

LOCAL INDUSTRIAL STRATEGY

JANUARY 2021

CONTENTS

EXECUTIVE SUMMARY		3
1.	GREATER LINCOLNSHIRE'S LOCAL INDUSTRIAL STRATEGY	11
2.	AGRI-FOOD	16
3.	ENERGY	21
4.	PORTS AND LOGISTICS	29
5.	DEFENCE	33
6.	HEALTH AND CARE	35
7.	VISITOR ECONOMY	37
8.	IDEAS	40
9.	PEOPLE	44
10.	INFRASTRUCTURE	51
11.	BUSINESS ENVIRONMENT	56
12.	PLACE	59
13.	IMPLEMENTATION	63



EXECUTIVE SUMMARY

Future proofing the UK's major food economy, capitalising on its businesses, land and people to create a productive, resilient and low-carbon economy.

ne of the largest LEP geographies, Greater Lincolnshire is a dispersed economy which is distinctive in its variety, from the world-leading offshore wind energy sector and manufacturers, ports and petrochemicals in the north to the centre of the UK's agricultural heartland in the south. Rural and coastal areas constitute more than 90% of Greater Lincolnshire's landmass, attracting visitors to destinations such as Cleethorpes and Skegness. Industrial centres like Immingham and Scunthorpe, clusters of chemical and energy production companies on the South Humber Bank, the heritage city of Lincoln, and market towns such as Sleaford all contribute to the economy as drivers of growth and innovation, housing residents, and providing vital services.

Greater Lincolnshire is a £20.7bn economy, with ambitions to add £3.2bn to GVA by 2030. This Local Industrial Strategy (LIS) will contribute to delivering this ambition. It identifies the area's distinctive strengths, opportunities and challenges, creating a strong foundation for growth. Success will be achieved through partners working together to boost productivity in all places and all sectors, creating a productive, decarbonised and resilient Greater Lincolnshire economy recognised for its businesses, land and people.

Greater Lincolnshire faces challenges around low innovation and human capital, but there are opportunities for growth which emerge from the evidence. The LIS will focus on critical innovation strands across Greater Lincolnshire's sectors, seeking to maximise links to higher education and innovation assets. In addition, the LIS focuses on levelling up

and responding to hyper-local challenges in skills, business growth and infrastructure. Greater Lincolnshire can and should be a location for market making innovation. There are established and emerging clusters in agrifood, energy and new fuels, ports and logistics and defence, and potential to build links to the wider regional economy. Greater Lincolnshire is already driving innovation in agri-food, transforming the sector through robotics and automation, and is helping achieve the UK's net zero 2050 goal through innovation in offshore wind energy, industrial decarbonisation and local energy generation solutions.

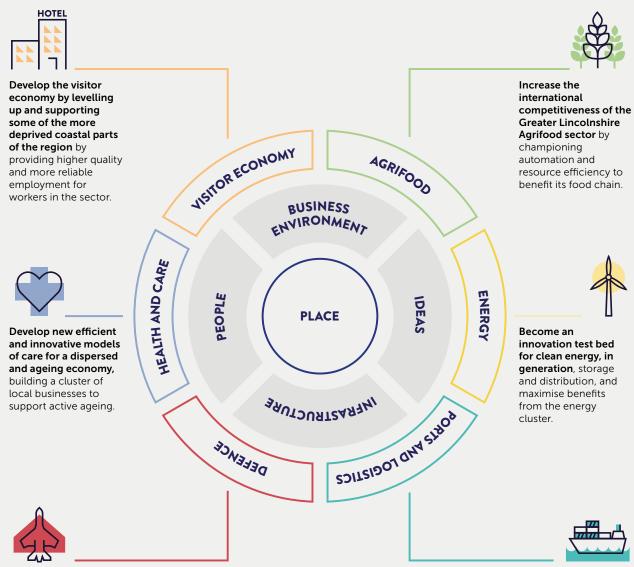
More must be done to ensure Greater Lincolnshire's focused excellence in discovery translates into its application in industrial and commercial practices, and so into increased productivity. The private sector is driven by micro and small businesses with one of the highest proportions of employment in small enterprises out of all LEP areas. It has a large manufacturing and engineering base, is home to much of the country's agri-food sector – from farm to manufacture and boat – alongside strong

energy industry assets (including the burgeoning offshore wind and new fuels sectors) and visitor economy sectors.

Place – or perhaps stronger places - is a thread which runs through this document. Productivity and wages are low with 32% of employees paid below the real living wage; the 4 visitor economy and health and care are major low productivity employers. In some places high streets are in need of revitalisation to help them adapt to and overcome the challenges facing traditional bricks and mortar retail. Population density is low across the area; there is space to grow but this can only be unlocked if the area has the appropriate mix of housing, employment and skills. This is complex in such a dispersed economy, requiring local and targeted interventions and investment; there is no one size fits all response to support Greater Lincolnshire to thrive. This approach will be supplemented by efforts to raise the ambitions of Greater Lincolnshire's broader industrial base, supporting businesses of all shapes and sizes to drive innovation levels, impact and geographic specialisation.

COVID-19

The Greater Lincolnshire LIS is a locally-led and developed strategy. Its development predates the onset of the Covid-19 crisis in early 2020. This document was first published in early 2021 and at this time the challenges and opportunities identified in the LIS remain relevant; the impact of the Covid-19 crisis has been to increase the urgency of implementing the strategy and engaging Greater Lincolnshire's businesses, people and places in the response. This Strategy underpins Greater Lincolnshire's approach to economic recovery from Covid-19, which is set out in full in 'Protecting, Progressing, Prospering: A Covid-19 Recovery Strategy for Greater Lincolnshire.'



Create a cluster of innovation focused defence companies, and ensure Greater Lincolnshire is a highly attractive, first-choice destination for defence-related industries, service leaders and their families.

Maximise the strategic advantages of our ports by leading their transformation into one of the most smart, clean and efficient port clusters in the world, handling increased volumes of trade.

THE PRIORITIES

Building on the evidence-based findings, the Greater Lincolnshire LIS identifies priorities to deliver greater productivity and earnings power, levelling up within the region and with the UK through a focus on increasing sectoral innovation and improving human capital.

INCREASING INNOVATION IN SECTOR CLUSTERS

Agri-food - Our Ambition is to increase the international competitiveness of our Agri-food sector by championing automation and resource efficiency, to become the UK's Food Valley and contribute to reducing the UK's reliance on food imports.

Agri-food represents 18% of the local economy (compared to 3% nationally). It is the source of 43% of new jobs and the heart of the sector's technological innovation through the Lincoln Institute for Agri-food Technology (LIAT), the National Centre for Food Manufacturing (NCFM), Riseholme College – Lincolnshire's specialist land-based FE college, the Food Refrigeration and Process Engineering Research Centre at the Grimsby Institute and the three Food Enterprise Zones. This is a strong foundation for growth. As new technologies arise and new processes develop there will be opportunities to deliver food more efficiently to a growing global population. The opportunity for Greater Lincolnshire is to capitalise on these trends and use innovation to improve productivity not only locally but in food production across the globe, taking a leadership role for this sector nationally.

> Greater Lincolnshire will work to develop a leading region for innovation in all parts of the food supply chain, focusing on skills, infrastructure and productivity gains. This will maximise the value of the National Centre for Food Manufacturing, the Lincoln Institute for Agrifood Technology, the Food Refrigeration and Process Engineering Research Centre and the agrifood clusters in the Food Enterprise Zones.

- > Greater Lincolnshire will use its convening power to foster collaboration with local industry and higher education alongside regional and national partners focused on sector productivity transformational change in food chain automation, trade and efficiency.
- > Greater Lincolnshire will work to maximise the international trade and inward investment opportunities related to the agri-food sector, including through cooperation with Norway, Iceland and broader Scandinavia, and building on existing links to China through the Hunan Lincolnshire partnership agreement.

Energy - Our ambition is that Greater Lincolnshire will pioneer industrial decarbonisation, creating a template for other areas. We will be a test bed for technologies in clean energy generation, storage and distribution.

Greater Lincolnshire's nationally significant energy assets in the Humber Estuary and the North Sea combined with its rural geography mean it is well placed to pioneer new approaches that contribute to the government's commitment to reach Net Zero UK carbon emissions by 2050. As well as supporting opportunities in decarbonisation and the expansion of the offshore wind and new fuels sectors in North Lincolnshire and North East Lincolnshire, the LIS will focus on local and rural energy production and distribution. Taken together, Greater Lincolnshire's strategy amounts to a potential transformation in how energy is generated, distributed and used. and positions Greater Lincolnshire as an innovative leader in the UK's efforts to combat climate change.

- > Greater Lincolnshire will continue to support the expansions of the offshore wind supply chain, supported by the Offshore Renewable Energy Catapult and unlocking the potential for cluster development outlined in the Offshore Wind Sector Deal. This will include targeted support to SMEs through the Growth Hub, a growing portfolio of sites and purposebuilt facilities, and access to established sector networks.
- > Greater Lincolnshire and local and regional partners will work together in an energy partnership to ensure that regional aspirations for industrial decarbonisation and clean energy generation align with and support government investment and policy including primarily Net Zero.
- > Greater Lincolnshire will continue to implement the ambitions set out in the local energy strategy, including to secure future investment into the Theddlethorpe Gas Terminal and the Carbon Neutral Business Zone, and bolster investment into new energy and fuels projects on the Humber Bank including private wire and district heating.
- > Greater Lincolnshire will work in partnership with energy intensive industries, the transport sector and other potential large-scale users to develop the demand required to support blue and green hydrogen production and distribution, and support the building of coalitions between companies to further develop hydrogen opportunities.

