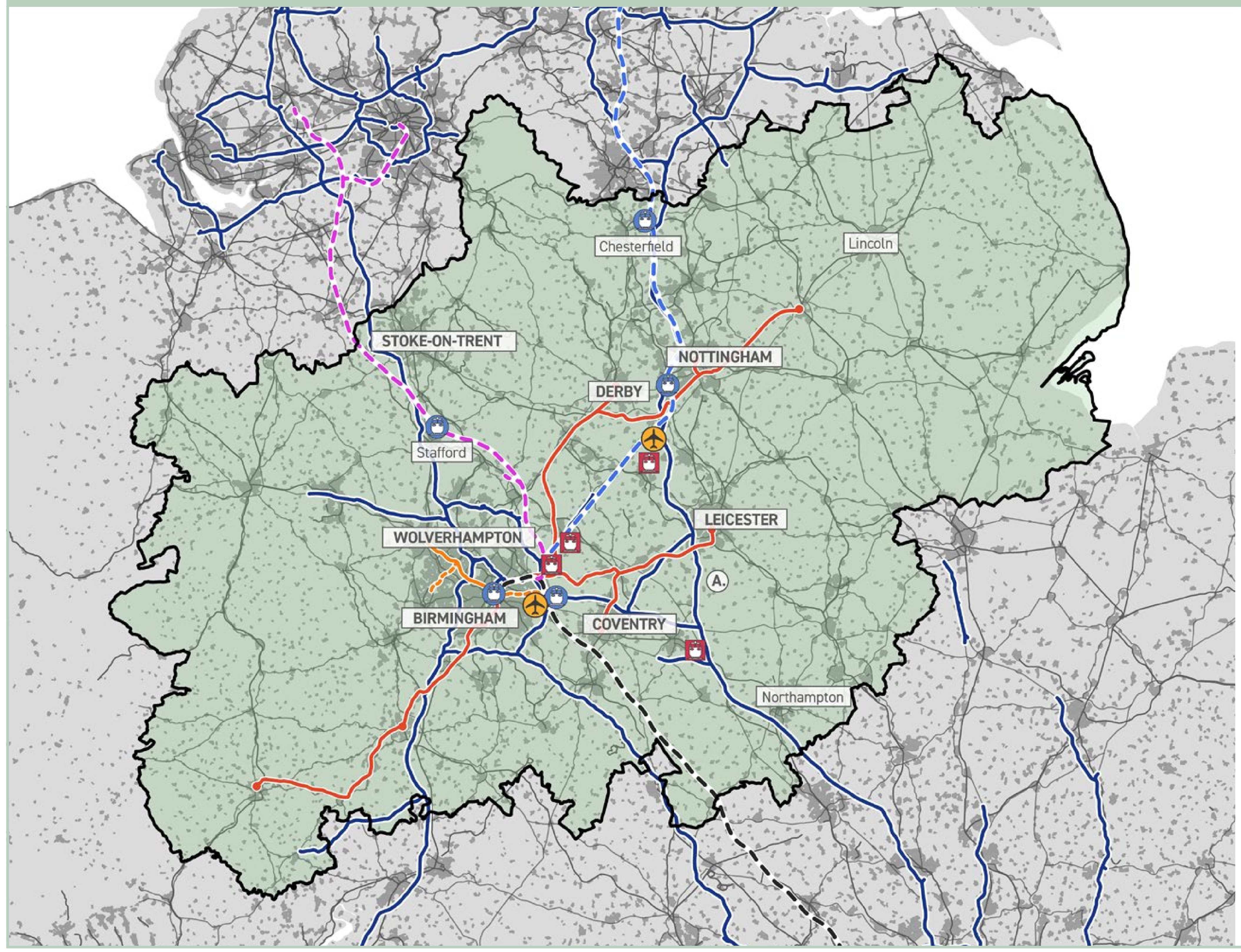
TRANSPORT & CONNECTIVITY



LEGEND

- Midlands Engine
- Metro Line
- Metro Line Extension
- Strategic Rail Freight Interchange
- Airports

ROAD NETWORK

- Motorways
- A-Roads
- Proposed A46 Improvment Works

RAIL NETWORK

- Existing lines
- Midlands Rail Hub route corridors/journeys
- HS2 Phase 1
- HS2 Phase 2a
- HS2 Phase 2b
- HS2 Stations

