraints;
- Balancing the shortfall in supply against the market rank and other considerable factors;
- Assuming a road need of 841 ha (growth target) - (1,848 ha minus supply of 1,007 ha)
- An indicative site count assuming 50 ha sites for mixed use sites and 25ha for B2 sites.
- Indicative phasing based on the following assumptions:
    - (a) A process of identifying pipeline sites to aid delivery in the near term before 2030;
    - (b) There is some supply but further delivery from 2030 would be beneficial;
    - (c) Further supply in the 2030s is required
    - (d) Supply should be considered for the end of the period towards 2040s

Table 14.1 Indicative Site Distribution by Opportunity Area (Ha)

	Notional supply – years (hatching=current committed supply)					Market rank	Indicative phasing	Indicative additional strategic site requirement at B8/mixed c.50ha - E(g)/B2 c.25ha	Narrative – market rank / performance, scale (no. LPA), site supply, SRFIs, Green Belt
Opportunity Area	Type	0-5	5-10	10-15	15-20				
Area 1: M6 Stoke and Stafford	B8/ Mixed					B	C	2	Large OA. Market supply at present but potential for two sites through study period.
	E(g)/B2						B	0-1	Has existing manufacturing focused supply – but non-strategic (sub 25ha). Blended sites may be preferable.
Area 2: M6 / M54 South Staffordshire and Black Country	B8/ Mixed (road)					B	D	1	WMI providing major strategic supply. Potential for additional road based supply later in the period. Constrained GB area.
	E(g)/B2						D	1	i54 has existing supply but potential for extension later in period – not all take up strategic. Constrained GB area
Area 3: M54 Shopshire	B8/ Mixed					C	A	1-2	OA with demand overspill from Black County on M54. Part constrained GB area.
	E(g)/B2						-	0	i54 expected to absorb demand.
Area 4: M6 Toll / A5 / A38 Lichfield	B8/ Mixed					B	A/B	1	Part GB constrained OA. A5/M6Toll route not established location.
	E(g)/B2						-	0	Not established location, preferable alternatives.

Area 5: M42 North Warwickshire	B8/ Mixed					A	B	1-2	Part GB constrained OA. High demand established location. Supply requirement later in study period. Two existing SRFIs.
	E(g)/B2						-	0	Existing supply at MIRA considered sufficient.
Area 6: M42 Solihull	B8/ Mixed					A	C	1-2	Constrained GB area. High demand location with good labour market proximity.
	E(g)/B2						B	0-1	Anticipated market / occupier potential.
Area 7: M6 / A45 / A46 / M45 Coventry & Rugby	B8/ Mixed					A	C/D	1-2	Large OA. Highest existing supply. High demand location. Part GB constrained OA. Supply requirement later in study period.
	E(g)/B2						C/D	1-2	Highest existing supply although Coventry Airport is a single occupier site that may shorten supply period. Further supply at Ansty Park. Potential to attract further investment.
Area 8: A46 / M40 Warwick	B8/ Mixed					B	A	1-2	Large OA. Existing supply is in Warwick but at Coventry, identified in Rugby/Coventry OA.
	E(g)/B2						C/D	1	Existing JLR/AML supply concentrated for single occupier. Potential for further manufacturing agglomeration.
Area 9: M42 / M5 / A435 Redditch and Bromsgrove	B8/ Mixed					C	B	1-2	Large OA. GB constrained OA.
	E(g)/B2						C/D	0-1	High manufacturing labour concentration. Existing supply but potential for further supply if take up increases.
Total	B8/ Mixed							10-16 (500-800ha)	
	E(g)/B2							3-7 (75-175ha)	

14.25 The results above are indicative and are not intended to pre-empt any Local Plan processes. It is recognised that in some, if not all, of the OAs it will be very challenging to deliver the number of sites indicated given Plan processes and wider constraints including Green Belt. In reality, sites will be of differing sizes and land constraints; and wider policy considerations will influence capacity. However, the high level policy-off capacity work undertaken for this study does suggest that in broad terms these numbers could be achievable.

Rail based Opportunity Areas

14.26 Give then scale of requirements considered in the long term, it is likely that a new strategic site will be required.

14.27 Broad areas of search across the West Midlands study area will be where appropriately freight gauge cleared railway lines coincide with the strategic highway network and are appropriately located for serving both the regional market (i.e. close to the main urban conurbations) and a national hinterland. This suggests five broad areas of search for a new commercially attractive site(s), namely:

- Stoke / Stafford;
- Lichfield;
- Nuneaton-Coventry
- Warwick-Leamington; and
- Solihull

Policy recommendations and next steps

Relationship with EDNAs

14.28 It is not expected that the outcomes of this WMSESS will be readily reconcilable with local EDNAs due to the different methodologies involved and the influence of cross boundary working.

14.29 This WMSESS considers pan regional methodologies for ‘need’. However urban areas including the Birmingham conurbation have constrained supply particularly for large sites, so findings for this WMSESS are likely to be higher than local or FEMA studies as the Birmingham conurbation need is inevitably ‘pushed out’.

14.30 Where large sites are provided to meet ‘locally derived’ needs, that meet the criteria in this study, they would be contributing to the strategic need at the same time and vice versa.

14.31 It is recommended that EDNAs do look to provide analysis and differentiation between larger unit and smaller units trends and requirements in the LPA or study area. It is also recommended that EDNAs look at both the issue of their strategic and non strategic sites, which can be identified via the characteristics noted elsewhere in this report.

Identifying, allocating and delivering strategic employment sites

14.32 The focus of bringing sites forward would be through individual local plans however authorities may elect to work independently on responding to the need or may choose to work at their local FEMA level to consider most appropriate sites and balance of sites. The steps to develop and maintain a portfolio of strategic sites is recommended as:

- Undertaking a call for sites as a part of the Local Plan process, in the context of plans being reviewed at least every five years (NPPF para 32).
- The call for sites process may consider specifically identifying the need for strategic sites. These sites should meet the criteria set out in section 5, in summary being:
  - Good connections with the strategic highway network (for road)
  - Sufficiently large and flexible - ideally sites would be a minimum of 25ha and readily over 50ha

- Is or can be served from an electricity supply grid with sufficient capacity.
- Is accessible to labour and includes a clear sustainable transport solution for the local road network.
- Is located away from incompatible land-uses.
- The ability to deliver high-bay warehousing

- These sites will need to be assessed through the Local Plan process to ensure that they meet the above criteria and other local sustainable appraisal requirements taking into account issues of landscape, biodiversity and network capacity.
- In Green Belt areas it may be necessary to consider testing alternative options and undertaking a review of the Green Belt.
- The benefit of operating at the OA or FEMA level will enable LPAs to develop a consistent narrative for duty to cooperate proceedings / memorandum of understanding and ensure they have a clear response to the overall recommendations.
- Progress sites through the Plan stages towards adoption.

14.33 Early identification in plan making will increase the ability of securing contributions towards accessibility mitigation as well as infrastructure planning provision such as power.

14.34 Delivering dedicated manufacturing sites may be more challenging and require public intervention, particularly in land options, or through policy mechanisms that enable mixed use but protect unit sizes or floorspace thresholds for use classes.

14.35 The allocation of strategic sites may also have implications for housing needs and delivery, where sites could lead to a labour market imbalance. Future local plan evidence should consider the effect of labour demand and supply from employment as well as taking into account commuting patterns that may influence more than one authority

Take up of land for non-strategic uses

14.36 It is recognised that in some instances large-scale strategic employment sites see the take-up of land for non-strategic uses, for example car-sales or other sui-generis operations.

14.37 Sites allocated specifically for B2 may be more vulnerable to such applications as these tend to take longer to achieve full occupation. Similarly sites in sub optimal locations which are less attractive to the market.

14.38 In part this highlights the importance of maintaining a good range of land across the plan portfolios to ensure choices for other non strategic uses. This incudes separate allocations for mid sized and smaller industrial areas more suited to diverse uses. These uses may also be less well suited to the criteria needed for strategic sites, preferring proximity to population density and urban areas over the strategic network.

14.39 Allocations should utilise the B2, B8 and E(g) Use Classes including of note the E(g) sub division distinctly from broader Class E definition.

Monitoring

14.40 In order to effectively and consistently monitor the development of strategic sites across the West midlands, it is recommended that data monitoring and collection are actively pursued beyond the individual authority level. The most useful area to be considered would be the regional level. The roles and responsibilities for this need to be defined with a particular organisation and/or individual collecting and managing data – potentially WMCA.

It is also recommended that future updates to this work be commissioned at an indicative 5 year interval to measure progress on delivery, market conditions and a review of future need.

A1.Glossary

- Availability: vacant stock and stock known to be coming to market in the near term through build or lease exit.
- CoStar: national commercial property database.
- Grade A stock: state-of-the-art properties built specifically for warehousing and logistics. They have not been converted or renovated for this purpose. Tenants competing for a Grade A building are typically well-established industry leaders and looking for the best that commercial real estate has to offer.
- Grade B may be a little older than Grade A but typically renovated to have the latest technology. It will typically have lower ceilings than a Grade A building. May be located in the periphery rather than primary market location.
- Grade C buildings are typically older buildings converted from their original purposes, such as former hangars and manufacturing facilities. They often lack modern amenities and require upgrade. May be in a low desirable area.
- E-commerce: online retail
- Golden Triangle: national centre of the UK logistics market whereby main other parts of the UK can be reached in a 4hr drive time.
- Gross absorption: total lease deals.
- Growth build: demand for warehouse floor space driven by growth in the wider economy along with forecast population increases leading to a growth in the volume of consumer goods handled leading to increasing demand for additional warehouse floor space.
- Net absorption: move in leases minus lease breaks.
- Net delivery: total of all new floorspace delivered after any demolitions.
- Replacement build: requirement to replace outdated warehouse stock
- Vacancy: physically vacant stock.