> Greater Lincolnshire will develop a "Living Lab" Rural Innovation Test Bed for Energy and Water for the Greater Lincolnshire area looking at the application of new energy technologies in rural contexts. A first focus will be to link generation from local hubs to the national grid and address existing local capacity constraints in rural parts of Greater Lincolnshire.

The opportunities in Energy across Greater Lincolnshire are made possible in part by the region's specialisms in Advanced Manufacturing and Engineering. Although not a listed priority sector of this LIS, Greater Lincolnshire will build on its existing strengths in manufacturing and engineering to promote growth and sustainability within the sector.

- > Greater Lincolnshire will work with the manufacturing sector to support diversification, innovation, decarbonisation and add value to the manufacturing sector.
- > Greater Lincolnshire will utilise government initiatives around training to support the needs of the manufacturing and engineering sector and build on the strong technical skills base in the area.
- > Greater Lincolnshire will work in partnership with the manufacturing and engineering supply chains to support local businesses to benefit from national infrastructure schemes and ensure Greater Lincolnshire is recognised as a first choice for manufacturing, processing and engineering.

Ports and Logistics - Our ambition is to maximise the strategic advantages of our ports by leading their transformation into one of the most smart, clean and efficient port clusters in the world, leveraging greater value from the ports by handling increasing volumes of trade and attracting more value-added manufacturing activity.

Greater Lincolnshire has many ports, along the coast and further inland on the Humber Estuary, the River Trent and the River Nene. Major ports include Immingham and Grimsby, and smaller ports at Boston, New Holland, and Sutton Bridge. 75% of all UK manufacturing and 40 million UK consumers are within a 4-hour drive of the Humber Estuary ports. 12% of all UK cargo is handled in the ports of Immingham and Grimsby, and Greater Lincolnshire's ports originate over 25% of the UK's rail freight. The ports and logistics sector has been fundamental to Greater Lincolnshire's economy, particularly on the Humber Bank, and also to the wider economy as the only ports in the Midlands. After a period of growth and investment the next stage of their transformation is to raise their productivity, increase trade, unlock investment in complementary industries around them and support clean growth in the region.

- > Greater Lincolnshire will strengthen the position of the ports to attract new value-added manufacturing activity and further grow the share of UK trade they handle, including by:
 - Opening up more employment land for port-related commercial development through existing Growth Deal and other private and locally-led investment
 - Managing the pipeline of future sites and premises to respond to market requirements, and working with landowners to explore how barriers to development can be overcome, including on port-related Enterprise Zone sites
 - Advancing discussions with government on the possibility of a Freeport on the Humber Estuary, which would include the ports of Immingham and Grimsby and the developing high value cluster of renewable energy industries, to support growth ambitions, open up new opportunities for local people, boost productivity and tackle deprivation
- Identify options for accelerating the decarbonisation of Greater Lincolnshire's maritime cluster, supporting the delivery of the Clean Maritime Plan.

Defence - Our ambition is to create a cluster of innovation focused Defence companies, and ensure Greater Lincolnshire is a highly attractive, first-choice destination for Defence-related industries, service leavers and their families.

Through the LIS Greater Lincolnshire will grow the local defence sector, creating an innovative cluster linked to the RAF presence already in the region. There are opportunities to benefit from the strong military presence in the area and the resulting need for effective and secure digital infrastructure. Actions will build aspiration and innovation support to develop a thriving local defence cluster. It will do this by building on the physical assets, training, human capital, and investments which are already in Greater Lincolnshire, increasing the number of start-ups and spin-outs, including specific initiatives to encourage exiting service personnel to create new businesses in Greater Lincolnshire.

- > Greater Lincolnshire will work with partners to improve research and innovation capabilities of the nascent sector, exploring the potential for a defence cluster business park and workspace units at Lincoln Science and Innovation Park.
- > Greater Lincolnshire will develop tailored business support services, reflecting the finance, skills, advice and commercial premises required to start and grow a defence related business in Greater Lincolnshire. This will include a programme for RAF leavers and other defence personnel to encourage them to stay and start a business in the region.
- > Greater Lincolnshire will work to better understand the defence supply chain and trade potential to boost the sector and stimulate innovation and investment from a broad range of sources.

IMPROVING HUMAN CAPITAL AND BETTER DIFFUSION OF EXISTING TECHNOLOGY

Health and Care – Our ambition is to develop new efficient and innovative models of care for a dispersed and ageing economy, building a cluster of local businesses to support active ageing.

The LIS will look to spur productivity gains in health and care, one of Greater Lincolnshire's largest sectors by employment. Health and care services in Greater Lincolnshire are delivered to a population which is relatively older and more rural than the UK average. While health and care is a significant source of employment in Greater Lincolnshire, as a sector it is relatively unproductive and there is a need to find new more efficient and innovative models of care. Lincoln has a significant cluster of medical expertise including at the University of Lincoln a School of Life Sciences and Pharmacy, a new Medical School (opened in September 2019), a Science and Innovation Park and the National Centre for Rural Health and Care. All of these institutions will help to generate innovative activity and raise the profile of the health and care sector as an employer of choice. The LIS will market test new models of care which could be rolled out across the country, driving innovation and efficiency in the sector, and delivering better outcomes for some of the most vulnerable and hardest to reach residents. Capital investment in health care facilities can also support wider economic and social benefits and any investment will be used to generate the maximum possible benefits for communities and businesses.

> Greater Lincolnshire will become an international centre for innovation for rural health and care solutions, particularly through the National Centre for Rural Health and Care.
A priority will be to develop a pharmaceuticals network based around the Science and Innovation Park.

- > Greater Lincolnshire will pilot 'Communities of the Future' to meet the needs of an ageing population. This will explore improved physical and digital connectivity to local services and transformation of health and care services.
- > Greater Lincolnshire will address workforce challenges around skills and retention through promoting alternative career pathways, attracting health care professionals and enhancing the capability of the voluntary and community sector.
- > Greater Lincolnshire will utilise any opportunities arising from capital investment in health care facilities to achieve wider economic and social benefits.

Visitor Economy – Our ambition is to develop the tourism sector, levelling up and supporting some of the more deprived parts of the region by providing higher-quality and more reliable employment for workers in the sector.

50 miles of coastline, an Area of Outstanding Natural Beauty, a thriving food culture, distinctive heritage assets, a network of market towns boasting attractive high streets and hundreds of visitor attractions contribute to a £2.39bn visitor economy sector which supports at least 30,000 full time equivalent jobs. Lincoln has seen major investment in recent years in both the castle and cathedral, developing a strong heritage city offer, while in Grimsby plans to revitalise the town centre and improve links to the waterfront are expected to attract many more visitors. Further plans are in place to build on the investment already seen in Scunthorpe to create a centre for learning, living, leisure and business. Rutland's growing reputation for excellent food and produce draws in visitors to its quality restaurants and markets. However, the sector as a whole has low wages and is primarily a seasonal industry in many parts of the region. Perhaps as a result, traditional coastal resort towns such as Cleethorpes, Mablethorpe and Skegness have significantly different economies, challenges and opportunities to other towns in Greater Lincolnshire.

A priority is to promote Greater Lincolnshire as a year-round tourist destination to address some of these distinctive local challenges.

- > Greater Lincolnshire's partners will enhance and promote the local place offering, including designing a tourism zone, to draw in not only a greater number of visitors overall but also a greater number of high-spending visitors. It will do this by producing a refreshed visitor economy strategy and destination marketing offer, and to implement the Hotel Strategy.
- > Greater Lincolnshire will work to address barriers in sector related skills and employment provision to improve access to jobs and lift residents' earning potential. A priority will be to develop a sector skills plan and to focus on upskilling and retraining frontline workers.
- > Greater Lincolnshire will support SMEs to adopt digital technologies and platforms which will enable them to improve their productivity and attract greater numbers of visitors.
- > Greater Lincolnshire will maximise the benefits of the rural area to help enhance residents' wellbeing, protect and enhance the quality of the landscape and supporting recognition for the Area of Outstanding Natural Beauty.

SUPPORTING ALL BUSINESSES AND RESIDENTS

This LIS is for the whole of Greater Lincolnshire and looks to maximise the gains for all places. However, not every intervention will impact every place at the same time or in the same way. The LIS draws from the evidence to use the five foundations of productivity to focus on targeted and evidence led responses to support all parts of the economy. This takes a broad-brush approach open to every sector and business; it is not limited to the priorities above.

Ideas – Our ambition is to broaden and deepen the base of innovating firms in Greater Lincolnshire, aligning innovation with the priority sectors, and trebling the level of innovation investment in the region

While Greater Lincolnshire does enjoy pockets of innovation and a core of businesses which lead R&D in their sectors, the overall picture is one of limited innovative activity. Greater Lincolnshire is determined to play its part in levelling-up the UK economy and to achieve this it will increase the quantity – at least trebling the level of investment to 0.6% of GVA - and spread of innovation across the whole of the region. Greater Lincolnshire will focus on developing innovation in its priority sectors and foundational manufacturing industries - particularly innovation to support decarbonisation, and also on the diffusion of existing technologies to more businesses across more sectors, ensuring that the economic and social value of these ideas are maximised. The encouragement of innovation to address the county's current and future challenges will be key, for example, on decarbonisation, flooding, food production and manufacturing, and digitisation.