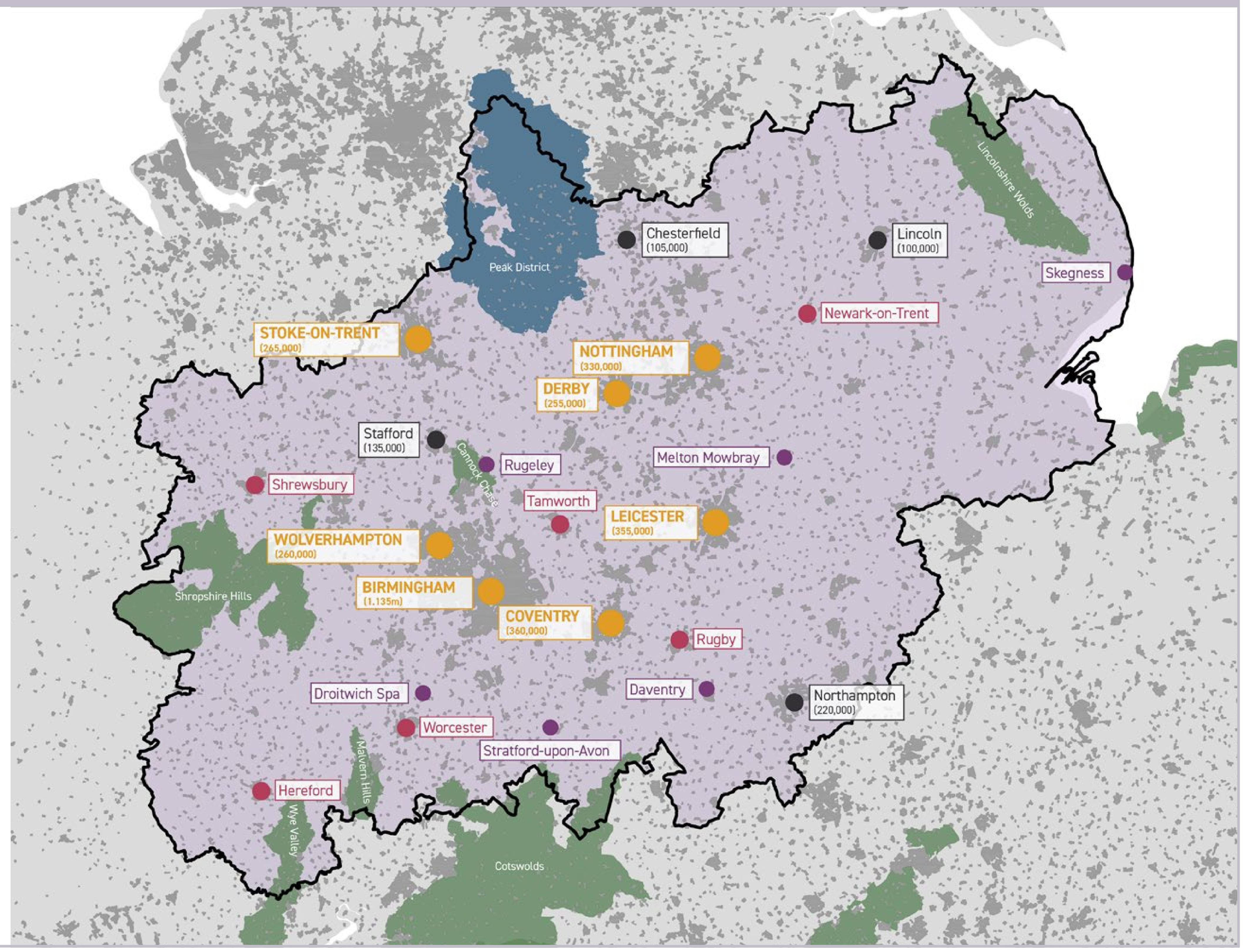
Source: West Midlands Metro (2019), High-Speed 2 (2019), Midlands Connect: Midlands Rail Hub (2018) Reproduced from the Ordnance Survey Map with the permission of the Controller of HMSO. Crown Copyright Reserved. Licence No. 100019279.

POPULATION & PLACE

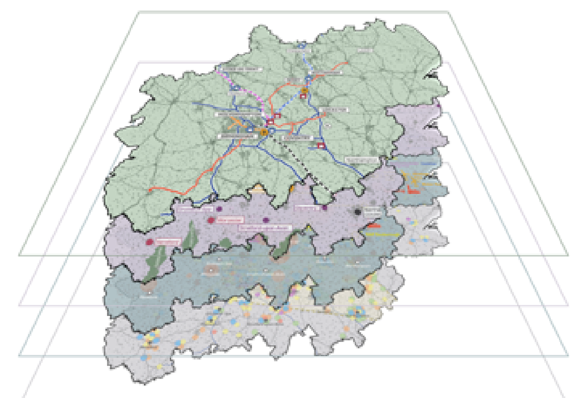
LEGEND

- Core Settlements (Population 2017)
- Major Settlements (Population 2017)
- Other Settlements
- Rural Hubs
- Urban Areas
- Areas of Outstanding Natural Beauty
- National Parks

Source: DEFRA (2011): Urban and Rural Classification of Local Authority and other higher level geographies for statistical purposes (May 2014), Midlands Engine (Indicators with Data) (figures from 2017), Visit Britain (Annual Survey of Visits to Visitor Attractions) (2017) Reproduced from the Ordnance Survey Map with the permission of the Controller of HMSO. Crown Copyright Reserved. Licence No. 100019279.