Abbreviations

- AQMA (Air Quality Management Area)
- MDST (MDS Transmodal Consultants)
- BEVs (Battery-electric vehicles)
- BPF (British Property Federation)
- CFCs (Customer fulfilment centres)
- DCO (Development Consent Order)
- DIRFT (Daventry International Rail Freight Terminal)
- EMG (East Midlands Gateway)
- ESG (Environmental, social and corporate governance)
- FTAs (Free Trade Agreements)
- FTA (Freight Transport Association)
- FTE (Full-time equivalent)
- GHG (Greenhouse gas)
- GVA (Gross Value Added)
- HGVs (Heavy Goods Vehicles)
- I&L (Industrial and logistics)
- LGVs (Light Goods Vehicles / vans)
- LDOs (Local Developments Orders)
- NDCs (National Distribution Centres)
- NIC (National Infrastructure Commission)
- RDCs (Regional Distribution Centres)
- SMEs (Small and medium-sized enterprises)
- SRFI (Strategic Rail Freight Interchange)
- 3PLs (Third-party logistics)

- VOA (Valuation Office Agency)

A2. Economic Context

A2.1 This section provides a brief overview of the economic context in the study area. This covers:

- Employment in the key sectors considered relevant being manufacturing, wholesale and transport & storage (assessment of employment in Leicestershire's main industrial estates reports warehousing and wholesale trade as the two top employment categories34).
- Economic activity and unemployment rates.
- Qualification levels and occupation levels.

Sectors

A2.2 The figure below shows the percentage of district employment in manufacturing, wholesale and transport & storage.

A2.3 Redditch (20.9%), East Staffordshire (18.5%), Stratford-on-Avon (18.1%) and Sandwell (17.2%) have a significant proportion of employment in Manufacturing. North Warwickshire (20.6%), Rugby (14.6%) and Cannock Chase (14.3%) have a significant proportion of employment in the Storage and transport sector.

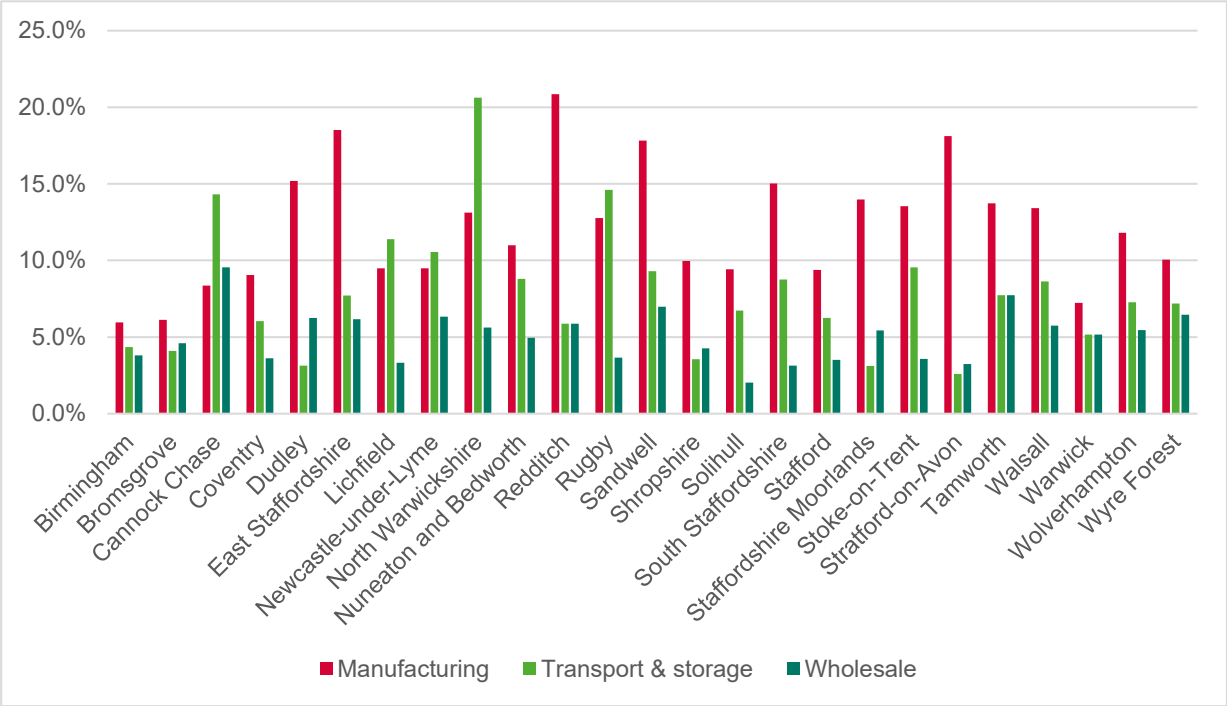
A2.4 Employment in the Wholesale sector has also been considered as around 41.% of logistics workers work in wholesale35. Cannock Chase (9.5%), Tamworth (7.7%), Sandwell (7.0%) and Wyre Forest (6.5%)

[34] Warehousing and Logistics in Leicester and Leicestershire: Managing growth and change 2021 table 68

[35] Logistics Skills Review 2023

have relatively high employment levels in the Wholesale sector compared to the other districts within the study area.

Figure 14.2 Percentage of Employment by Sector



Source: BRES (2022)

Economic activity

A2.5 The table below shows economic activity metrics for each district within the study area.

A2.6 Lower economic activity rates are present in Birmingham (71.5%), Wolverhampton (72.4%), Wyre Forest (72.8%), and Coventry (75.4%).

A2.7 Birmingham (7.5%), Wolverhampton (6.6%), Sandwell (6.3%), Walsall (6.1%) and Coventry (5.4%) all have relatively high levels of unemployment.

Table 14.2 Economic Activity and Unemployment

	Economic Activity Rate	Unemployment Rate
Birmingham	71.5%	7.5%

Bromsgrove	82.0%	2.7%
Cannock Chase	86.4%	3.3%
Coventry	75.2%	5.4%
Dudley	81.0%	4.4%
East Staffordshire	80.8%	3.3%
Lichfield	83.8%	3.1%
Newcastle-under-Lyme	76.8%	3.3%
North Warwickshire	87.6%	2.5%
Nuneaton and Bedworth	80.2%	3.9%
Redditch	79.4%	3.9%
Rugby	86.7%	3.0%
Sandwell	68.9%	6.3%
Shropshire	80.5%	3.2%
Solihull	80.8%	3.3%
South Staffordshire	89.0%	2.9%
Stafford	79.1%	3.6%
Staffordshire Moorlands	81.8%	3.6%
Stoke-on-Trent	77.3%	4.2%
Stratford-on-Avon	86.1%	2.7%
Tamworth	86.6%	3.0%
Walsall	78.6%	6.1%
Warwick	82.2%	3.8%
Wolverhampton	72.4%	6.6%
Wyre Forest	72.8%	3.5%

Source: Annual Population Survey (Average Jan 2022- September 2022) and Model-based Estimates of Unemployment (June 2022-July 2023)

A2.1 A significant proportion of Warwick's population (45.2%) has level 4 qualifications of above, similar to Stratford-on-Avon (39.5%), Bromsgrove (36.6%) and Solihull (35.4%). Sandwell (28.9%), Walsall (26.3%), Stoke (25.9%), Wolverhampton (25,3%) and Birmingham (23.9%) have a relatively higher proportion of their population with no qualifications.

Table 14.3 Highest Level of Qualification Attained - % of +16 population

	No qualifications	Level 1 and entry level qualifications	Level 2 qualifications	Apprenticeship	Level 3 qualifications	Level 4 qualifications or above	Other qualifications
Birmingham	23.9%	10.1%	12.5%	3.6%	17.1%	29.9%	2.9%
Bromsgrove	15.7%	9.1%	14.1%	5.3%	16.6%	36.6%	2.6%
Cannock Chase	22.0%	11.9%	15.9%	6.0%	18.8%	22.7%	2.6%
Coventry	19.4%	9.9%	12.6%	5.2%	19.0%	30.6%	3.3%
Dudley	23.1%	10.8%	15.0%	6.0%	17.2%	25.0%	2.9%
East Staffordshire	20.1%	10.7%	14.5%	6.0%	17.0%	28.7%	3.0%
Lichfield	17.1%	10.1%	14.1%	5.4%	17.2%	33.6%	2.6%
Newcastle-under-Lyme	20.1%	9.7%	13.6%	6.7%	19.6%	28.0%	2.4%
North Warwickshire	22.2%	11.5%	15.3%	6.1%	17.6%	24.8%	2.4%
Nuneaton and Bedworth	22.6%	11.9%	15.0%	6.2%	17.0%	24.5%	2.8%
Redditch	20.8%	11.6%	15.7%	5.9%	17.2%	25.9%	2.9%

Rugby	15.7%	9.7%	14.0%	6.4%	16.4%	34.9%	2.9%
Sandwell	28.9%	11.5%	13.6%	4.8%	14.8%	22.7%	3.7%
Shropshire	16.7%	9.6%	15.0%	6.1%	17.4%	32.5%	2.6%
Solihull	17.6%	9.5%	14.1%	4.6%	16.2%	35.4%	2.5%
South Staffordshire	19.3%	10.2%	14.5%	6.3%	17.6%	29.4%	2.7%
Stafford	15.8%	9.4%	14.0%	5.6%	17.4%	35.1%	2.7%
Staffordshire Moorlands	20.1%	9.7%	14.1%	7.1%	17.9%	28.4%	2.7%
Stoke-on-Trent	25.9%	11.0%	14.8%	6.9%	16.8%	21.8%	2.8%
Stratford-on-Avon	14.4%	8.7%	13.5%	5.0%	16.5%	39.5%	2.4%
Tamworth	21.8%	13.0%	16.8%	5.5%	18.4%	21.9%	2.7%
Walsall	26.3%	11.5%	14.2%	5.3%	15.7%	23.7%	3.2%
Warwick	12.6%	7.3%	10.7%	4.2%	17.7%	45.2%	2.3%
Wolverhampton	25.3%	11.0%	13.8%	4.9%	15.1%	26.2%	3.6%
Wyre Forest	21.8%	10.7%	15.0%	6.6%	17.0%	26.1%	2.8%

Source: Census 2021

Occupation

A2.1 The table below shows employment by occupation for each district.