- > Greater Lincolnshire's partners will develop innovation excellence in the priority sectors of agri-food, energy, ports and logistics, and defence, bringing forward locally led development of new initiatives and continuing to value Greater Lincolnshire as a 'living laboratory' and test bed that creates solutions to regional challenges that will have global applications.
- > Greater Lincolnshire will encourage innovation where it contributes to addressing local, national and international challenges, for example, decarbonisation, flooding, digitisation, health and social care.

- > Greater Lincolnshire will increase diffusion of existing technology in the priority sectors of health and care and visitor economy, alongside all local SMEs without an existing focus on innovation. This will develop an innovation hub and spoke model across the region.
- > Greater Lincolnshire will develop the networks and governance to support a thriving innovation ecosystem, building on the Greater Lincolnshire Innovation Council, Growth Hub and LEP Board connected leadership.

People - Our ambition is to enable all residents to reach their potential in the local labour market and participate in a flourishing and inclusive economy

Greater Lincolnshire's working age population is shrinking; upskilling and retraining the existing work force is imperative. A challenge for the area is to find suitably qualified and resilient residents to fill projected job vacancies. The Greater Lincolnshire economy is seeing demand for level 2 and above qualifications rise. Whilst higher level skills will be important to the future economy, replacement demand will ensure that there continues to be a large number of job vacancies for people at all levels. Responding to these challenges requires focus on the skills system and better supported pathways into employment for residents.

- > Local partners will work to identify local solutions to level up on digital skills, with a focus on tackling digital skills gaps in rural areas and market towns. This could potentially include developing a Digital Skills Partnership.
- > Greater Lincolnshire and partners will build on the SAP to develop more detailed and localised labour market information to better inform people, business and education, living in economically different parts of the LEP area by 2021.

- > Greater Lincolnshire will design local programmes to address skills gaps identified in the SAP and through local research to respond to the needs of local employers in the dispersed and rural economy, including hyper local responses in areas of deprivation such as the coastal Opportunity Areas.
- > Greater Lincolnshire will work to maximise the effectiveness of the Apprenticeship Reform, Levy and T levels in all areas and especially in the priority sectors.
- > Greater Lincolnshire and local partners will work together over the next five years to successfully open, promote and deliver better results for Greater Lincolnshire through an employer led Institute of Technology.
- > Greater Lincolnshire will prioritise employment programmes which focus on healthy ageing and maintaining a healthy and diverse workforce. This will include promoting the National retraining Scheme for adults and engaging with DWP's programmes around productive healthy ageing.
- Greater Lincolnshire will explore piloting personal learning accounts to support a skilled and productive workforce.
- > Greater Lincolnshire will encourage more businesses to employ graduates and offer internships to build skill levels, and recruit higher skilled labour into businesses supporting innovation.

Infrastructure – Our ambition is to develop the infrastructure needed to support business growth, connect people, and be prepared for future growth and challenges

Greater Lincolnshire's infrastructure requires renewed investment and a strategic approach to overcome three main challenges: providing essential infrastructure in a large, rural area with a dispersed population; increasing connectivity with the rest of the country, particularly to ensure the full value of the Humber Estuary's ports can be harnessed; and future-proofing the region against anticipated challenges

- notably climate change, the future of mobility, and digitisation.
 The LIS will complement the Greater Lincolnshire Strategic Infrastructure Delivery Plan.
- > Greater Lincolnshire recently published the Greater Lincolnshire Strategic Infrastructure Delivery Plan, which sets out infrastructure projects for the area. Greater Lincolnshire will maintain a pipeline of strategic infrastructure projects, developing locally and with partners the necessary business cases and feasibility studies to remove pinch points and increase network capacity and resilience.
- > Greater Lincolnshire will work with Midlands Connect and others to build the business cases and prioritisation for regionally significant improvements in road, rail, and trade as part of an integrated Midlands transport strategy.
- > Greater Lincolnshire will work with Transport for the North where infrastructure improvements fall within Northern Lincolnshire and engage with the Northern Powerhouse on aspects of joint priority.
- > Greater Lincolnshire will work with service providers and other partners to find solutions to improve rural digital and mobile connectivity for businesses and residents and champion the delivery of Full Fibre to the Premises.
- > Greater Lincolnshire will address strategic flood risk management issues and deliver effective water management linked to economic growth and climate change. This includes implementing the Water Management Plan, and supporting innovation, research and development around flooding.
- > Greater Lincolnshire will explore how to increase bus provision in rural areas, this will include looking at where there are blocks to innovation in public transport.

> Greater Lincolnshire will explore and support transport decarbonisation in support of the government's target of reaching net zero greenhouse gas emissions by 2050.

Business environment – Our ambition is to create a supportive business environment for entrepreneurs, micros and SMEs to grow and become more productive and resilient

The area's economy is built on a broad base of successful small and micro businesses, which account for 64% of local employment - the third highest proportion among LEPs. Greater Lincolnshire sees positive business growth rates and fair business survival rates - particularly in strategic opportunity areas - however, experienced an overall negative net business birth rate (-1.17%) in 2017. A focus on quality start-ups and high growth scale-ups means more opportunities for scale-ups, frontier firms and the general expansion of the business base.

- > Greater Lincolnshire will develop programmes to support high growth start-ups and scale-ups alongside the 'Made Smarter' pilot that will drive industrial digitalisation across Greater Lincolnshire and beyond. This will use the area's Technology Hubs to link businesses with technology businesses. Greater Lincolnshire will also develop links with Be the Business to develop targeted programmes for micro and family owned businesses with potential to grow.
- > Greater Lincolnshire will continue and enhance Growth Hub activity focusing on business resilience, access to finance, digital, clean growth and productivity across all sectors. The programmes will include the Business Lincolnshire Supply Chain Support programme to help businesses become more competitive.

> Greater Lincolnshire partners will develop a coordinated internationalisation offer. focused on maximising opportunity from the priority sectors and infrastructure assets, and working with regional and national partners such as Midlands Engine and the Northern Powerhouse to showcase local investment opportunities. It will include an investor development programme (soft landing package) targeted at businesses in priority sectors.

Place – Our ambition is to capitalise on the dispersed economy to create a leading polycentric, productive economy

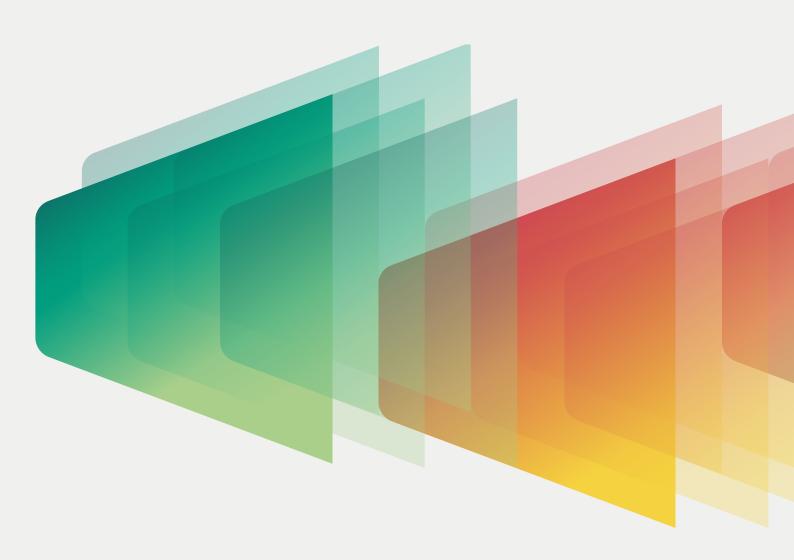
Across every foundation of productivity in Greater Lincolnshire there is a strong place element which must be reflected in implementation. This is a large and mostly-rural area with low population density of just over 150 people per square km making it one of the most sparsely populated LEPs in the country. Greater Lincolnshire faces a challenge in delivering the number of homes needed to support the area's aspirations for growth. There is also a large inclusion challenge in rural and coastal locations and in some of the towns. Providing solutions to promote inclusion and ensure that all parts of Greater Lincolnshire are supported to grow is vital in terms of inclusive growth and increasing the prosperity of areas.

- > Greater Lincolnshire will develop hyper local responses to enhance the roles of town centres, market towns and high streets as economic, creative, and cultural hubs using the Towns Fund, Future High Street Fund and Local Growth Funds as catalysts. This will include development of a new creative hub through the Cultural Development Fund.
- > Greater Lincolnshire will develop local place-based responses to opportunities and challenges focused around the Spatial Corridors and level up across the dispersed economy, for example reducing inequalities in coastal areas working with the Coastal Communities Alliance.

- > Greater Lincolnshire partners are working together with Homes England to deliver the housing pipeline to attract and support the working age population required by the region's businesses. This includes Housing Infrastructure Fund bids from Grantham and St George's Barracks.
- Greater Lincolnshire will explore and work with partners around an extension to the Area of Outstanding Natural Beauty (AONB).

MAKING IT HAPPEN

Local partners working together will ensure that Greater Lincolnshire achieves the ambitions of this LIS. This LIS is based on a robust evidence base which has been developed through strong local leadership in collaboration with local businesses, education providers and institutions. It supports objectives outlined in other strategy documents, including the Greater Lincolnshire Vision for Growth 2050 and local authority planning documents.



GREATER LINCOLNSHIRE'S LOCAL INDUSTRIAL STRATEGY

his LIS is the result of collaboration between the Greater Lincolnshire Local Enterprise Partnership (GLLEP), government, ten local authorities, Innovation Council, Skills Advisory Panel, sector Boards, and business. Its development has been supported by an Independent Expert Panel, which brings together six national experts to test, check and challenge the content. It is informed by an extensive evidence base and identifies the opportunities and challenges facing Greater Lincolnshire and how it will respond.