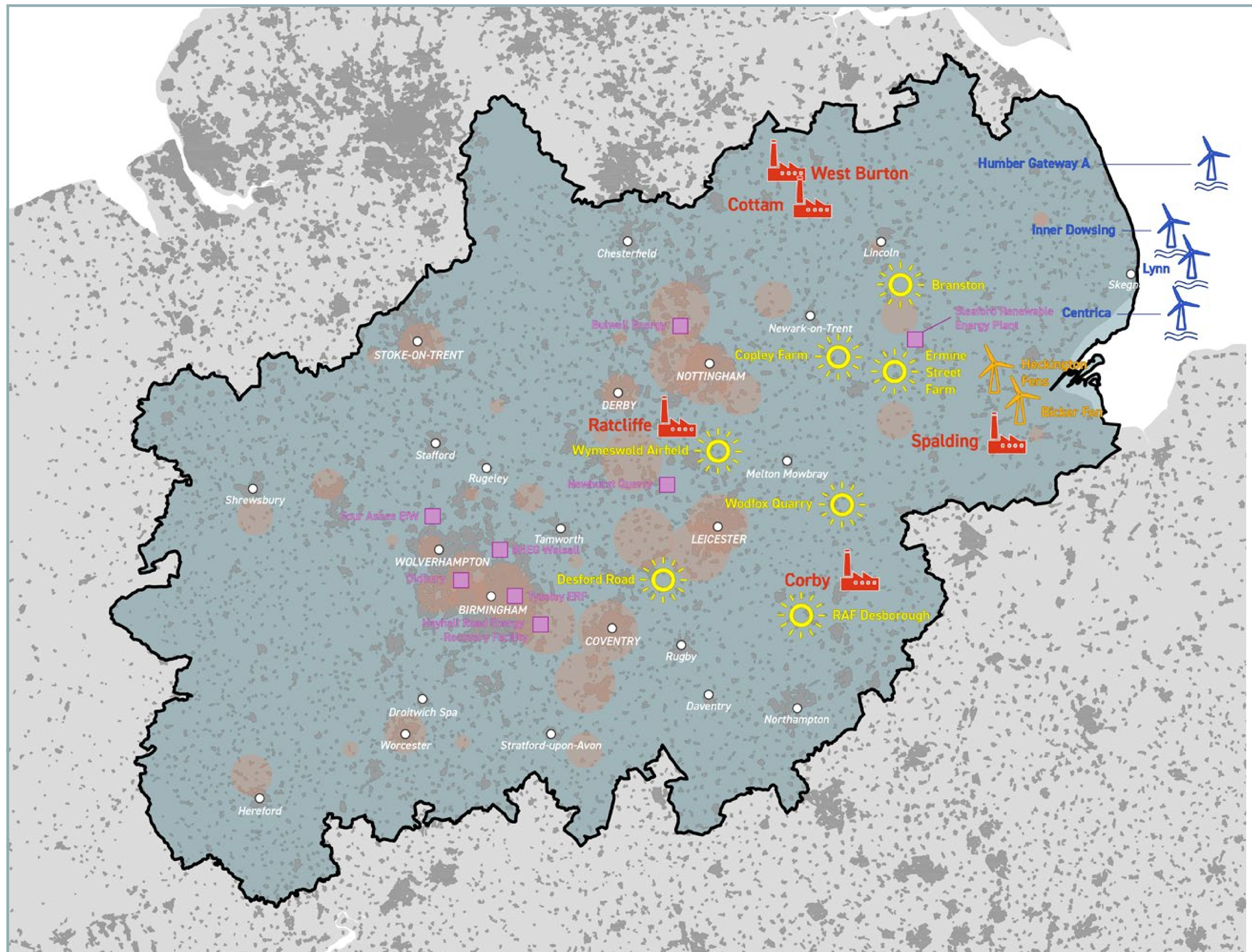


ONE POWERHOUSE: A SPATIAL BLUEPRINT FOR THE MIDLANDS



A vision for Britain. **Planned.**

ONE POWERHOUSE
RSA
BARTON WILLMORE



LEGEND

- Power Plant
- Offshore Wind Farm (over 25MW)
- Onshore Wind Farms (over 25MW)
- Solar Farm (over 30MW)
- Key Energy Facilities / Centres (over 30MW)