A2.2 Managers, directors and senior officials (1) are highest in Redditch, Wyre Forest, Stafford and Lichfield.

A2.3 Professional occupations (2) are highest in Warwick, Lichfield, Stafford and Stratford-on-Avon.

A2.4 Elementary occupations (9) are highest in Coventry, North Warwickshire, Rugby, Wolverhampton and East Staffordshire.

A2.5 Process, plant and machine operatives (8) are highest in Wyre Forest, Newcastle-under-Lyme, Tamworth and Dudley.

Table 14.4 Percentage of Employment by Occupation (SOC2020)

	1: Managers, directors and senior officials	2: Professional occupations	3: Associate professional occupations	4: Administrative and secretarial occupations	5: Skilled trades occupations	6: Caring, leisure and other service occupations	7: Sales and customer service occupations	Process, plant and machine operatives	9: Elementary occupations
Birmingham	6.5%	28.6%	14.7%	10.7%	7.3%	7.4%	6.1%	6.1%	12.3%
Bromsgrove	11.9%	29.2%	18.1%	9.9%	9.6%	6.0%	5.8%	2.8%	6.7%
Cannock Chase	13.7%	23.0%	10.6%	10.9%	11.7%	6.6%	6.5%	9.0%	7.6%
Coventry	7.0%	25.0%	12.4%	8.8%	6.9%	8.5%	5.8%	8.3%	16.9%
Dudley	11.4%	20.6%	14.4%	12.0%	8.7%	5.2%	6.9%	11.8%	8.2%
East Staffordshire	10.3%	21.6%	12.1%	6.0%	12.7%	5.6%	7.3%	10.1%	14.5%
Lichfield	14.2%	34.8%	10.9%	6.1%	11.4%	2.5%	5.1%	6.5%	8.6%
Newcastle-under-Lyme	7.3%	22.3%	11.4%	8.0%	6.3%	12.5%	5.5%	12.7%	14.1%
North Warwickshire	9.5%	21.1%	14.9%	10.0%	12.0%	4.9%	1.1%	8.1%	16.2%
Nuneaton and Bedworth	6.8%	20.2%	13.5%	10.7%	9.2%	7.2%	7.9%	10.3%	14.4%
Redditch	16.3%	14.0%	9.8%	7.6%	11.1%	12.4%	8.5%	10.9%	9.4%

Rugby	8.9%	22.6%	17.3%	7.0%	10.3%	7.5%	2.0%	8.9%	15.7%
Sandwell	8.3%	16.1%	12.6%	12.1%	9.2%	11.3%	9.3%	10.1%	10.5%
Shropshire	13.3%	23.5%	11.1%	10.1%	12.8%	7.2%	6.9%	5.3%	9.6%
Solihull	11.8%	24.8%	16.4%	9.5%	9.2%	7.4%	6.8%	5.8%	8.4%
South Staffordshire	9.9%	25.2%	13.3%	17.9%	10.8%	3.4%	0.0%	0.0%	13.2%
Stafford	14.5%	33.4%	9.9%	11.2%	5.8%	1.4%	5.2%	3.7%	14.2%
Staffordshire Moorlands	10.0%	21.0%	11.8%	4.1%	17.6%	5.5%	10.5%	5.0%	12.6%
Stoke-on-Trent	7.5%	20.1%	12.6%	8.5%	10.2%	9.5%	7.2%	9.9%	14.2%
Stratford-on-Avon	12.9%	32.6%	16.3%	8.3%	9.5%	7.3%	6.7%	2.0%	4.5%
Tamworth	10.5%	15.6%	12.8%	13.5%	12.7%	5.8%	4.2%	11.9%	11.9%
Walsall	6.8%	18.5%	11.0%	11.7%	11.4%	9.3%	7.9%	9.0%	14.1%
Warwick	10.3%	35.7%	14.0%	6.4%	7.0%	7.6%	5.5%	3.8%	9.8%
Wolverhampton	7.9%	19.4%	9.5%	14.9%	7.4%	9.1%	5.4%	10.9%	14.7%
Worcester	7.2%	24.8%	17.2%	10.9%	6.8%	17.0%	1.0%	6.1%	5.5%
Wyre Forest	14.6%	13.9%	10.5%	12.0%	9.5%	8.5%	6.6%	16.9%	7.7%

Source: Annual Population Survey (Average Jan 2022- September 2022)

A3. Commitments

Table A3.1 Strategic Commitments in the West Midlands study area

Local Authority	Site	Allocation / Planning Permission	Description	Land (Ha)	Floorspace (sq.m))	Notes	Estimated Phasing (years)	Use
East Staffordshire	Branston Locks	Outline planning permission (P/2012/01467)	Mixed use development comprising the erection of up to 2500 dwellings (Class C3), **up to 92,900sq.m (1,000,000 sq.ft) of employment floorspace (Classes B1, B2 and B8)…**	15.8	55,210	55,210 sq.m residual on the outline planning permission - converted using 0.35 plot ratio	0-5	Mixed

East Staffordshire	Land Adjacent To Burton Gateway Lichfield Road Branston Staffordshire	Outline planning permission (P/2015/0001) 2	Up to 21,500 sq.m of employment floorspace (comprising 17,200 sq. m of Class B8 (Storage and Distribution) and 4,300 sq. m of Class B2 (General Industrial) with ancillary offices	4	9000	Extension of St Modwen Park Burton. Application for 21,500 sq.m however only one strategic unit of 9,000.	0-5	Mixed
Bromsgrove and Redditch	Redditch Gateway	Outline Planning Permission (17/00700/OUT)	Hybrid application for the development on a phased basis of 32ha of employment land for business/industrial uses (Use Classes B1, B2, B8).	13		Originally 32 ha - residual after Amazon development	0-5	Mixed

Solihull	Damson Parkway	Draft Allocation	This is an employment led land release of c94ha which will provide additional employment land to meet local needs, including future expansion for JLR and JLR related activities and ancillary development for Birmingham Airport	39		Draft allocation of 94 ha - Phase 1 27ha built out for JLR B8 logisitics; Phase 2 (2022-26) 25 ha; Phase 3 (2025-30) 14ha	0-10	Mixed
Newcastle-under-Lyme	Land West of Pit Head Close, Lymedale Business Park	Full Planning Permission (20/00123/OUT)	Erection of business/industrial development of B1(c), B2 and/or B8 uses with all matters reserved	6.5	27,725	Extension of Lymedale Business Park	0-5	Mixed

South Staffordshire	West Midlands Interchange	TR050005	Strategic Rail Freight Interchange	298	743,200		0-10	Mixed
South Staffordshire	ROF Featherstone	20/01131/OUT	Full proposals for a new access road from the A449 to a proposed roundabout and outline proposals for the employment uses (E, B2 and B8) with floorspace up to 158,121 sq.m.	36	158,121		0-5	Mixed
South Staffordshire	Plot D/F i54	Draft Allocation	B2 - i54 extension	4.8		Extension of i54 – vacant plots	0-5	B2
South Staffordshire	i54 Western Extension	Draft Allocation	B2 - i54 extension	40			5-10	B2

South Staffordshire	Unit D (Vernon 122), Vernon Park, Featherstone	21/00948/FUL	Construction of warehouse (B8 Use Class) including ancillary offices (5% of total) together with car parking, servicing and landscaping	2.8	11,387	Extension of Vernon Park / Hilton Cross	0-5	Mixed
Stafford	Land off A34 North at Redhill	20/33137/FUL	Development of warehouse and distribution facility (Use Class B8) (including ancillary offices); associated infrastructure works; provision of new access road and access roundabout with the A34 Stone Road; and associated circulation space, landscaping and other ancillary works.	30	71569		0-5	Mixed

Stafford	Former Meadford Power Station	Outline planning permission (21/35159/OUT)	Creation of development platforms and phased development comprising up to 96,932sq.m of employment floorspace (Use Classes E(g)(iii)/B2/B8) including up to 2 hectares of battery storage (Use Class Sui Generis)	47.3	96,932		0-10	Mixed
Birmingham	Peddimore	Outline planning permission (2019/00108/PA)	Employment park comprising B1b, B1c, B2 and/or B8 uses, including ancillary offices (B1a)…	71		40 ha (159,000 sq.m) – B1/B2 31 ha (87,861 sq.m) – B8	0-5	B2

Birmingham	Washwood Heath HS2 RSMD	MoU	Memorandum of Understanding signed between HS2 Ltd and Birmingham City Council to deliver 24 hectares of land for B2/B8 development following the construction of HS2	24			0-10	Mixed
Birmingham	Longbridge	RIS	Legacy of a 25 hectare Regional Investment Site allocated in the Longbridge AAP. Local Plan Issues & Options consultation document suggested removing the RIS allocation, but it is still considered to be a strategic employment site.	17			0-10	B2