The LIS is an opportunity to focus efforts on supporting strengths and opportunities and to address pockets of underperformance. This is important for Greater Lincolnshire where the productivity of workers and businesses underperforms the national averages with low average wages and high numbers of workers earning below the real living wage. The Greater Lincolnshire LIS identifies priorities which have the potential to deliver greater productivity and earnings power for all places and people. It also sets out the actions necessary for businesses to take advantage of these opportunities and navigate global trends.

Although this LIS focuses on the sector based priorities highlighted in the evidence base, all sectors and industries within Greater Lincolnshire's economy have a part to play. The impacts of having a mix of coastal and rural activity, with vast areas disconnected from major infrastructure and opportunities for learning or employment, has resulted in some places which are more reliant on seasonal, lower

paid and lower productivity jobs. If left without intervention, the disparity between these areas and the more prosperous, better connected parts of Greater Lincolnshire will increase.

This LIS is for the whole of Greater Lincolnshire and looks to maximise the gains for all places and sectors. However, not every intervention will impact every place and sector at the same time or in the same way. Issues and actions which are applicable to all people, places and parts of the economy are explored in detail within Chapter 3 onwards.

THE IMPORTANCE OF PLACES IN THE LOCAL INDUSTRIAL STRATEGY

Greater Lincolnshire is a £20.7bn economy, home to more than one million people, with ambitions to add £3.2bn to GVA by 2030. It boasts a mix of manufacturing and engineering, a comprehensive agri-food sector, energy and services, and has large health and care and visitor economy sectors. The area benefits from a large number of small businesses - a distinctive feature of the economy. This is a place with strong identities and significant assets including strategically important industries. Covering an area more than 4.5 times larger than Greater London, Greater Lincolnshire is a large and polycentric place, with over 50 miles of coastline and one of the lowest population densities of any LEP. Greater Lincolnshire has room to grow.

Greater Lincolnshire's dispersed economy is made up of distinctive market towns interspersed between rural, coastal and urban areas, as well as concentrations of industrial activity clustered around the ports of Grimsby and Immingham in the

Humber Estuary. It has a varied economy with challenges and opportunities often concentrated by sector or place. This difference is reflected in (and drives) the priorities which capitalise on the distinctive natural and dispersed nature of the place.

URBAN AREAS ARE SHOWING POTENTIAL FOR GROWTH

Lincoln is a historic cathedral city with a thriving economic and cultural life, it lies at the core of a network of market towns, urban centres and ports, with space to grow that is unique in England. It has a population of almost 100,000 and the highest jobs density and the second highest business density after Grimsby. From 2013-2018 total population grew by 4%, jobs by 9%, and business growth by 20%. 51% of its population is below the age of 35, the highest among the towns. It is home to the University of Lincoln and many heritage assets. Compared with Greater Lincolnshire, Lincoln has a significantly higher GVA per head of £24,126, higher than East Midlands at £21,423 and closer to the UK average at £26,870. There are opportunities for growth particularly to capitalise on the innovation ecosystem, visitor economy and existing strengths in attracting foreign direct investment. Lincoln's success increases the prosperity of the wider area through the provision of HE, FE, opportunities for highskilled employment, and access to services and amenities. Significant growth in Lincoln before 2010 has provided the impetus for wellplanned growth there, as well as in Sleaford and in other growth points such as Gainsborough and Grantham.

Grimsby is a major industrial centre on the Humber Bank. It is Greater Lincolnshire's largest town by population at 101,000, and 47% of these residents are below the age of 35. Since 2013 there has been 17% growth in the business base, and 11% jobs growth. Looking forward, the North East Lincolnshire Local Plan provides a framework to create between 9,000 - 13,000 new homes and 8,800 new jobs in the Greater Grimsby area to 2032. It has a strong heritage in food production, most notably in its fishing and seafood processing industry and is home to the largest port by tonnage in the UK. The pace and scale of industrial change in Grimsby has created low wages and productivity, high unemployment and challenges retaining businesses and skills in the area. The scale of change also bring opportunities for Greater Grimsby, particularly through its position in high growth clean energy industries as a hub for offshore wind. A wellestablished cluster of offshore wind Operations & Maintenance (O&M) businesses signposts future growth opportunities in the sector. Greater Grimsby pioneered the Town Deal initiative that is now being rolled out through the Stronger Towns Fund. The initial projects are focused on reconnecting the town centre with its under-utilised waterfront. Furthermore, the recently launched Made Great in Grimsby brand intends to boost consumer recognition of the quality of the place's goods, particularly its seafood.

Scunthorpe has experienced 19% business growth from 2013-2018, although so far this has had only a mild positive effect on jobs (+4%) and population (+2%). Scunthorpe has a very substantial manufacturing industry, including a steel industry, which provides employment for over 3,000 people and is integral to local and national supply chains. Maintaining a vibrant steel sector is of vital importance to the local and UK economy. The area is now looking to diversify its key economic offerings and bring new opportunities to Scunthorpe creating a centre for learning, living, leisure and business. Current aims for the town centre are

focused on the commercial offer, housing, leisure and education. Addressing social inequality and supporting inclusive growth is a major component of plans for the town. Building on the success of recent investments which include redevelopment of the former civic centre into the University Campus North Lincolnshire, the development of the University Technical College, development of St John's Market and relocation of headquarters into the town centre, further plans are in development supported via proposals to both the Future High Street Fund and the Town's Fund.

To the west of Lincolnshire, more industrial market towns such as Grantham and Gainsborough are looking to capitalise on their strong heritage and connectivity to realise their potential. Grantham is a Growth Point and has approval for a housing village at Spitalgate Heath. Gainsborough (along with North East Lincolnshire) has Housing Zone status and will play a significant role in delivering growth to the local area.

Grantham is the fifth largest town with a population of 39,038. Despite its small size, its population density is the second highest after Lincoln. It has the highest share of residents aged over 50 and the lowest share of residents below 35. Grantham's job growth is the second highest at 11%. Grantham has a strong military and engineering heritage, being the home of the caterpillar track and munitions production. Grantham's location grants it excellent connections into major national routes, sitting on both the A1 and East Coast Mainline as well as the A52, providing eastwest connectivity from the Fens to Nottinghamshire.

Gainsborough is a gateway between Lincolnshire, Nottinghamshire and Sheffield City Region. Gainsborough is expected to see economic growth of 12% over the Local Plan period to 2036, including 2,150 new homes increasing the population to more than 30,000. However, there are still pockets of significant deprivation in Gainsborough with low levels of

employment (lowest 4% across England) and living standards (lowest 2% across England). With similar challenges around industrial change to Scunthorpe and Grimsby, Gainsborough is a growth point with Housing Zone status due to its significant availability and affordability of land and proximity to towns and assets such as Scunthorpe, Lincoln, Doncaster and Doncaster Sheffield International Airport.

Within the key towns of Boston, Spalding and Holbeach, up to 40% of employment is within the food sector and its associated supply chain. The area's new assets, such as the National Centre for Food Manufacture, Boston College's Engineering, Manufacturing and Technology (EMAT) Centre, and the Holbeach Food Enterprise Zone, will capitalise on the existing strength of the local economic base. Management of water is imperative in this area, as it is across the border in New Anglia and Cambridgeshire. Stamford is also a gateway to Lincolnshire given its proximity to the A1 and Peterborough. It is an attractive town commanding stronger house prices than other areas of Greater Lincolnshire

RURAL AND COASTAL AREAS ARE A CORE PART OF THE GREATER LINCOLNSHIRE IDENTITY

Rural and coastal areas constitute more than 90% of Greater Lincolnshire's landmass. Rural areas provide housing and a high standard of living. They provide a strong sense of place, identity, and cultural offer. The LIS recognises this and looks to capitalise on it further.

The traditional coastal resort towns such as Cleethorpes, Mablethorpe and Skegness have significantly different economies, challenges and opportunities to other towns in Greater Lincolnshire. The strong visitor economy contributes more than £2bn to the Greater Lincolnshire economy and supports at least 30,000 full time equivalent jobs, many in these coastal resort towns. However the labour market is markedly seasonal compared to other areas and

connectivity is a major constraint. The risk of coastal flooding restricts housing and business growth.

The region's distinctive natural capital and varied geography is linked closely to its visitor economy and agri-food strategic opportunities. Rutland has been classed as the most rural county or unitary authority in England and Wales with a high proportion of land in agricultural use. The South of Lincolnshire is an area dominated by agriculture, food production and logistics. The A17 and A16 is a major corridor and central to Greater Lincolnshire's nationally important food sector. The Lincolnshire Wolds, an Area of Outstanding Natural Beauty, has 14 sites of special scientific interest, as well as small settlements. Combined with the coast and large amount of Grade 1 agricultural land, Greater Lincolnshire is endowed with a variety of natural assets, which make a strong contribution to its economy and quality of place.

Rurality brings challenges too. Rural residents can have limited access to local amenities and public services. In some places less than 10% of the population are aged between 20 and 34; some locations have limited energy supply (no access to the grid); and low levels of connectivity (broadband, public transport and roads). The result of this is pockets of significant deprivation and rural isolation.

Digital connectivity is vital to support growth of the rural economy and supports a number of aspects of business growth, including providing support for increasing home/agile working. Full Fibre to the Premises is key to increasing digital connectivity and Greater Lincolnshire is a prime location for increasing rural digital connectivity.