CONCENTRATION OF EMPLOYMENT IN THE ENERGY SECTOR

- 400 Jobs
- 200 Jobs
- 40 Jobs

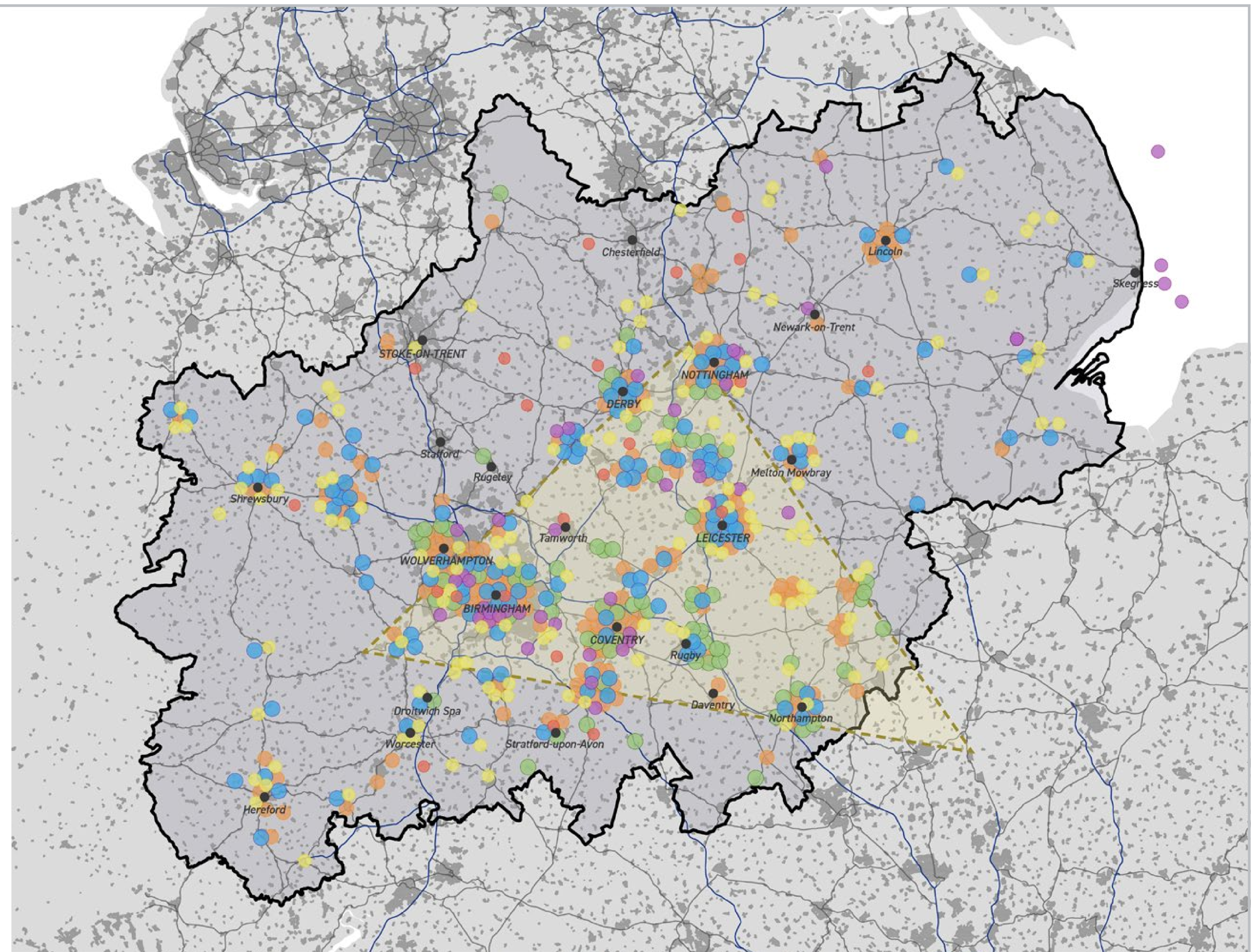
Source: My Grid GB (December 2018), Midlands Energy Sector Research: Powering a New Energy Future (November 2017), The NX Group: The Golden Triangle (2016) Reproduced from the Ordnance Survey Map with the permission of the Controller of HMSO. Crown Copyright Reserved. Licence No. 100019279.

ENERGY

LEGEND

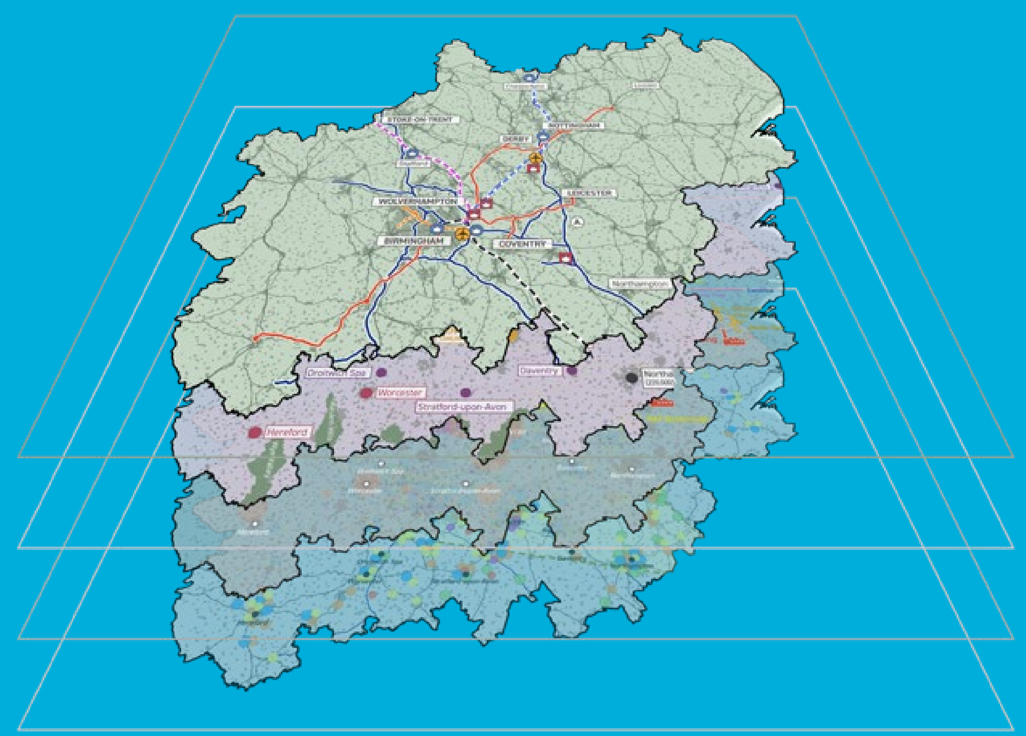
- Research, Professional, Creative & Digital (Life Sciences, Medical Technology, AI, Data Driven, Professional skills, Data analytics, Digital technologies, Media)
- Advanced Manufacturing (Engineering, Materials, Innovation, Agri-tech)
- Transport & Logistics (Advanced Logistics, Automotive industry, Autonomous cars, Rail, Aerospace)
- Energy (Low Carbon Technology, energy production)
- Traditional Industries (Agriculture, Food and Drink, T extiles, Construction)
- Visitor Economy (Tourism, Entertainment)
- The Golden Triangle of Logistics (Approximate)