Coventry	Land at Baginton Fields and South East of Whitley Business Park	Allocation	Employment Type: B1b&c, B2 & B8	25			5-10	Mixed
Rugby	Tritax Symmetry, Land North of Coventry Road	Allocated site with outline planning permission (R16/2569). Parts of site with full planning permission (R20/1026 & R21/0790 & R22/0803)		46.2	186,500		0-5	Mixed

Rugby	Prospero Ansty	Outline Planning Permission (R19/1540). Parts of site with Full Planning Permission (R19/1512), Under Construction or with Reserved matters (R21/0784)	Erection of two buildings within Class B2 with ancillary office.	49.4	160,000	Residual of 65.3 ha outline.	0-5	B2

Rugby	Former Peugeot Factory Site C (Prologis Park)	Outline Planning Permission with Reserved Matters (R16/2561 & R17/2019)	Employment development on designated strategic site.	16.7	45,275	Extension of existing strategic site at Ryton	0-5	Mixed
Rugby	Rugby Radio Station	Allocated Site with Outline Planning Permission (R11/0699)	Urban extension to Rugby for up to 6,200 dwellings…31 hectares (up to 106,000sq.m) of commercial and employment space (B1, B2 and B8)	16	106,000	16 ha identified to meet B use employment. Extension of existing strategic site at DIRFT	0-5	Mixed

Rugby	Coton Park East	Allocated site with full planning permission (R22/0551)	Application for full planning permission for storage and distribution floorspace (Class B8 use).	8.7	26421	Extension of existing strategic site (Central Park).	0-5	Mixed
North Warwickshire	Land at Mira	Allocated site	B2 use	42			0-10	B2
North Warwickshire	West of Birch Coppice, Dordon	Allocated site	B1/B2/B8	5.1	25,000	Extension of Birch Coppice.	0-5	Mixed
North Warwickshire	Playing fields South of A5, Dordon	Allocated site	B1/B2/B8	3.5	175,000	Extension of Birch Coppice	0-5	Mixed

North Warwickshire	Former B Station Site - Prologis Park Hams Hall (DC2, 3 & 4)	Full planning permission (PAP/2016/0399)	Demolition of existing buildings and redevelopment of site for industrial/distribution uses (Use Class B2/B8) including ancillary offices.	8.9	45,000	Extension of Hams Hall. Approximately 10 ha of the site remaining - permission for 85000 sq.m, 38,5000 sq.m built out	0-5	Mixed
Nuneaton and Bedworth	Faultlands	Allocation and full planning permission (034901 & 038406 & 038687)	Redevelopment of existing land for up to 92,904 sq.m of B2 (General industrial) and B8 (Storage and distribution) floorspace	26	92,904		0-5	Mixed

Nuneaton and Bedworth	Meadow Off Pilgrims Walk	Outline planning permission (039023)	Erection of industrial units for (either Class Use B2 - General Industry or Class Use B8 - Storage and Distribution) to include ancillary offices (Class Use E formally B1a)	5.9		Extension of Prologis Park	0-5	Mixed
Stratford-on-Avon	Jaguar Land Rover	Allocated		100			0-10	B2

Warwick	Gateway South, Land to south and west of Coventry Airport	Outline planning permission (!/18/0522)	Comprehensive redevelopment of land South of Coventry Airport, comprising demolition of existing structures and the erection of new buildings to accommodate general industrial uses (Use Class B2) and storage and distribution (Use Class B8)	177.7	337,421		0-10	B2
Warwick	Coventry Airport	Outline planning permission (!W/21/1370)	Development of battery manufacturing facility	124.7	513,470		0-10	B2
Total				**1,305**				

A4. Completions

Table A4.1 West Midlands study area Strategic Completions

Local Authority	Site	Floorspace	Date Completed
Coventry	Plots 4 in part and 5 Lyons Park, Coundon Wedge Drive	19,930	2015/16
Coventry	Land forming south west part of Whitley Business Park Scimitar Way	19,888	2016/17
Coventry	Plot 6 Lyons park Coundon Wedge Drive	12,546	2016/17
Coventry	Plots 1, 2, 3 and part of 4, Lyons Park	58,707	2018/19
Coventry	Jaguar Cars Limited, Abbey Road	61,721	2020/21
North Warwickshire	Plot 4, Birch Coppice Phase 2 (Ocado)	82,654	2013/14
North Warwickshire	BMW, Hams Hall	330,899	2014/15
North Warwickshire	Unit 8, Plot 6, Hams Hall	13,471	2014/15
North Warwickshire	Sertec, Coleshill	26,698	2014/15
North Warwickshire	Plot E2, Birch Coppice Phase 2 (euro Car Parts T1)	38,073	2014/15
North Warwickshire	Plot W5/W6, Birch Coppice Phase 2	15,358	2014/15

North Warwickshire	Plot 10 (b), Hams Hall	13,365	2015/16
North Warwickshire	Former Baddesley Colliery (JLR)	238,360	2015/16
North Warwickshire	Plot 3, Birch Coppice Phase 2 (Euro Car Parts T2)	66,912	2015/16
North Warwickshire	Land south west J10 M42, Centurion Park	84,610	2016/17
North Warwickshire	Plot 5 & 6, Birch Coppice Phase 2 (Draxlmaier and Bunzl)	30,695	2016/17
North Warwickshire	Land North of the Beanstalk, Birch Coppice Phase 3	22,295	2017/18
North Warwickshire	Core 2 (Zone E), Core 42 Business Park, Birch Coppice Phase 3	9,925	2017/18
North Warwickshire	JLR, DC1, Hams Hall	36,232	2018/19
North Warwickshire	Core 3 (Zone F), Core 42 Business Park, Birch Coppice Phase 3	27,316	2018/19
North Warwickshire	St Modwen, Tamworth Logisitics Park	63,844	2021/22
Nuneaton	Nuneaton 230 - Bermuda Park	21,554	2019/20
Rugby	Unit DC2 - Prologis Ryton, London Road (A45)	27,981	2012/13
Rugby	Unit DC4 - Prologis Ryton (Site B), London Road (A45)	15,347	2013/14
Rugby	Unit DC5 - Prologis Ryton (Site B), London Road (A45)	15,843	2013/14
Rugby	RG-1, Rugby Gateway, Leicester Road	22,000	2014/15
Rugby	Unit DC3 - Prologis Ryton (Site B), London Road (A45)	21,067	2014/15

Rugby	Unit DC6 - Prologis Ryton (Site B), London Road (A45)	20,619	2014/15
Rugby	RG-4 Rugby Gateway, Leicester Road	22,018	2015/16
Rugby	London Taxi Company, Zone 6 Ansty Park	24,343	2016/17
Rugby	RG-2 Rugby Gateway, Leicester Road	27,406	2016/17
Rugby	RG-3 Rugby Gateway, Leicester Road.	16,723	2016/17
Rugby	RG-5 Rugby Gateway, Leicester Road.	25,014	2016/17
Rugby	Zone C (Plots 2 and 3) Central Park, Castle Mound Way	23,986	2016/17
Rugby	Unit DC1 - Prologis Ryton, London Road (A45)	120,770	2017/18
Rugby	Unit DC7 - Prologis Ryton, London Road (A45)	45,000	2017/18
Rugby	Meggitt - Rolls Royce, Ansty Aerodrome, Combe Fields Road, Ansty, CV7 9JR	44,580	2019/20
Stratford on Avon	Wellesbourne Distribution Park	77,179	2017/18
Stratford on Avon	Gaydon Proving Ground - 'Gaydon Triangle'	64,500	2019/20
Stratford on Avon	Gaydon Proving Ground - 'NVH Building'	40,910	2020/21
Tamworth	Land Adjacent to Relay Point	12,597	2021/2022
Warwick	Spa Park	12,077	2020/21
Warwick	Land to North and south of A45	18,445	2020/21

Warwick	Spa Park	16,770	2022/23
Birmingham	Holte & Priory Site 1 Land At Priory Road	11,500	2012/13
Birmingham	Plot 5, Prologis Park Midpoint Minworth Sewage Works	34,118	2013/14
Birmingham	Jaguar Cars Ltd Former Block E And Eps Chester Road	53,487	2013/14
Birmingham	Former Yuasa Site Signal Point Phase 1 Battery Way And Weston Lane	11,175	2015/16
Birmingham	Wharfdale Phase 3 Former Tyseley Wharf Road	13,749	2015/16
Birmingham	Midpoint 2, Plot 6 Former Minworth Sewage Works Water Orton Lane	15,237	2015/16
Birmingham	Former Severn Trent Depot Park Lane	19,809	2015/16
Birmingham	Former Tuckers Fasteners Site 177 Walsall Road	9,322	2016/17
Birmingham	Jlr Site Of West Car Park Vantage Way	16,805	2016/17
Birmingham	Jlr Former Dunlop Motorsport Site Ashold Farm Road	17,076	2016/17
Birmingham	The Hub Phase 2 Former Imi Works Witton Road	22,943	2016/17
Birmingham	The Hub Former Imi Works Witton Road	10,569	2017/18
Birmingham	Former Minworth Sewage Works Midpoint 2 (Plot 1) Midpoint Way Water Orton Lane	11,149	2017/18
Birmingham	Serpentine Site Former Asda Store Aston Hall Road	14,355	2017/18
Birmingham	The Hub Phase 6 Former Imi Works Witton Road	33,287	2018/19