In order to attract more visitors to the area as well as enhancing residents' wellbeing, protect and enhancing the quality of the landscape and promote economic benefits. North Lincolnshire Council are seeking to extend the Lincolnshire Wolds AONB designated areas of North Lincolnshire.

GROWING RESILIENT MARKET TOWNS

Connecting and sustaining much of Greater Lincolnshire are the market towns. The strength of the market towns provides a network of local centres that support the sparser rural populations of central and eastern Lincolnshire. Towns such as Sleaford, Louth, Horncastle, Market Rasen, Caistor, Brigg, Oakham, Uppingham and Bourne play a vital role for their local communities and are poised for considerable housing and employment growth. Successful initiatives to revitalise and reimagine the role of the towns' high streets, together with reliable, fast online connectivity throughout the area, means that the working population is less reliant on a few major centres and better able to participate in the life of a wider range of local towns and communities.

GREATER LINCOLNSHIRE'S ECONOMY

THE ECONOMY



£20.7BN

ECONOMY



AMBITION TO GROW THE ECONOMY BY

£3.2BN BY 2030



MANUFACTURING

LARGEST SECTOR AT 20% OF GVA



1.96% AVERAGE ANNUAL GVA GROWTH

FROM 2012-2017



£18,625 GVA PER HEAD

> 3RD LOWEST AMONG LEPS IN 2017



0.1% PRODUCTIVITY DECLINE

FROM 2007-2017

The economy has grown by 27.7% since 1998. In 2017, Greater Lincolnshire's GVA per hour worked was £27.40 and the area has seen a 0.1% decline in productivity from 2007 to 2017. Declining productivity means that the productivity gap between Greater Lincolnshire and the UK has widened – from a gap of 18.1% in 2007 to 22.8% in 2017. This is a significant challenge to address; if Greater Lincolnshire's economy was performing at the national average it would add almost £9bn to GVA each year, a 45% increase in the total size of the economy.

The overall figures mask differences at more local levels. Some local authorities, such as Boston and South Holland, have seen fairly consistent economic growth since 1998. North Lincolnshire, on the basis of real growth in GVA, has not recovered from the effects of the financial crash, with an overall downward trend in performance from 2007/8 onwards. It is the only geographical area which is smaller in GVA terms in 2017 than it was in 1998, although at 19% of Greater Lincolnshire's economy it is still the largest area by GVA.

In 2017 there were 468,500 jobs in Greater Lincolnshire, with 35.500 new jobs created between 2012-2017. Lincolnshire (24.000 jobs) had the highest job growth in absolute terms, growing by 8.5% (UK job growth rate is 9.6%). North Lincolnshire (5,500 jobs) had 7.9% job growth and North East Lincolnshire (4,500 jobs) 6.9%. Rutland (1,500 jobs) experienced the highest job growth in percentage terms with 10.3%. There have been increases in employment in low-skilled, low productivity areas such as accommodation and food services, transport, and agriculture. These have been offset in part by an increase in higher productivity jobs in sectors such as Manufacturing and IT. This has been compounded by the economic restructuring that occurred in the past decade.

CROSS BORDER COLLABORATION

Greater Lincolnshire is part of a broader economy. Its strengths and strategic opportunities complement activity in the Humber to the north, Derby, Derbyshire, Nottingham and Nottinghamshire to the west, and Norfolk, Suffolk, Cambridgeshire and Peterborough to the south, particularly in agrifood, clean energy and logistics. The top commuter destinations for Greater Lincolnshire's residents are Peterborough, Newark and Sherwood, Doncaster and Hull. Similarly, residents from outside Greater Lincolnshire who commute into the area for work mostly come from these places.

Further afield, Greater Lincolnshire is integrated into the global economy, exporting £4.7bn and importing £8.8bn in goods and services in 2015. 62.9% of exports are bound for EU destinations and the main export destinations beyond the EU are China and the USA. Dominant export categories are chemicals (£650m) and machinery, transport and equipment (£522m). Through its ports – including the UK's largest port by tonnage, the Port of Immingham and Grimsby - and Humberside Airport (as well as Doncaster Sheffield Airport and East Midlands Airport) there is an opportunity to exploit these assets.

The LIS identifies opportunities for close collaboration between Greater Lincolnshire and surrounding places which will deepen this integration. In particular, the LEPs of Greater Lincolnshire, the Humber, and York and North Yorkshire form a "food belt", with a substantial concentration of food manufacturing and processing, agriculture and agri-tech businesses. This food belt has a vital role to play in improving the sector's national productivity and sustainability. The three LEPs are working in partnership to develop the food sector across their areas and will work to set out their proposals in a joint Food Sector Strategy.

To the south, Greater Lincolnshire shares objectives for the agrifood industry with New Anglia LEP and the Cambridgeshire and Peterborough Combined Authority, both of which make substantial contributions to the UK's agrifood industry. Greater Lincolnshire will continue to explore ways to collaborate with the LEPs on its southern border to enhance the overall value and productivity of agrifood in the region.

To the north, Greater Lincolnshire LEP and the Humber LEP share complementary objectives for clean energy generation, industrial decarbonisation and stronger ports in the Humber Energy Estuary. Greater Lincolnshire LEP and the Humber LEP will collaborate where appropriate to advance the interests of the Humber's people, businesses and places.

MIDLANDS ENGINE

Greater Lincolnshire champions Midlands Engine and works to shape and deliver its priorities. Panregional working (set out through operating principles) complements sub-regional and local authority work - working at scale and joining up activity across the Midlands. The focus and role of the panregional partnership continues to expand. Greater Lincolnshire will continue to proactively shape the Partnership's work through the **Executive and Operating Boards** and commits to working with the partnership on the following areas.

Connectivity. Working with Midlands Connect to increase freight and trade access to the Midlands' only ports. The development of the Trans Midlands Trade Corridor – largely defined by the A46, reaching from the M5 at Tewkesbury up to Grimsby and Hull via the A15 – will have a transformational effect for Greater Lincolnshire. The corridor is an important economic spine, accounting for almost 9% of English GVA. The major ports in Greater Lincolnshire are a major part of the current and future corridor opportunity and Greater Lincolnshire will continue to support development of the Corridor approach in Midlands Connect. North and North East

Lincolnshire Council are members of Transport for the North.
Midlands Connect is committed to working closely with Transport for the North towards a mutual vision for rebalancing the UK economy through sustainable transport improvements.

Innovation. University of Lincoln lead one of the innovation workstreams on future food processing. This arose out of the Midlands Science and Innovation Audit, which recognised the importance of this area to the Midlands economy. Greater Lincolnshire is leading activity and proposals for innovation for the region.

Internationalisation. Pan-regional working gives the scale to promote Lincolnshire on a world stage, with internationalisation one of the main priorities of the Midlands Engine.

Partnership. Greater Lincolnshire intends to develop a sub-regional internationalisation strategy to complement and maximise local benefits of the pan-regional work and resource.

Investment. Greater Lincolnshire businesses have benefited from the Midlands Engine Investment Fund (MEIF), which provides commercially focused finance through Small Business Loans, Debt Finance, Proof of concept and Equity Finance funds. MEIF is a collaboration between the British Business Bank and ten Midlands Local Enterprise Partnerships, including Greater Lincolnshire LEP.

02

AGRI-FOOD

Our ambition is to increase the international competitiveness of our Agri-food sector by championing automation and resource efficiency, to become the UK's Food Valley and contribute to reducing the UK's reliance on food imports.

AGRI-FOOD



75,000



4,700 BUSINESSES



£3.1BN
GVA IN 2016



£30,000+



AGRI-FOOD EMPLOYS 9% OF WORKERS AND IS THE SOURCE OF 43% OF NEW JOBS



O% OF ENGLAND'S AGRICULTURE AND...

25%

OF THE UK'S GRADE 1 AGRICULTURAL LAND IS IN GREATER LINCOLNSHIRE

AGRI-FOOD CONTRIBUTES

18%

OF LINCOLNSHIRE'S GVA
COMPARED TO 3% NATIONALLY





CONTRIBUTION TO ENGLISH FOOD PRODUCTION

30% OF FRESH VEGETABLES

9% 20% of SUGAR

70% OF SEAFOOD PROCESSING

19%
OF ORNAMENTAL PLANTS AND FLOWERS

GREATER LINCOLNSHIRE HAS A PROUD AGRICULTURAL HERITAGE AND A PROMISING FUTURE

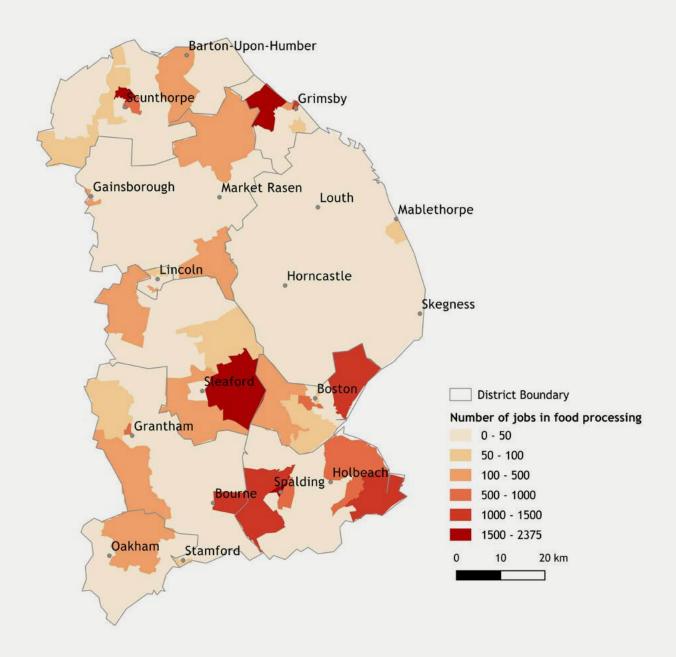
The agri-food industry is a fundamental part of Greater Lincolnshire's history and will be a core part of its future. The area is strong in all parts of the food chain, from farming to food processing, manufacturing, marketing and logistics. The area

produced £1.84bn of crops and livestock in 2016 which accounted for 10% of English agriculture, and supported 75,000 jobs in 4,500 businesses, ranging from family-owned farm businesses to some of the largest companies in the international food chain.