Source: West Midlands Local Industrial Strategy (May 2019), The Marches LEP, Strategic Economic Plan (2019), Worcestershire LEP [online web pages on key sectors], Worcestershire Local Enterprise Partnership Strategic Economic Plan Review Final Report (October 2017), Stoke-on-Trent & Staffordshire Strategic Economic Plan (April 2018), South East Midlands Strategic Economic Plan (2017), Leicester and Leicestershire SEP (2014-2020), Leicester and Leicestershire Local Industrial Strategy Prospectus (July 2018), Leicester and Leicestershire Our Economy, Economic Profiles 2019 [online on LEP pages], D2N2 Strategic Economic Plan (2019), D2N2 Key Sector pages [online on LEP website] on Transport Equipment Manufacturing Sector, Construction Sector, Creative and Digital, Food and Drink Manufacturing, Transport and Logistics, Life Sciences and Low Carbon Greater Lincolnshire SEP 2014-2030 Refresh (2016) Greater Lincolnshire Priority Sector pages [online] https://www.visitbritain.org/annual-survey-visits-visitor-attractions-latest-results [online, 2017] Reproduced from the Ordnance Survey Map with the permission of theController of HMSO. Crown Copyright Reserved. Licence No. 100019279.



ECONOMY

ONE POWERHOUSE: A SPATIAL BLUEPRINT FOR THE MIDLANDS



A vision for Britain. Planned.

ONE POWERHOUSE
RSA
BARTON WILLMORE

TRANSPORT & CONNECTIVITY

The Midlands region has a strong economic geography sitting at the heart of the UK's economy, harnessing growth potential attributed to its strategic road, rail and aviation networks. As a result, 92% of the UK's population are within a 4-hour drive from the Midlands (Midlands Engine, 2017). The strategic networks enable the region to import/export to local and foreign markets, become market leaders for advanced logistics and distribution, provide greater access to employment opportunities as well as being a highly attractive location for business headquarters.

Key Assets:

Road	» M6, M5, M1, M40, M42, M5 » A Roads (A38, A34, A46)
Rail	» Existing network of railway connections » HS2 » Phase 1 stations (Birmingham Curzon Street Station, Solihull Interchange) » Phase 2a (Stafford) » Phase 2b (East Midlands Hub – Toton, Chesterfield)
Strategic Rail Freight Interchanges	» East Midlands Gateway (Derby) » Birch Coppice (Tamworth) » Hams Hall (Lea Marston) » DIRFT (Rugby)
Aviation	» Birmingham International » East Midlands Airport

Key issues

Poor connectivity between the east and the west has hindered the Midlands' overall growth potential. This has resulted in large employment sites predominantly concentrated towards the central portions of the region. Peripheral areas in the eastern and western extremities are often poorly connected and overlooked when designating strategic employment sites thus weakening the Midlands economic potential.

Opportunities:

Road

Improvements to the road network will support access to new housing and employment sites. Moreover, motorway upgrades would improve reliability vital for multinational companies located in the Golden Triangle and support key growth hubs such as UK Central. Similarly, the A46 is a key trade route and proposed upgrades will be key to increasing economic output for the region and unlock growth potential in the East.

Rail

Improvements to the Midlands Rail Hub will create space for 6 million additional journeys per annum and remove approximately 4,300 lorries daily by 2040.

HS2 trains will serve over 25 stations nationwide connecting around 30 million people. 5 stations are within the Midlands, improving links to London and the North. The Interchange station in Solihull will form part of the UK Central Hub and be one of the best-connected places in the UK, whilst the Curzon Street station will provide another key interchange acting as a catalyst for investment in the City Centre. The new East Midlands hub station (Toton) will enhance connectivity between the East Midlands and the rest of the UK.