Birmingham	Former Yuasa Site Signal Point - Phase 2 Battery Way	11,208	2019/20
Birmingham	Holte & Priory Site 1 Land At Aston Hall Road	11,639	2019/20
Birmingham	TOWER ROAD	11,312	2021/22
Bromsgrove / Redditch / Stratford-on-Avon	Redditch Gateway	34,080	
Sandwell	Opus 9, St Paul Road, Wednesbury (Lidl)	43,669	2017/18
Sandwell	Site Of Former Training And Development Centre, Popes Lane, Oldbury	10,691	2018/18
Sandwell	Seven Stars Road, Oldbury	10,157	2021/22
Solihull	AEC, B'ham Bus Park	25,903	2013/14
Solihull	IAC Site, Elmdon Trading Est	10,443	2014/15
Solihull	Plot B, Blythe Valley Park	19,416	2017/18
Solihull	Ingenuity House, Elmdon Trading Est	20,097	2017/18
Solihull	Plot 6500, B'ham Bus Park	10,845	2019/20
Solihull	B'ham Bus Pk Ext, Prologis	28,799	2019/20
Solihull	B'ham Bus Pk Ext, JCAM Site	10,980	2019/20
Solihull	Plot A3, Blythe Valley Park	20,952	2020/21

Solihull	Plot F, Blythe Valley Park	11,728	2021/22
Solihull	JLR Logistics Warehouse, UK2	97,232	2021/22
Walsall	Unit 1 - Bullseye, Bull Lane, Wednesbury	16,000	2015/2016
Wolverhampton	Unit 1, Discovery Park, Wobaston Road	12,756	2018/19
Wolverhampton	Unit 4, Pantheon Park	13,301	2019/20
East Staffordshire	Lancaster Park, Needwood	9,898	2015/16
East Staffordshire	Land at Centrum West Callister Way Burton Upon Trent	24,002	2017/18
East Staffordshire	Unit BG25, BG40 & BG54 Land South of Lichfield Road Branston	110,794	2018/19
East Staffordshire	(JCB) Waterloo Farm, Uttoxeter Road, Beamhurst, Uttoxeter	32,000	2019/20
East Staffordshire	Unit BF101 Land South of Lichfield Road, Branston	9,412	2019/20
Lichfield	UK Pallet Express Delivery, Fradley Business Centre	12,895	2014/15
Lichfield	DC1, Prologis Park	51,279	2017/18
Lichfield	DC3, Prologis Park	19,834	2018/19
Lichfield	Wellington Crescent, Fradley Park	15,986	2019/20
Lichfield	Liberty Park, Burton Old Road	15,433	2019/20
Lichfield	Halifax Close, Fradley Park	39,940	2019/20

Lichfield	Land At Lancaster Road (Axis 38), Fradley Park	12,774	2021/22
Lichfield	Land Off Nanscawen Road (Ergo 354), Fradley Park	32,877	2022/23
South Staffordshire	JLR (Module 1a), I54, Wobaston Road	22,315	2014/15
South Staffordshire	International Security Printers, Unit G2, Valiant Way	9,576	2014/15
South Staffordshire	Sandvik, Cat And Kittens Lane, Slade Heath	22,460	2015/16
South Staffordshire	JLR Module 4, land at i54	93,505	2017/18
South Staffordshire	ERA Home Security	12,600	2018/18
South Staffordshire	Bericote Four Ashes	106,867	2018/19
Stafford	Orbital Gas Systems Ltd	12,582	2015/16
Stafford	Redhill Business Park - Plot 7a	19,223	2016/2017
Stafford	Redhill Business Park - Plots 4 And 6	10,838	2016/2017
Stafford	Land At Jasper Way, Walton, Stone	210,700	2018/19
Stoke-on-Trent	Radial Park (south east portion)	49,581	2015/2016
Stoke-on-Trent	Wedgwood Estate	21,150	2015/2016
Stoke-on-Trent	Smithfield	18,297	2015/2016
Stoke-on-Trent	Former Sentinel Newspaper site	14,153	2015/2016

Stoke-on-Trent	Land at Sideway	19,511	2016/2017
Stoke-on-Trent	Former Highgate Works Site	9,011	2016/2017
Stoke-on-Trent	Former Michelin Site	25,720	2018/19
Stoke-on-Trent	Former Johnson Matthey Site	25,505	2018/19
Stoke-on-Trent	Land at Whittle Road, Meir Park (G-Park)	25,505	2018/19
Stoke-on-Trent	Land to the south of	12,888	2018/19
Stoke-on-Trent	Land at Sideway	10,080	2018/19
Stoke-on-Trent	Land at Ravensdale	15,326	2019/20
Stoke-on-Trent	Land at Trentham Lakes, Stanley Matthews Way	9,501	2020/21
Stoke-on-Trent	Land off Gordon Banks Drive	12,709	2021/22
Stoke-on-Trent	G Park, Plot 220, Whittle Road	12,035	2021/22
Stoke-on-Trent	Tunstall Arrow North, James Brindley Way, Sandyford	10,848	2021/22

Source: Local Authority Monitoring Data (2023)

A5. Supressed Demand

Table 14.5 West Midlands Suppressed Demand Calculations (+9,300 sq.m units) – 5% availability target

Year	A: Inventory (sq.m)	B: Availability (%)	C: Availability (sq.m)	D: Net absorption (sq.m)	E: Net absorption/ Availability	F: Required floorspace for 5% availability (sq.m)	G: Supressed Net Absorption (sq.m)
2022	16,206,235	3.4%	551,012	404,487	73%	259,300	148,548
2021	15,832,526	3.5%	554,138	323,344	58%	237,488	136,052
2020	15,655,549	3.7%	579,255	456,182	79%	203,522	116,594
2019	15,302,830	4.5%	688,627	283,877	41%	76,514	43,834
2018	15,011,756	4.5%	675,529	119,296	18%	75,059	43,000
2017	14,787,653	4.2%	621,081	385,183	62%	118,301	67,773
2016	14,330,728	4.4%	630,552	432,452	69%	85,984	49,259
2015	13,882,209	4.0%	555,288	233,815	42%	138,822	79,529
2014	13,682,125	4.2%	574,649	440,351	77%	109,457	62,706
2013	13,515,673	6.3%	851,487	461,070	54%	-	
Average					**57%**		**67,936**

Source: Iceni analysis of CoStar, Savills methodology, confirmed by Savills

A5.1

Table 14.6 West Midlands Suppressed Demand Calculations (+9,300 sq.m units) – 8% availability target

Year	A: Inventory (sq.m)	B: Availability (%)	C: Availa-bility (sq.m)	D: Net absorption (sq.m)	E: Net absorption/ Availability	F: Required floorspace for 8% availability (sq.m)	G: Supressed Net Absorption (sq.m)
2022	16,206,235	3.4%	551,012	404,487	73%	745,487	427,076
2021	15,832,526	3.5%	554,138	323,344	58%	712,464	408,157
2020	15,655,549	3.7%	579,255	456,182	79%	673,189	385,657
2019	15,302,830	4.5%	688,627	283,877	41%	535,599	306,835
2018	15,011,756	4.5%	675,529	119,296	18%	525,411	300,999
2017	14,787,653	4.2%	621,081	385,183	62%	561,931	321,920
2016	14,330,728	4.4%	630,552	432,452	69%	515,906	295,553
2015	13,882,209	4.0%	555,288	233,815	42%	555,288	318,114
2014	13,682,125	4.2%	574,649	440,351	77%	519,921	297,853
2013	13,515,673	6.3%	851,487	461,070	54%	229,766	131,629
Average			**57%**			**319,379**	

Source: Iceni analysis of CoStar, Savills methodology, confirmed by Savills

A6. Units on Non-Strategic Sites

Table A6.1 Strategic Units on Non-Strategic Sites

	Built 2000-2012			Built post-2012			Total		
Local Authority	**Strategic Unit Floorspace (sq. m)**	**Strategic Unit Floorspace on Non-Strategic Sites**		**Strategic Unit Floorspace (sq. m)**	**Strategic Unit Floorspace on Non-Strategic Sites**		**Strategic Unit Floorspace (sq. m)**	**Strategic Unit Floorspace on Non-Strategic Sites**	
		No.	%		No.	%		No.	%
Bromsgrove	44,283	44,283	100%	74,332	14,317	19%	118,615	58,599	49%
Cannock Chase	168,552	101,583	60%	108,760	13,422	12%	277,313	115,005	41%
Coventry	182,798	64,018	35%	219,449	151,054	69%	402,248	215,072	53%
Dudley	16,557	16,557	100%	-	-	0%	16,557	16,557	100%
East Staffordshire	282,488	173,594	61%	100,280	100,280	100%	382,768	273,874	72%
Lichfield	195,174	12,190	6%	208,791	-	0%	403,965	12,190	3%
Newcastle-under-Lyme	161,736	161,736	100%	-	-	0%	161,736	161,736	100%
North Warwickshire	457,584	42,434	9%	447,778	-	0%	905,363	42,434	5%
Nuneaton And Bedworth	91,959	91,959	100%	40,858	40,858	100%	132,817	132,817	100%
Redditch	59,317	59,317	100%	15,620	15,620	100%	74,937	74,937	100%

Rugby	149,940	23,351	16%	489,438	-	0%	639,378	23,351	4%
Sandwell	106,466	51,357	48%	93,057	53,927	58%	199,523	105,284	53%
Solihull	24,840	13,190	53%	182,716	26,234	14%	207,556	39,424	19%
South Staffordshire	52,363	38,993	74%	195,454	92,445	47%	247,817	131,439	53%
Stafford	136,135	10,619	8%	129,535	-	0%	265,669	10,619	4%
Staffordshire Moorlands	88,067	88,067	100%	-	-	0%	88,067	88,067	100%
Stoke-On-Trent	266,506	35,474	13%	211,121	132,559	63%	477,627	168,033	35%
Stratford-On-Avon	51,309	-	0%	41,280	41,280	100%	92,589	41,280	45%
Tamworth	50,072	34,043	68%	25,768	-	0%	75,840	34,043	45%
Walsall	107,723	37,901	35%	27,652	27,652	100%	135,374	65,552	48%
Warwick	66,134	66,134	100%	110,545	33,501	30%	176,679	99,635	56%
Wolverhampton	115,030	93,351	81%	47,870	12,357	26%	162,900	105,708	65%
Wyre Forest	-	-	0%	-	-	0%	-	-	0%
Birmingham	511,328	191,262	37%	213,158	79,703	37%	724,487	270,964	37%
Total			**43%**			**28%**			**36%**