The sector generates 18% of local GVA, against 3% nationally, with large local employment. This makes Greater Lincolnshire the LEP area with the greatest dependence on food processing and distribution. This focus is supported by its knowledge base, with 29.3% of the Innovate UK grants offered in Greater Lincolnshire from 2014/15 to March 2018 focused on the themes of food supply and agri-tech.

FIGURE 1: SPATIAL DISTRIBUTION OF FOOD PROCESSING JOBS IN GREATER LINCOLNSHIRE

(map does not display Rutland, where 4% of jobs are in agriculture, forestry and fishing)



The main concentrations of the food industry are in North East Lincolnshire and the South Holland and Boston areas of Lincolnshire, but the food industry has a very significant presence across the whole area. Food processing jobs, for example, are distributed throughout Greater Lincolnshire, with particular concentrations in the south east (see map). Many of the largest food chain companies are in rural communities where they are the dominant local employer. These rural and sparse communities also have some of the lowest workforce qualification levels in the UK. Some areas of Greater Lincolnshire, such as South Holland, have the highest concentration of jobs in food processing and distribution in the country. Improving the skills levels and quality of employment in the food chain can have a major impact on the socio-economic progress of these poorer areas. It is therefore vital to prioritise support for higher value jobs, through skills, investment and innovation, in these areas.

The area has over 70 large food producers, of whom over half are part of larger international companies. Companies such as Bakkavor, with 18,000 staff, are centred on Lincolnshire where a third of their workforce are based but operate globally. Greater Lincolnshire is the centre of the UK seafood processing industry, with a cluster of 65 seafood processors including the largest UK producers such as Youngs and Morrisons seafood processing facilities. The area also hosts plants operated by some of the world's largest food companies globally such as Pepsico, Danish Crown and Moy Park.

The area has the UK's greatest concentration of food logistics companies with an estimated 30% of national food shipments passing through south Lincolnshire in the food chain. The Spalding area dispatches between 1,000-1,200 finished lorry loads of food per

CASE STUDY

LINCOLN INSTITUTE FOR AGRI-FOOD TECHNOLOGY AND NATIONAL CENTRE FOR FOOD MANUFACTURING

Applied research programmes to support new agri-food technologies are undertaken by the National Centre for Food Manufacturing (NCFM) and Lincoln Institute for Agri-food Technology (LIAT), both part of the University of Lincoln, as well as the Food Refigeration and Process Engineering Research Centre at the Grimsby Institute. In the last four years, LIAT and NCFM have developed over £25m of new applied research projects with industry focused on automation, digitalisation and resource efficiency and secured £10m in capital investment. LIAT now has the largest agri-food robotics team in Europe as a result of investment by industry and the public sector, but demand is outstripping supply and meeting industry needs is constrained by resources.

day into the food chain. The south bank of the Humber has a major food logistics and cold storage sector supporting its seafood and added value food sector. There is also a growing food logistics cluster on the A1 corridor in the west. The A46/A15 north/south corridor plays a vital function as a strategic economic corridor and is particularly beneficial for facilitating the movement of goods in connection with the food sector. Improvements to the A15/A46 corridor could open up substantial opportunities and provide significant support for the agri-food sector.

There are opportunities for UK market growth as consumers spend more on food and the population grows, as well as substantial opportunities for import substitution given that only 55% of UK food demand is met from the UK. There is also potential for increased exports, particularly for higher value-added premium products, where global demand is increasing rapidly (6% per annum value growth but under 2% volume growth) and UK products have a reputation for high quality and clear traceability.

GREATER LINCOLNSHIRE IS ADAPTING WITH NEW TECHNOLOGIES IN A CHANGING AGRIFOOD INDUSTRY

To remain competitive, Greater Lincolnshire's food industry must increase innovation and lead the transition towards greater automation and productivity and do so in a way that supports the region's environment. The sector in Greater Lincolnshire (and globally) has a high dependence on manual labour and, in the UK, much of this has been met by EU migrant workers who fill roles at every level in the industry, with many having been in the region's food industry for many years. Working in the industry must be made more productive and attractive to UK employees.

The twin challenges of workforce availability and wage cost pressures means investment in labour productivity is essential to industry competitiveness. This is recognised by Greater Lincolnshire's food chain companies and they are investing to address this challenge, but the rate of investment and productivity growth could be substantially increased through further innovation and investment

CASE STUDY

BISHOP BURTON COLLEGE'S RISEHOLME CAMPUS - PROMOTING INNOVATION IN AGRI-FOOD

Completed in November 2016, Riseholme College's Showground Campus, two miles north of Lincoln city is a £24m investment that strengthens Greater Lincolnshire's position as an agri-food leader in innovation and excellence in food production. The Showground Campus has three education centres which provide three critical services – state-of-the-art food processing facilities and laboratories; a platform for technology transfers; and local community engagement through sports and fitness facilities. Riseholme College is a focal point for the rural community, hosting public and private sector activities. It has supported over 100 businesses, resulting in a nationally renowned, employer-led Farm Management Development programme developing young agriculturalists to become industry leaders. The college supports over 600 learners per year including Further Education students, apprentices and Higher Education undergraduates.

support. Culture change and skills are essential to help facilitate this change. Many food chain companies remain uncertain about which investments to make or their specialist nature requires bespoke machinery and applied R&D to develop new solutions.

Efforts to provide businesses with the support they need to capitalise on emerging technologies and markets are already underway in Holbeach at the University of Lincoln's National Centre of Food Manufacturing - a nationally important centre with a focus on robotics and automation in food production. There are also advanced plans to develop a new food-focused R&D cluster on a neighbouring Food Enterprise Zone (FEZ) within Holbeach that will complement the offer from two further FEZ sites (Europarc and Hemswell Cliff) across Greater Lincolnshire. Given the findings of the LIS evidence base, a priority for Greater Lincolnshire is to ensure that its three Food Enterprise Zones, and the Humber Enterprise Zone on the South bank are developed and marketed effectively.

CLIMATE CHANGE PRESENTS RISKS AND OPPORTUNITIES

The Agriculture Bill and the end of the Common Agriculture Policy will bring about a seismic shift in land management, business structure and food production and land use in Greater Lincolnshire. Food producers and manufacturers have the opportunity, through close collaboration and innovation, and the adoption of circular economy principles, to reduce the environmental impact of the sector and support the decarbonisation agenda. While the pursuit of productivity will remain the driver for many, other landowners may begin to focus on different opportunities in tackling climate change, building biodiversity and improving soil health.

The impacts of climate change present a direct challenge to the heart of this area, with increasing pressure predicted on water supplies in the future, and some producers already reporting difficulties in growing their businesses due to insufficient supplies of clean water. Developing a strategic approach to water

resource management means that the water managed within the extensive EA and IDB drainage systems can be stored more effectively in times of flood, and then deployed to where they are needed in times of water scarcity.

The food chain is a major sector for the application of demand side response and smart grid technology and is central to proposals to develop a rural innovation test bed for energy and water. This will draw on the use of Al and advanced data processing. The Committee on Climate Change have proposed that to help address climate change the UK needs to double bio-energy production to 15% of energy demand by 2050. The agri-food supply is at the heart of this challenge. LIAT has helped lead the largest IoT project in the UK which looked at how to use sensor systems and Al to reduce Tesco's refrigeration energy use. Greater Lincolnshire has the capacity and capability to lead innovation in agri-food energy usage, transforming the sector for the region and the UK.

CASE STUDY

GRIMSBY'S SEAFOOD PROCESSING CLUSTER AND THE MADE GREAT IN GRIMSBY BRAND

Greater Lincolnshire is rightly proud of the seafood processing cluster in Grimsby. The acknowledged home of UK seafood processing is built on a local heritage of fishing and seafood processing and, whilst most seafood consumed in the UK is now imported, the seafood processing sector in Grimsby remains vibrant and dynamic.

With more than 60 seafood processing companies directly employing about 5,000 people, the seafood processing sector is vital to the North East Lincolnshire economy. Thousands more are employed in the wider supply chain, which includes cold storage, logistics, engineering, packaging and ingredient development.

The long term prospects for the seafood sector are strong with recognised benefits for health and innovative new seafood products being created to appeal to busy consumers who also want products which are convenient to use. The industry's long term aim is to increase UK seafood consumption by 75% to two portions per person per week by 2040, to meet Public Health England recommendations. This would mean additional sales of over £4billion per year for seafood products in the UK and quarantee the sector a strong future.

The UK seafood processing industry has real growth potential both in the UK and international markets. With the UK leading global initiatives to ensure sustainable fisheries, the newly launched Made Great in Grimsby brand will help consumers buy Grimsby's seafood products with confidence and help Grimsby's seafood processors realise their growth potential.