Aviation

Birmingham Airport has grown by around 40% over the last five years to around 13 million passengers per annum. The airport contributes to £1.5 billion GVA projected to rise to £2.1 billion by 2033. This level of growth, however, has strained the airport's existing capacity and facilities. A £500 million pound expansion is planned over the next 15 years which will see the expansion and modernisation of the terminal building, airport services and facilities, interconnect with HS2 and a particular focus on long-haul routes to high growth economies such as India and China, and North Atlantic routes.

The East Midlands is the UK's busiest pure cargo airport handling over 320,000 tonnes of flown cargo every year. This function will be bolstered by East Midlands Gateway with its associated rail freight terminal.

POPULATION & PLACE

The Midlands is home to over 10.6million people (Oxford Economics, 2017). The greatest concentration of people reside towards the centre of the region; Birmingham being the most populous followed by Coventry and Leicester. West Midlands has the highest proportion of urban areas which coincides with the population statistics. East Midlands had the fastest population growth of the nine regions of England, as a result of higher net in-flow (ONS, 2017).

The spatial areas between each of the settlements are predominantly rural, comprising of agricultural land, Green Belt and the Midlands' key natural assets.

Key Assets:

Areas of Outstanding of Natural Beauty	Wye Valley Malvern Hills Shropshire Hills Cannock Chase Lincolnshire Woods
National Parks	Peak District

Key Issues:

The Midlands population is dispersed throughout the region relative to the rest of the country. In effect, this means it is more expensive for people, goods and ideas to move around easily (Midlands Engine, 2017).

Opportunities:

Quality of place plays a significant role in the economy as people want to live in high-quality places that are well connected, have access to high quality green spaces and economic opportunities. In effect, such places attract a skilled workforce which is essential for a prosperous economy. Place-making should remain at the forefront of any development.

Enhancement of the transport network to improve connectivity between the east, west and rest of the UK will minimise the spatial gap within the region. In effect, this will facilitate greater movement of knowledge, ideas, goods and workforce which in turn will deliver greater economic benefits.

Birmingham

Lincolnshire Wolds

A VISION FOR BRITAIN. PLANNED.

The One Powerhouse Consortium, supported by The Sir Hugh and Lady Ruby Sykes Charitable Trust, believes that a substantial part of the problem of regional inequality in the UK can be solved not just by money, but by the transformative potential of spatial planning.

Spatial planning is the 'where' of decisions. It looks at a defined geographical area and makes an assessment of everything contained in that area – towns, cities, housing, schools, universities, roads, rail, airports, offices, factories, hospitals, energy sources, museums, parks and leisure activities - and makes a plan to develop those assets for the benefit of the people who live in that region, now and for the future.

It is well understood that countries and regions around the world have used spatial planning to focus political will, economic activity and social reform to great effect. Notable examples include Germany's Rhine/Ruhr, Holland's Randstad and New York City's Regional Plan Association.

The Value of Place and Scale

There is evidence that spatial planning has already begun to deliver results in the UK. We are not alone in recognising that the two 'regional economies' that have the highest levels of productivity are those where there are coherent regional economic plans: London and Scotland.

Indeed, in England, there is good work taking place through some Local Enterprise Partnerships (LEPs) and Combined Authorities and Mayoralties but not all. In strategic planning and investment terms, these tend to be rather small and the outcome is rather patchwork.

Our Plan

The clear 'gap' in terms of economic planning in the UK, therefore, is at the level of the English regions. Any spatial strategy needs to bring together the best local industrial strategies and plans within a wider regional strategy framework. The foundations of how this can be achieved are already present. The regions of England are already agglomerating: The Northern Powerhouse, The Midlands Engine, The Great South West and The Wider South East all exist as functional identities.

Our ambition is, in short, to work with these regional networks to prepare a series of draft spatial plans that will better enable decision-making and prioritization of investment across the country and thus help the UK as a whole develop over the long term – creating opportunity for all, jobs for all and prosperity for all.

We are also delighted to be supported on the technical side by some of Britain's most respected planning consultancies: Atkins in the North, Barton Willmore in the Midlands and The South West and Aecom in the South East.

Together, we hope to show how well thought out, long term spatial planning can start as words and diagrams on a page and end up changing lives for the better – wherever in the UK those lives are lived.

What's next:

This prototype will be developed further over the coming months. Using this prototype and the equivalents for the South East/South West/Midlands/North, the One Powerhouse Consortium and the RSA will create joined-up plans. All these documents will be released by the end of 2019.

How to contact us

If you are interested in this project, please get in touch with us at: info@onepowerhouseconsortium.co.uk

Acknowledgements:

Thank you to the Sir Hugh and Lady Sykes Foundation for funding this project and to the One Powerhouse Consortium, the RSA and UK2070 Commission for their ongoing assistance.

www.bartonwillmore.co.uk

BARTON WILLMORE

ENERGY

The UK is undergoing a fundamental change in energy production and the Midlands is well placed, centrally, to contribute. In 2017, the region supported 1 in 3 jobs in the energy sector nationally with a contribution of over £5 billion (annual economic output) to the UK economy. There are over 500 businesses trading in the core energy sector comprising 30,000 jobs. Indeed, the Midlands generates 12.2 GW of energy, principally from coal and CCGT sources.