Source: Iceni analysis of CoStar (2023)

A7.Site Age Case Study

Table A7.1 Small Units on Strategic Sites

		Units built post-2000			Units built post-2012		
District	**Site**	**Total floorspace (sq.ft)**	**Small units floorspace (sq.ft)**	**% small units**	**Total floorspace (sq.ft)**	**Small units floorspace (sq.ft)**	**% small units**
Rugby	Ansty Park	1,903,377	74,428	4%	1,478,377	74,428	5%
Rugby	Rugby Gateway	2,641,237	446,955	17%	1,669,353	156,944	9%
Ruby	Ryton	2,031,274	-	0%	2,031,274	-	0%
Coventry	Cross Point	1,593,776	289,946	18%	1,245,510	88,332	7%
North Warwickshire	Birch Coppice	5,740,699	591,592	10%	3,506,622	415,830	12%
North Warwickshire	St Modwen Tamworth	692,004	252,050	36%	692,004	252,050	36%
North Warwickshire	Hams Hall	987,623	122,750	12%	348,008	52,820	15%
Ruby	Symmetry Park (incl commitments)	6,292,732	703,284	11%	1,221,404	85,685	7%
Nuneaton and Bedworth/Coventry	Prologis Park Nuneaton	2,265,287	456,479	20%	109,472	109,472	100%

Warwick	Middlemarch	3,071,774	593,849	19%	2,442,187	114,667	5%
Wolverhampton / South Staffs	i54	2,831,288	642,177	23%	2,807,910	210,357	7%
Cannock	Kingswood Lakeside	2,222,003	474,922	21%	1,244,226	218,000	18%
Lichfield	Fradley Park	5,818,195	677,369	12%	3,745,154	183,719	5%
Stafford	Redhill	2,959,256	213,893	7%	1,537,933	143,623	9%
Stoke-on-Trent	Radial Park	1,724,620	-	0%	845,648	-	0%
Redditch	Redditch Gateway	1,553,450	430,781	28%	706,451	60,443	9%
Birmingham	Midpoint Park	3,543,991	372,585	11%	756112	372,585	49%
Total				13.2%			9.6%

Source: Iceni analysis of CoStar (2023)

A8. Junctions within the Corridors of Search

Table A8.1 Junctions within Corridors of Search

M6 Toll	M40	M42	M5	M54	M6	M6 (2)	M45/A45	A46	A38	A50
M(T)6 J1/M42	M40 J12/B4451	M42 J1/A38/B4096	M5 J1/A41O/A4252	M54 J1/A460	M6 J1/A426	M6 J3/A444/B4113	A45/A452	A46/B4082	A38/A5148	A50/Derby Road
M(T)6 J2/A446/A4091	M40 J13/A452/B4100	M42 J10/A5	M5 J2/A4123(T)/A4034	M54 J2/A449/A449	M6 J10/A454/B4464	M6 J3a/M6 TOLL T0	A45/Maxstoke Lane	A46/A428	A38/Wood End Lane	A50/B5030
M(T)6 J4/A5/A38(T)	M40 J14/A452	M42 J2/A441	M5 J3/A456	M54 J3/A41	M6 J10A/M54	M6 J4/M42 J7/A446	A45/A4114	A46/Stoneleigh Road	A38/A513	A50/A522
M(T)6 J7/A5/A34/A460	M40 J15/A46/A429	M42 J3/A435/A435	M5 J4/A38(T)/A491	M54 J4/A464/B5060	M6 J11/A460/A462	M6 J4A/M42	A45/A444	A46/A452	A38/B5016	A50/A521
M6 TOLL J3/A38	M40 J16/A3400	M42 J3A/M40	M5 J4A/M42		M6 J11A/M(T)6	M6 J5/A452	A45/A46	A46/Coventry Road/Warwick Road	A38/Branston Junction	A50/B5029

M6(T) J5/A5/A5127/A5148		M42 J4/A34			M6 J12/A5	M6 J6/A38(M)/A38/A5127	A45/NEC	A46/Birmingham Road	A38/A5121	A50/A521/Lysander Road
M6(T)J6/A5159		M42 J5/A41/A4141			M6 J13/A449	M6 J7/A34	A45/B4438		A38/A452	A50/Weston Road/Sandon Road
M6(T) J8/A460/A4601		M42 J6/A45/A45			M6 J14/A34/A5013	M6 J8/M5	A45/A423		A38/A453	A50/Baths Road/Foley Road
		M42 J7A/M6			M6 J15/A500/A519/A5182	M6 J8/M5	A45/A445/Warwick Road		A38/Midpoint Blvd	A50/Heron Cross
		M42 J7a/M6 TOLL			M6 J16	M6 J8/M5	A45/B455		A38/Peddimore	A50/Trentham Lakes Jct
		M42 J8/M42/M(T)6			M6 J2/M69/A46/A4600	M6 J9/A461	A45/A4071		A38/Kingsbury Road	A50/A500
		M42 J9/A446/A4097					A45/B4429/M45			

							M45/B4429/Daventry Road			

A9. Junctions Omitted from Scoring

Table A9.1 Junctions Omitted from Scoring

Junctions	Reason
A38/A452	No land
A38/A453	Ruled out by transport assessment
A38/A5121	No land
A38/Branston Junction	No land
A38/Kinsbury Road	No land
A38/Midpoint Blvd	No land
A38/Peddimore	No land
A38/Wood End Lane	No land
A45/A4114	No land
A45/A444	No land
A45/A452	No land
A45/A46	No land
A45/B4429/M45	No land
A45/NEC	No land
A46/B4082	No land
A46/Coventry Road/Warwick Road	Ruled out by transport assessment
A46/A428	No land
A46/Stoneleigh Road	No land
A5/A452	No land
A5/A47/B4666	Ruled out by transport assessment.
A5/A5195	No land
A5/B4116/Holly Lane	Ruled out by transport assessment.
A5/DIRFT Extension	No land
A5/Gypsy Lane/Long Street	No land
A5/Hammonds Way	No land
A5/Higham Lane	Ruled out by transport assessment.
A5/Logix Road	Ruled out by transport assessment.
A5/Long Street	No land
A5/M69	Ruled out by transport assessment.
A5/Mira Drive	Ruled out by transport assessment.
A5/Spon Lane/Boot Hill	No land
A5/White Horse Road/The Parade	No land
A50/A500	No land
A50/A521	Unsuitable site access
A50/A521/Lysander Road	Unsuitable site access
A50/A522	No land
A50/Baths Road/Foley Road	No land
A50/Derby Road	No land
A50/Heron Cross	No land
A50/Trentham Lakes Jct	No land

A50/Weston Road/Sandon Road	No land
A500/A34	Site proximity to residential
M(T)6 J1/M42	No land
M(T)6 J2/A446(T)/A4091	No land
M(T)6 J7/A5(T)/A34/A460	No land
M40 J15/A46(T)/A429	No land
M42 J3A/M40	No land
M42 J5/A41/A4141	Unsuitable site access
M42 J6/A45(T)/A45	Ruled out by transport assessment
M42 J7A/M6	No land
M42 J7a/M6 TOLL	No land
M42 J8/M42/M(T)6	No land
M5 J1/A41 O/A4252	No land
M5 J2/A4123(T)/A4034	No land
M5 J3/A456	No land
M5 J4A/M42	No land
M54 J1/A460	No land
M6 J1/A426	No land
M6 J10/A454/B4464	No land
M6 J10A/M54	No land
M6 J11A/M(T)6	No land
M6 J3/A444/B4113	No land
M6 J3a/M6 TOLL T0	No land
M6 J4/M42 J7/A446(T)	No land
M6 J4A/M42	No land
M6 J5/A452	No land
M6 J6/A38(M)/A38/A5127	No land
M6 J7/A34	Unsuitable site access
M6 J8/M5	No land
M6 J9/A461	No land
M6 TOLL J3/A38	No land
M6 TOLL T6/A5159	No land

A10. Transport for West Midlands – Travel Time Isochrone Methodology

A10.1 Using rail and bus timetables and the road network, TfWM prepared a set of banded travel time isochrones and a travel time matrix for each LSOA in the West Midlands region. For each LSOA in the region, several isochrones were generated for 'car' and 'transit' (which covered all public transport modes and an element of walking). Each mode was run at a 15, 30 and 45 minute interval[36]. These travel-time isochrones calculate, at a particular LSOA, which other LSOAs could be reached by the selected mode of travel and time interval e.g. by public transport in 30 minutes.

Isochrone Lineage

A10.2 The isochrones generated should be considered low accuracy, used for initial site sifting and relative comparison within this data set rather than being suitable for absolute assessment of accessibility or detailed single-site study. See further notes in the 'limitations' section.