COMMITMENTS

- > Greater Lincolnshire will work to develop a leading rural region for innovation in all parts of the agri-food supply chain, focusing on skills, infrastructure and productivity gains. This will maximise the value of the National Centre for Food Manufacturing, the Lincoln Institute for Agri-food Technology and the food clusters in the Food Enterprise Zones.
- > Greater Lincolnshire will use its convening power to foster collaboration with local industry and higher education alongside regional and national partners focused on sector productivity transformational change in food chain automation, trade and efficiency.
- > Greater Lincolnshire will work to maximise the international trade and inward investment opportunities related to the agri-food sector, including through cooperation with Norway, Iceland and broader Scandinavia, and building on existing links to China through the Hunan Lincolnshire partnership agreement.

03

ENERGY

Our ambition is that Greater Lincolnshire will pioneer industrial decarbonisation, creating a template for other areas. We will be a test bed for technologies in clean energy generation, storage and distribution.

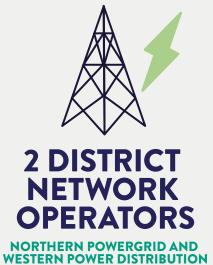
ENERGY



5,900



210



£2BN

OF PROJECTS IN OFFSHORE WIND
COMPLETED OR IN CONSTRUCTION
IN HUMBER ESTUARY





PLANS FOR AN EXTRA £60BN
OF INVESTMENTS IN OFFSHORE WIND
CAPACITY BY 2030, EQUIVALENT TO
40% OF THE UK'S TOTAL
FORECASTED INVESTMENT





35 ANAEROBIC DIGESTORS
IN OPERATION WITH A COMBINED CAPCITY OF OVER
22 MEGAWATTS

AN EXISTING ASSET BASE AND FUTURE DEMAND FOR CLEAN ENERGY

The energy sector – in Greater Lincolnshire and globally – is transforming in response to the climate, new technologies and changing consumer preferences. Greater Lincolnshire's rural geography and nationally significant energy assets in the Humber Estuary and the North Sea mean it is well placed to pioneer new approaches that contribute to the government's commitment to reach Net Zero UK carbon emissions by 2050.

Energy in Greater Lincolnshire is a strategic industry in its own right and an industry which underpins the growth and performance of all other industries in the region. For example, the food chain is responsible for 14% of UK energy demand, with food refrigeration and the cool chain alone responsible for over 10%. This has significant impact on Greater Lincolnshire through the agri-food sector. The majority of energy consumption is from industrial and commercial activities (64%), almost double that of nearby New Anglia LEP (33.6%).

Directly employing nearly 6,000 people across more than 200 businesses, the industry covers a diverse mix of energy and heat generation methods – including the offshore wind industry and innovative Anaerobic Digestor plants – as well as electricity and heat distribution operations. Substantial recent and historic investment in energy assets look small in comparison to the extra £60bn of investment in offshore wind capacity planned for sites off Lincolnshire's coastline.

SUPPORTING THE OFFSHORE WIND SECTOR OFF GREATER LINCOLNSHIRE'S COAST

Over just a few years, the Humber Energy Estuary has transformed into one of the world's leading hubs for clean energy. Now the Humber Energy Estuary has a vital role to play as the offshore wind sector scales up to deliver the Sector Deal. As a result of the Sector Deal, low-cost offshore wind could contribute up to a third of UK electricity

(30GW) by 2030 – the result of over £40bn of investment in infrastructure over the next decade. This includes a commitment to increase UK content to 60% by 2030, and a £250m investment in the UK supply chain. The industry predicts that employment will rise from 7,200 to 27,000 and is committed to increased diversity.

Offshore wind manufacturing, installation, operations and maintenance businesses all now have firm foundations locally, creating sustainable skilled jobs and attracting a wider supply chain. The region is centrally located for the largest offshore wind farms under construction and planned, and has the land, ports and is continually developing the skills required to support the sector, meaning that its future prospects are also strong.

Building on the Humber Estuary's leading capability in offshore wind operations and maintenance (O&M) is an immediate opportunity for securing high-value and sustainable growth. The Humber's O&M cluster is centred on the Port of Grimsby. The value of the UK's O&M sector is around £600m per year today and forecast to exceed £2bn by 2030. The UK has the potential to

leverage its competitive advantage in offshore renewable O&M to develop UK solutions for a global market, and Greater Lincolnshire is positioned to be at the front of that drive.

OPPORTUNITIES IN DECARBONISATION

The UK is the first major economy in the world to pass laws to end its contribution to global warming by 2050. Decarbonisation is a major economic opportunity – nationally, low carbon sectors are growing significantly faster than the wider economy, and Greater Lincolnshire has already become a magnet for the renewable energy sector. Realising this opportunity will require sustained action over the coming years, and collaboration amongst many organisations.

Greater Lincolnshire's distinctive industrial mix and geography mean that it can contribute to the decarbonisation agenda in a number of ways:

 It is a leading location for the transition to clean energy, with a substantial concentration of renewable energy generation assets and businesses;

CASE STUDY

OFFSHORE RENEWABLE ENERGY (ORE) CATAPULT

The Offshore Renewable Energy (ORE) Catapult is the UK's leading applied technology, innovation and research centre for offshore renewable energy in the UK.

The ORE Catapult has established the national Operations and Maintenance Centre of Excellence (OMCE) for offshore renewables in Grimsby, the UK's largest offshore renewable O&M port. The purpose of the centre is to build on the UK's existing leadership and expertise in offshore wind O&M. Leveraging industry 4.0 methodologies and drawing on cross sector experience (such as defence, oil & gas, aerospace and automotive), the OMCE will focus on the emerging technologies of data and digital, remote operations, advanced communications, robotics/autonomous systems, and maritime and port decarbonisation – combined with cutting edge assets, programmes, knowledge and support, the OMCE will make Grimsby the global centre of gravity for offshore renewable O&M innovation.

Working with all elements of the industry, supply chain, academia and government, the OMCE's mission is to ensure that UK PLC capitalises on the rapidly growing domestic and international markets in offshore renewable energy O&M – building business resilience, developing UK IP and generating long term high skilled jobs.

- It has a large and dynamic industrial cluster which is both essential to the wider UK economy and ideal for piloting an ambitious approach to decarbonisation;
- Its rural geography enables it to act as a test bed for new forms of clean energy generation and decarbonisation, tailoring local solutions to local problems.

Greater Lincolnshire is committed to a proactive, managed approach to decarbonisation that aims to protect the long-term competitiveness of existing strategically-important industries whilst generating new value from the UK's transition to a net zero carbon economy.

One such industry is steelmaking. Greater Lincolnshire is committed to supporting the government's plans to decarbonise UK steelmaking, in line with the UK's goal of net zero by 2050. Greater Lincolnshire welcomes the government's announcement of a £250m Clean Steel Fund and £100m Low Carbon Hydrogen Production Fund and will work with local partners to maximise the economic and environmental benefits of these, and other, decarbonisation programmes.

CONVERTING INDUSTRIAL WASTE TO VALUE

Industrial symbiosis, using the waste from one process as the raw material for another, is an opportunity to strengthen Greater Lincolnshire's industrial cluster whilst contributing to the development of a circular economy that supports clean growth. New income streams, such as from selling heat that is currently wasted, could support some plants to become more sustainable. Potential symbioses for industry include:

- > Upstream and downstream chemical intermediate manufacture;
- > Use of waste such as dusts, tars, oils, effluent, sludges, ash, used filter media
- > Capture and sharing of waste heat.

THE HYDROGEN ECONOMY

The transition to alternative fuels also brings potential for new manufacturing. Some, such as hydrogen and ammonia, are already used in some local industrial processes, meaning that there is existing expertise in safely transporting and storing them. In future, clean hydrogen could replace fossil fuels in some high-energy, high-temperature processes. Increased industrial demand could support the case for new manufacturing, with the resultant increase in availability enabling a wider transition in industry, transport and domestic heat as part of Greater Lincolnshire's ambition to achieve net zero carbon emissions. As one example of how energy from waste facilities are attracting investment, Altalto plans to develop the UK's first commercial scale waste-tojet-fuel project on the Humber Enterprise Zone near Immingham.

Greater Lincolnshire is well-placed to support the development of a hydrogen economy, expanding on existing production with the help of carbon capture technology and future deployment of electrolysis for green hydrogen using clean renewable power, creating a zero carbon energy system.

CARBON CAPTURE, STORAGE AND SEQUESTRATION

The growth of renewable energy sources like offshore wind and biomass mean that Greater Lincolnshire will already make a significant contribution to reducing carbon dioxide emissions from electricity generation. However, at this time not all carbon emissions can be eliminated in a cost-effective way or with current technology. Carbon capture and storage is therefore an essential part of decarbonisation.

Greater Lincolnshire is well placed to deploy carbon capture and storage at scale in two forms:

- > A technology and infrastructure led solution deploying carbon capture technology in industrial and power generation facilities, and connecting these to a pipeline network that would store the captured CO² under the North Sea. This prevents remaining emissions from entering the atmosphere, without ceasing (or displacing overseas) key industrial processes. It can also enable large-scale generation of blue hydrogen.
- > Natural sequestration enhancing Greater Lincolnshire's distinctive natural capital, including intertidal habitats, to capture and store more CO² from the atmosphere.

CASE STUDY

ALTATO - CONVERTING INDUSTRIAL WASTE TO JET FUEL

Altato, a collaboration of Velocys, British Airways and Shell, are planning to develop Europe's first commercial scale waste to sustainable transport fuels plant on the Humber Enterprise Zone near Stallingborough. Once fully operational, the plant would take up to 600,000 tonnes per year of household and commercial waste left over after recycling, otherwise destined for landfill or incineration, and convert it into over 60 million litres of clean burning sustainable jet and road fuel each year.