Key Assets

There are several areas where the energy sector is concentrated in the Midlands including the Greater Birmingham and Solihull LEP, Leicester and Leicestershire LEP and Derby, Derbyshire, Nottingham and Nottinghamshire (D2N2). The East Midlands, in particular, has benefitted from large-scale investment in renewable energy sources, including offshore and onshore windfarms, and solar farms. These provide jobs and knock-on investment for more rural parts of the Midlands, such as Lincolnshire. However, the majority of jobs continue to be concentrated around the urban conurbations.

Constraints

In the Midlands, a lack of connectivity (east-west) is hampering the maximisation of growth in the sector. This is coupled with national challenges, including the ever-growing expectation for a green, low carbon future, whilst ensuring costs are minimal for all consumers. National Grid have identified several challenges and argue that the economic landscape, technological development, business models and consumer behaviours are all changing at unprecedented rates.

In addition to the above, there is a growing skills shortage in the energy sector as well as a lack of large infrastructure projects coming forward.

Increased automation and robotisation in manufacturing and logistics means that energy is becoming an increasingly important factor in locational decisions and it is important that the necessary infrastructure is provided to support and future-proof the clustering of economic activities. This has resulted in a move towards a flexible, decentralised system of low-carbon generation but there are regulatory and workforce issues to resolve.

Opportunities

There are many growing companies already sited in the region, capitalising on the rise of the UK's clean economy. For example, the Sustainable Energy Association has its headquarters in the region and there is a wide range of existing skills that can assist in overcoming the UK's shortage of technical-level skills. In light of the economic, environmental and social commitment to drive forward clean energy growth, the Region is well placed to capitalise on this as a sectoral strength with significant political support at a variety of scales.

ECONOMY

The Midlands economy is worth approximately £233.4billion (Oxford Economics, 2017) and responsible for 13% of the UK's annual output (Midlands Engine, 2017). The key sectoral strengths lie within the core cities and are described below:

- R&D, Life Sciences, Creative industries - Birmingham and Nottingham
- Automotive clustering - Coventry and Warwickshire
- Agriculture, Food & Drink - Lincolnshire, Leicestershire and The Marches.

Key Assets:

Research, Professional, Creative & Digital – The Midlands has a strong science and research base as it is home to 20 universities geographically spread throughout the region specialising in Health, Civil Engineering, Artificial Intelligence and Space Technology. A number of Enterprise Zones, Business Parks and Science Parks provide employment space to grow and develop the sector with notable clusters in Birmingham and Nottingham.

Advanced Manufacturing – The Midlands economy covers a substantial area built on a globally significant, advanced manufacturing base. It is home to some of the most advanced manufacturing industries in the world and employs approximately 246,100 people. The region is home to the headquarters of a number of globally significant businesses (including Jaguar Land Rover, Rolls Royce and JCB) and nationally significant clusters within the West Midlands region and Derbyshire. As a consequence, it accounts for over 21% of the UK manufacturing output (Midlands Engine, 2017).

Energy – The Midlands is well-placed to research, develop and contribute to the energy production market. This includes low-carbon technologies such as Birmingham's Thermal Energy Demonstrator as a test-bed facility for solar and wind farms located in the rural parts of East Midlands, particularly Lincolnshire.

Traditional Industries – The Region's traditional manufacturing base is resilient as 27,500 businesses fall within the manufacturing sector.

Transport & Logistics - This sector plays an important economic role in its own right as well as supporting other sectors through the movement of goods and components. Because of its location and existing transport network (including access to regional airports and strategic rail freight interchanges), the Midlands is the central point for logistics, warehousing and distribution companies. The original Golden Triangle around Daventry and Lutterworth (and including the far eastern fringe of the West Midlands around Rugby) has expanded to include the eastern half of Birmingham, the M42 Corridor, and the motorway-accessible parts of Coventry. The Region benefits from extensive supply chain infrastructure and has capitalised on the rapid growth of e-commerce.

Visitor Economy – One of the key aims of the Midlands Engine is to support and strengthen the regional tourist economy. A number of high visitor generating attractions are located in the Midlands, including Alton Towers, Drayton Manor Park, Shakespeare's Birthplace and the Black Country Museum. The numerous natural and heritage assets such as the AONBs, National Parks and Forest add to the rural economy and provide diversity.

Key Issues:

The key foundations of productivity are people, skills, infrastructure, innovation, business environment and space. Despite the sectoral strengths, the Midlands has fallen behind other regions due to a lack of skills, following low educational attainment, high unemployment and low graduate retention. There is also a shortage of employment space. Businesses locate near to skilled workforces and other parts of the UK have proven more competitive.