Process

A10.3 The process used is an enhancement of https://github.com/Transport-for-the-North/otp4gb-py, updated to use OTP v2.3 (Open Trip Planner) https://docs.opentripplanner.org/en/v2.3.0/

A10.4 In summary, the OTP4GB project provides a well-documented and significantly automated process to install a local OTP instance, build the required data, and automate submission of a large volume of requests

[36] A 1 hour interval was also run, however this was omitted from the scoring as it was considered too long of a commute to be meaningful.

to the OTP server, collating the results – avoiding issues with time / rate limiting / cost of using a commercial API such as https://docs.traveltime.com/api/overview/introduction

A10.5 The code in the repo for this project comprises the automation of input data cleansing, and submission of requests to the server – not the OTP server or code.

A10.6 No modifications have been made to the OTP server code, any customisation of OTP behaviour is purely via data and configuration. https://docs.opentripplanner.org/en/v2.3.0/Configuration/

Input Data

A10.7 In order to allow processing on commodity hardware it is important to reduce the size of the input data to a manageable size.

A10.8 It should be remembered that the output will be clipped to the extent of this data, so it is important to ensure that the maps are sufficiently sized to cover the anticipated study locations, plus the travel zones to them.

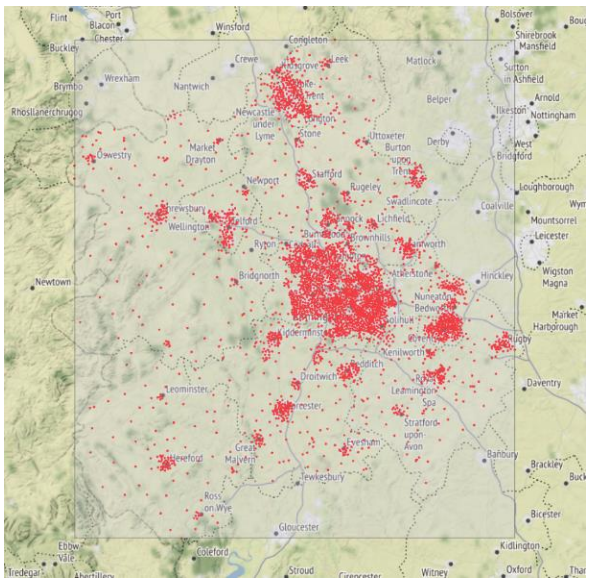
A10.9 This is particularly important if the maximum travel time is increased significantly beyond what was originally expected when creating the map data. Image (right) shows several thousand 90 minute isochrones overlaid and demonstrates how outputs are clipped to the map extent.

Map / Highway network

A10.10 OSM (Open Street Map) https://www.openstreetmap.org is used for highway definitions. A suitably clipped extract of the OSM globe is extracted using this tool https://extract.bbbike.org/ Via this site there is a maximum extract size which this project hits, hence buffer size being limited to 10km.

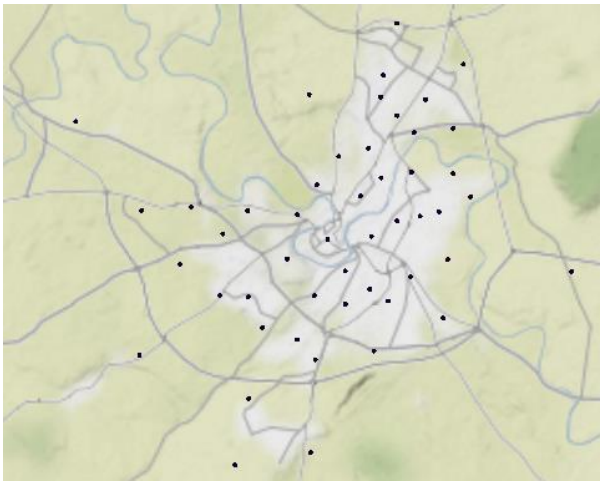
Locations

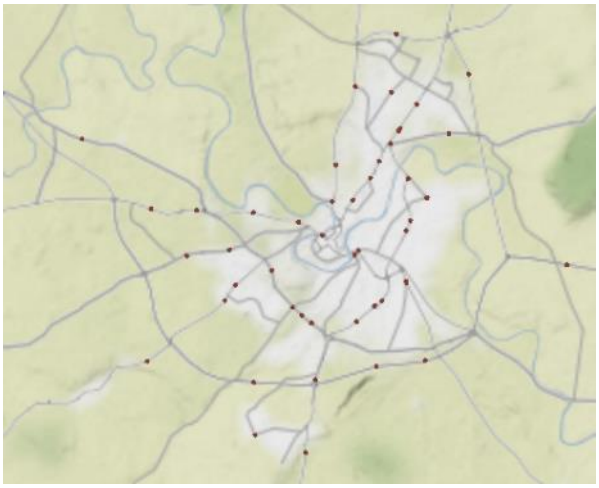
A10.11 West Midlands region LSOA areas have been used. We initially take the centroid for each LSOA, which resulted in a bounding box of :



- Latitude(degrees): 51.853, 53.167
- Longitude: (degrees) - 3.116, -1.206
- n=3486

A10.12 This was then used to extract a suitably sized map for the step above. The centroid of the LSOA - particularly in rural areas – may not be located on existing transport infrastructure, so we snap the initial centroid location to the nearest highway as illustrated below.





A10.13 Since the study purpose is strategic employment land, we attempt to snap to more significant highways rather than residential streets. This is achieved using the map layer definitions from the OSM map extract.

A10.14 While this may be lower accuracy than a source such as Ordnance Survey, there is consistency with the map used as input data for the

other parts of the process, and it reduces the number of data sources required to perform analysis.

A10.15 The preference logic used selects the closest point on the first road satisfying this condition :

- ‘`motorway_junction`’ (or SRN junction) within 1 km. Motorways themselves are not selected due to the high cost of new junctions
- ‘`trunk`’ road within 500m
- ‘`primary`’ road within 500m
- ‘`secondary`’ road within 1km
- ‘`tertiary`’ road within 2km
- Any of the above within 4km
- ‘`residential`’ and ‘`unclassified`’ roads are not considered within this selection.

Rail timetable

A10.16 Rail timetables are downloaded in CIF format from network rail[37]. A one-day all TOC (Train Operating Company) full extract is downloaded.

Public transport timetable

A10.17 Timetables for other modes of public transport are downloaded from: https://data.bus-data.dft.gov.uk/downloads/ . The ‘all England’ download covers all of GB. It is important to ensure the timeframes covered by all timetable sources overlap and are suitable for the study period.

[37] https://wiki.openraildata.com/index.php?title=SCHEDULE

Study period

A10.18 The study has selected 2nd August 2023 as the model run date, purely on the basis of the available timetable data. The PT journey times and car journey times were based respectively on timetables on that date and free-flow journey time so are known not to reflect any congestion related factors – therefore are time of year agnostic, rather than being based on a 'neutral' time of year.

A10.19 Isochrones generated are for inbound travel arriving at the destination location at 9am.

A10.20 Modes of 'walking', 'car', 'bus', and 'transit' have been modelled. 'Transit' covers all public transport modes. This has been repeated for public transport modes at 5 minute intervals from 8:30 – 9:30am.

A10.21 Time isochrones of 15, 30, 45, 60 minutes have been generated.

Limitations

A10.22 Various trip planners have strengths in different areas. OTP is good for public transport, but the data input does not include congestion related information, so will over-estimate car accessibility – especially at peak times.

A10.23 Public transport accessibility is similarly based on timetable data rather than real-world travel times, so does not reflect the impacts of congestion. If a single arrival time is selected, this will under-estimate public transport accessibility for low-frequency services. A more rigorous analysis is to consider a range of closely grouped arrival times and amalgamate the resulting isochrones.

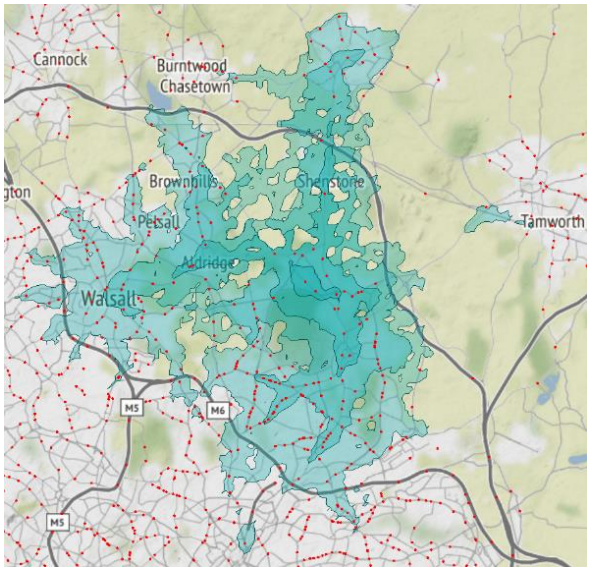
Limitations: Travel time matrix

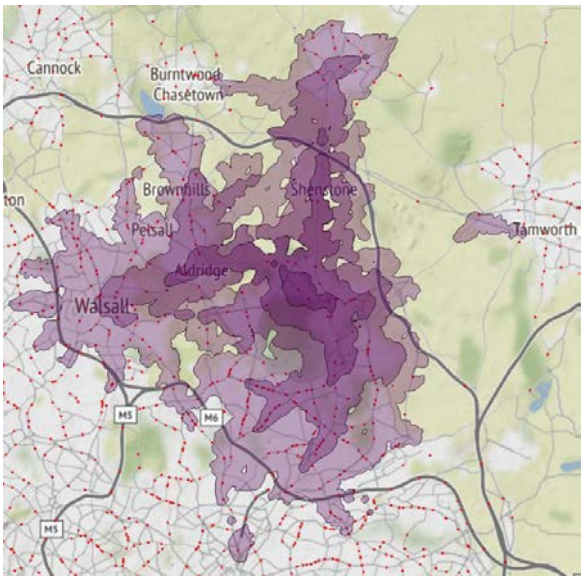
A10.24 Shown below is a bus travel time isochrone for a random location (blue). We can see the shapes created are highly detailed with small geographical pockets falling outside the maximum travel time.