A lack of innovation and dynamism has resulted in low business start-up rates compared to the national average and business closures remain high (Midlands Engine, 2017). A greater number of lower output firms in the region impact upon the overall economic output. The connectivity divide between the east and west further hampers the region's economic potential.

Opportunities:

The Midlands can strengthen skills through greater support in education, apprenticeships and targeted up-skilling. New businesses can be supported via mentorship, knowledge-sharing and use of technology to drive productivity. New major transport infrastructure can drive trade and investment opportunities. Consideration of Functional Economic Market Areas (FEMAs) can ensure benefits span across the wider region.

WHY THE MIDLANDS?

The absence of a regional tier of governance has resulted in a piecemeal approach to planning meaning the full potential of the Midlands has not been realised.

The Midlands Engine Strategy is a Government backed initiative to transform the region into an economic powerhouse through a holistic vision. This will require a joined-up approach involving the alignment of industrial and spatial strategies to draw upon the key strengths of the region, identify areas of growth, drive productivity and bolster the Midlands economy benefitting all.

The economic/political composition, fragmented approach to planning and different timescales to produce the economic strategies within the Midlands adds complexity to this task. For example, the West Midlands has a Mayor in Andy Street, but he does not have spatial planning powers and his remit does not cover the East Midlands. There are ten Local Enterprise Partnerships (LEPs) and the Region comprises a number of independent Functional Economic Market Areas (FEMAs).

There are currently five Local Industrial Strategies (LISs) under preparation in the Midlands Engine geography, as shown on Figure 1. The West Midlands LIS was published in May 2019 as part of Wave 1 and the South East Midlands LIS is another trailblazer currently being developed. The Leicester and Leicestershire LIS is to be published as part of Wave 2 in March 2020 and the D2N2 and Greater Lincolnshire LISs will sit within Wave 3. These strategies need to be aligned through an overarching regional plan the contents of each have informed this piece of work.

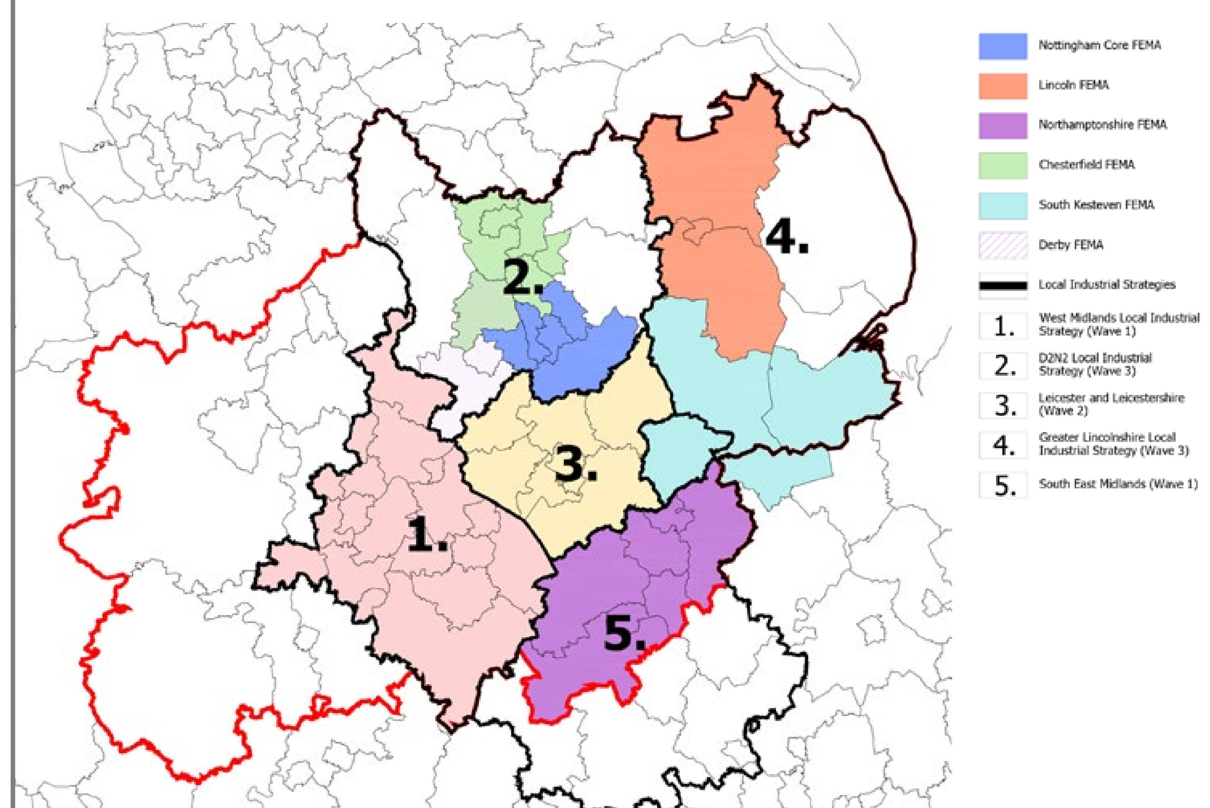


Figure 1. Source: Barton Willmore 2019