A10.25 The accompanying travel time matrix that is generated considers only the (snapped) LSOA centroid location in whether a LSOA is accessible or not accessible from the origin. Hence it is possible that large areas of an LSOA fall within the travel time but the (snapped) centroid location does not.

A10.26 The probability of this is reduced by the location being snapped to an existing road, but to further soften this effect the isochrones generated have a 100m buffer added to them in both the output isochrone files and travel time matrix evaluation. Image shown has not been buffered. A more sophisticated area analysis is practical but would increase execution time, so was not deemed necessary for this initial assessment.

A10.27 The right image (purple) is the same ischrone, with 100m buffer applied. It can be seen that the level of spatial detail in the isochrone is reduced, creating a more rounded appearance – and the number of small islands of inaccessibility have been reduced.





A11. Transport for West Midlands – Employment Catchment Methodology

14.41 To produce a labour accessibility score, the next step was to count the working population within the travel time isochrone for the mode of transport and time interval selected. Since the study looks up to 2045, the labour pool assessment included the working age population (16-64) and also children under 16 who will enter the labour force during the study period. This was calculated using data from the 2021 Census.

14.42 It cannot be assumed that the entire current and future labour pool within LSOA are eligible for employment on a strategic manufacturing or logistics site. To take account of this, for each LSOA, the proportion of employment within the manufacturing and logistics sectors[38] was calculated. This proportion was used to weight the working population within the LSOA.

14.43 A propensity to travel weighting was then applied depending on the time interval, reflecting that labour located 45 minutes away is less likely to commute than labour located within a 15 minute travel time.

14.44 A percentage score was produced by taking the junctions score as a proportion of the highest scoring junction. For example, the highest-ranking junction has a 15 minute drive time labour score of 127,523, a junction with a labour score of 83,308 would receive a score of 65%.

14.45 As the propensity to travel adjustment has been applied, the 15, 30 and 45 minute scores were then weighted equally to produce overall labour accessibility by car and labour accessibility by public transport scores.

[38] Sum of Wholesale, retail and trade, Transport and Storage and Manufacturing divided by total employment (BRES 2021)

Policy Context

A11.1 WMCA's vision in our LTP is for a 45 minute region, connecting a series of 15 minute neighbourhoods. Therefore, we consider 45 minutes to be the upper bound for a daily travel to work catchment for completely place-based employment.

A11.2 Applying a hard boundary to analysis would result in edge effects, so applying decreasing weightings to populations further from a prospective site would soften boundary effects.

Travel time isochrones

A11.3 TfWM have prepared a set of banded travel time isochrones, and a travel time matrix, for the approximate centroid of every LSOA in the WM region. This will allow travel time assessment of prospective locations. These locations have been snapped onto a suitable nearby road for the purpose of assessment.

Trip rates

A11.4 There are a number of potential sources for trip rates. TRICS would be the preferred option to identify suitable trip rates for various purposes. As an alternative the practitioner may wish to consider using NTS data.

Table A11.1 NTS – 5 year average 2015-2019 – location: all England trip purpose: commuting

Time band (NTS)	Weighted Trip count (NTS)	Nominal time area*	Travel Propensity
zero to under 15 minutes	18%	225	80.36

15 minutes to under 30 minutes	33%	675	48.56
30 minutes to under 45 minutes	24%	1125	21.66
45 minutes to under 1 hour	10%	1575	6.48
1 hour to under 1.5 hours	11%	4500	2.42
1.5 hours to under 2 hours	3%	6300	0.44
2 hours +	1%	8100	0.11

A11.5 We derive a suggested propensity value as follows:

Weighted Trip count / nominal time area = propensity

A11.6 The NTS trip count is function of both the number of people available to travel, and their willingness to travel.

A11.7 As the travel time increases the number of people in the catchment will increase in a non-linear fashion. If we assume that the catchment is perfectly circular and of uniform population density, then the available population will increase with time squared.

A11.8 We assume that available population is a function of time^2, choosing the upper-point of each time band to represent out ‘time area’, subtracting the ‘time area’ of the enclosed bands to give a nominal ‘area’ value for each time band– this being our ‘nominal time area’

A11.9 Clearly there are a lot of assumptions and crude approximations in arriving at this value, so practitioners should feel free to adjust as they see fit when carrying out an assessment.

A11.10 Whatever propensity value is selected, it should be used to weight the available labour pool values to derive an available labour pool value weighted by willingness to travel.

A11.11 We suggest that weighting by duration of journey is more useful than by distance travelled.

Population demographics

A11.12 Since the intent of the study is to look over strategic timescales we suggest that not only currently employed working age people should be included in the labour pool assessment, but that currently economically inactive working age people, students, and children under 16 should be included in the comparative assessment, with these people split between skill levels in the same proportions as the working population for the respective LSOA.

A11.13 Including students / young people will reflect that there is a wide variation in the proportion of students/ young people in LSOA across the region.

Transport accessibility

A11.14 The approach for developing a relative combination labour pool / transport accessibility score is, for a candidate junction:

- Identify the nearest (snapped LSOA) location
- For each transport mode of :walk, bus, all public transport modes, and car
- For each travel time band of 15, 30, 45, 60 minutes

- Identify the accessible origin LSOAs for that destination LSOA from the travel time matrix
- Include appropriate non-working person counts for the LSOA e.g. students, under 16s
- Weight this count of potential employees by the proportions employed in the industrial sector
- Weight this overall count of potential employees by a suitable propensity for the time band.

A11.15 This will allow for the creation of a relative score for each location and travel mode comprising the pool of willing and available labour, and willingness / ability to travel to the candidate location.

A11.16 We anticipate that the public transport accessibility for many of the prospective junctions is likely to be poor, but it will be illustrative of how the prospective sites either entrench or reduce employment car-dependency.

A11.17 The public transport accessibility time matrix is built off current calling points and timetables, so even if an existing route passes close by a prospective location – if there is no calling point there already it will perform badly via this analysis.

A11.18 Along a similar vein, the public transport accessibility assessment has only been carried out for daytime normal business hours arrival times. This is unlikely to be suitable for logistics shift work – but it is more realistic to suggest an extension of operating hours for an existing route than the creation of a completely new route serving an employment site requiring round the clock shift work.

A12. Local Employment Needs Summary Table

Local Authority	Latest Evidence	Plan Period	Model Recommended	Industrial Need (ha)	Warehouse Need (ha)	Total (Ind + W)	Comments
Birmingham	HEDNA – April 2022	2020-2040	VOA Trend	-	-	268.7ha	52.8ha shortfall (excl. HS2)
East Staffordshire	ELR – April 2013	2010-2031	Alternative Labour Demand Forecast (Experian Business Strategies)	33.9	83.0	119.9	30ha B8 shortfall

Lichfield	HEDNA – November 2020	2016-2036	Past Completions Trends	15	40	55	
Tamworth	HEDNA – November 2020	2016-2036	Past Completions Trends	2.8	2.4	5.2	
Solihull	HEDNA – October 2020	2020-2036	VOA	-	-	16	
Cannock Chase	EDNA – January 2024	2018-2040	LB: Current SM UB: Long term past take-up	-	-	43-74 65-94 – incl. replacement loss	

Redditch	HEDNA – February 2022	2021-2040	Experian Forecast	0	30.9	30.9	
Bromsgrove	HEDNA – January 2022	2019-2040	Labour demand: Baseline and High Scenario	-	-	21-28	Shortfall 6-13ha
Wyre Forest	ELR – October 2018	2016-2036	Mid-point of Experian Baseline and past take-up			25	86% total 29ha need
Staffordshire Moorlands	ELR – February 2017	2014-2033	Labour supply to past completions/take-up	-	-	14-32	
Stoke-on-Trent	HEDNA– November 2021	2020-2040	Labour supply to past take-up			85.6-281.8	

Stafford	HEDNA – January 2020	2020-2040	Labour growth scenario – taking account of WMI	25.3	31.6	56.9	
South Staffordshire	EDNA – March 2024	2020-2040	Labour growth scenario – taking account of WMI	32.3	31.7 + 8.8 at WMI	72.7	
Newcastle-under-Lyme	EDNA – June 2020	2020-2037	Experian baseline and past take-up	1.8-16.8	12.8-47.1	29.7-49.9	
Wolverhampton	EDNA – August 2023	2020-41	OE GVA forecasts and mid-rate completions trend			105-11	

Walsall	EDNA – August 2023	2020-41	OE GVA forecasts and mid-rate completions trend			107-136	
Sandwell	EDNA – August 2023	2020-41	OE GVA forecasts and mid-rate completions trend			185-186	
Dudley	EDNA – August 2023	2020-41	OE GVA forecasts and mid-rate completions trend			47-116	
Coventry	HEDNA – November 2020	2021-2041	Gross completions	147.6	156.1	303.7	551 Strategic B8 need

Warwick	HEDNA - November 2020	2021-2041	Gross completions	56.2	67.6	123.8	
Stratford-on-Avon	HEDNA - November 2020	2021-2041	Gross completions	166.1	171.3	337.4	
North Warwickshire	HEDNA - November 2020	2021-2041	Gross completions	56.1	61.4	117.5	
Nuneaton and Bedworth	HEDNA - November 2020	2021-2041	Gross completions	45.5	47.7	93.2	

Rugby	HEDNA - November 2020	2021-2041	Gross completions	150.5	155.7	306.2	
Shropshire	EDNA – April 2021	2016-2038	Labour supply and past take-up			91.0 -180.5	