Each tonne of jet fuel produced at the plant is expected to deliver 70% net greenhouse gas reduction and up to 90% reduction in particulate matter emissions compared with a tonne of conventional jet fuel. This will lead to an estimated net CO² saving of over 40,000 tonnes per year.

CASE STUDY

CARBON CAPTURE AND STORAGE ON THE HUMBER BANK

The Humber Bank's sizeable industrial cluster and power generation assets provide the critical mass required for large-scale deployment of carbon capture technology with transportation infrastructure. The area's close proximity to large available storage sites means there is capacity to deliver substantial reductions of carbon emissions in a relatively short period of time. With the Humber Estuary emitting more CO² than any other industrial cluster, introducing carbon capture and storage into the region would make a significant contribution to reducing UK emissions.

Businesses in the region are actively developing projects that capitalise on this opportunity and support Greater Lincolnshire to achieve net zero carbon emissions, such as VPI Immingham.

VPI Immingham, one of Europe's most thermally-efficient gas-fired combined heat and power plants, supplies steam and electricity to the Humber's two oil refineries, as well as up to 2.5% of UK electricity demand. Together with owner Vitol, the company is developing proposals for producing blue hydrogen and using it in its fuel mix, reducing the CO² footprint of VPI and the adjacent refineries by 2.75 Mt per annum. CO² created by the power plant, and potentially the refineries, would be captured and stored under the North Sea.

ADDRESSING LOCAL CAPACITY CONSTRAINTS TO UNLOCK INDUSTRY GROWTH

Despite having energy generating assets that help supply energy to the rest of the UK, parts of Greater Lincolnshire suffer from significant energy capacity constraints. These constraints hinder local industries: in particular, the Humber Estuary's energy-intensive industrial base, including steel, chemical and petrochemical manufacturers, require access to cheap, reliable (and increasingly - sustainable) energy to compete in international markets. Local capacity constraints also make it difficult to accommodate population growth in new housing.

There are specific challenges in the local area due to the dispersed economy, isolated rural areas, inflexible existing energy infrastructure, and high costs and delays in implementation. There is a mismatch between real growth and planned growth and the delivery plans for Distribution Network Operators (DNOs) which acts as a break to economic growth in some areas of Greater Lincolnshire.

Recent studies carried out by the Greater Lincolnshire LEP show that developments can be stalled by the lack of power or by the costs of dealing with unforeseen reinforcement costs, which are projected to cost £250m over the next twenty years. Specifically:

- > Because most of the Greater Lincolnshire area is rural, agricultural land, it has a thinly stretched, radial grid, which is much weaker than a network grid found in denser urban areas. However, some areas such as North and North East Lincolnshire have strong network connections, which offer an opportunity to attract investment;
- > Low land values in some parts of Greater Lincolnshire means it is often very difficult to persuade developers to pay for upgrades to the electricity distribution network, as the levels of profit on new development is already low;
- > Energy capacity constraints will make it increasingly more difficult to deliver the housing and employment land needed to deliver growth.

A prominent example is South Holland, where major assets include two operational gas fired power stations and a third under construction. It is also where the power cable that links the Race Bank, Inner Dowsing and Linc's offshore windfarms makes landfall. However, at the same time, a number of housing and commercial sites in the district suffer from utility constraints, with larger sites most affected. It is important that local areas can benefit from Greater Lincolnshire's many energy assets as the transition to a more flexible and decentralised system continues.

UNLOCKING 'WHOLE-OF-SYSTEM' ENERGY SOLUTIONS THROUGH THE LIS

The LIS will unlock the potential of local and existing energy infrastructure by improving 'whole of system' demand and supply side understanding along with knowledge of local energy infrastructure and assets, local needs and future ambitions, and connecting local strengths and challenges such as the strongly varying power generation capacity across the region. This whole of system approach to energy thinking about how local solutions can contribute to solving national problems – is especially pertinent in rural regions and Greater Lincolnshire's energy industry is therefore well-placed to advance this approach.

In this way it will be possible for local businesses, residents and local authorities to engage in delivery of local solutions for local needs, whilst using the currently constrained energy infrastructure in a more efficient and affordable manner. This will include independent, localised energy generation (through solar power or anaerobic digestion) and storage (through batteries) to address local capacity constraints in isolated areas which are prohibitively difficult to connect to traditional electricity grids.

BECOMING A RURAL TEST BED FOR NEW ENERGY TECHNOLOGIES AND THEIR APPLICATION IN RURAL AREAS

Developments in energy technology are revolutionising the sector; Greater Lincolnshire will use its distinctive rural aspect and nationally significant local infrastructure assets to become a test bed for how emerging energy technologies can be applied to rural areas. This will allow Greater Lincolnshire to establish new energy assets as the country transitions to a net carbon zero economy, taking advantage of its role as an energy disruptor through the test bed concept. It will help unlock growth as businesses in Greater Lincolnshire's energy industry can build their capacity and know-how and export the knowledge and innovation globally.

Globally, there are a number of challenges and opportunities which Greater Lincolnshire will capitalise on to create the rural test bed:

- Within energy generation the cost of renewable energy has fallen dramatically as better methods of construction and improved reliability have made renewables more commercially viable.
- > Within distribution, smart grid approaches have been developed, where the usage of energy is monitored in detail and connected appliances and properties can 'communicate' with one another to minimise wastage and lower costs.
- > Distribution Network Operators (DNOs) are making the transition to being Distribution System Operators (DSOs) which means they will be responsible for ensuring demand can be met by generation. They are procuring flexibility services for selected areas to incentivise consumers to avoid consumption at peak times. As energy demands grow, these services will be rolled out across wider areas.

- Within the waste sector artificial intelligence is beginning to be used to sort waste, and improvement in recycling technology has greatly increased the proportion of waste that is recycled.
- > Within transport new technologies - in particular electric vehicles - are helping reduce greenhouse gases from transport, but are also increasing pressure on the energy distribution network. As Electric Vehicles replace fossil-fuel powered vehicles they will induce extra demand for electricity and place increased pressure on the electricity grid. This pressure can be alleviated by charging stations which have their own source of energy generation and storage independent of the national grid.
- > Within the construction sector there will be potential for local energy solutions to be tested and implemented in the development of strategic housing and employment sites, including in Sustainable Urban Environments (SUEs) such as the Western Growth Corridor.

MAJOR ENERGY ASSETS



HORNSEA 1 IS THE
WORLD'S LARGEST
WINDFARM
MANAGED FROM GRIMSBY



A NETWORK OF GAS PIPELINES

SUPPLYING ENERGY ACROSS THE UK NEAR THEDDLETHORPE GAS TERMINAL



2 MAJOR OIL REFINERIES OUT OF 6 ACROSS THE UK



UNIVERSITY OF LINCOLNSHIRE'S POWER AND ENERGY GROUP AT THE ENGINEERING SCHOOL RESEARCHING

ELECTRIC & HYBRID VEHICLES AND ENERGY SYSTEMS MANAGEMENT



MORE BATTERY STORAGE UNITS PLANNED

OFFSHORE RENEWABLE ENERGY (ORE) CATAPULT

PLANNED FOR GRIMSBY



THE UK'S LARGEST

OFFSHORE WIND OPERATION AND MAINTENANCE BASE

IS IN NORTH EAST LINCOLNSHIRE

5 GAS TURBINE POWER STATIONS

WITH A TOTAL CAPACITY OF **4.4GW**





BY 2030, UP TO

20GW OF ADDITIONAL

WILL BE INSTALLED AT THE NORTH SEA **ACROSS THE MAJOR ROUND 3 DEVELOPMENT SITES AT DOGGER BANK,** HORNSEA AND EAST ANGLIA

NORTH LINCOLNSHIRE PROGRESSING

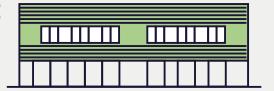
ABLE MARINE ENERGY AND ABLE LOGISTICS PARK



HOLBEACH FOOD ENTERPRISE ZONE

WILL BE A RESEARCH CENTRE FOR AGRICULTURAL PROCESS AND FOOD MANUFACTURING WITH

RELEVANT APPLICATIONS TO **ENERGY, WATER AND WASTE**





35 ANAEROBIC **DIGESTORS**

IN OPERATION WITH A **COMBINED CAPCITY OF OVER**

22 MEGAWATTS



NORTH HYKEHAM & NEWLINCS ENERGY FROM WASTE PLANTS HAVE A COMBINED CAPACTIY OF 220 KILOTONS

SUPPORTING SMES TO **ENGAGE IN THE CIRCULAR ECONOMY**

With the increasing importance of Net Zero, and the Carbon 2050 agenda, successfully integrating SMEs into the circular economy will have a substantial impact on the UK's carbon reduction efforts. Initial delivery approaches supporting businesses in Greater Lincolnshire to engage with the circular economy include information and networking events, access to advisors, and specialised Growth Hub support. There will be further refinements to this initial delivery process to take into account Midlands Energy Hub activity, and innovation/research findings, as the agenda unfolds.

NET ZERO CARBON EMISSIONS IN THE HUMBER ENERGY ESTUARY

As well as the government's commitment to net zero by 2050, Greater Lincolnshire will support the Humber to deliver their ambition of zero carbon by 2040 through increased decarbonisation, as outlined in the Humber's Energy Estuary vision. The Humber LEP, through its LIS has set an ambition to continue to develop the Humber as a global leader in clean energy generation. Linked by the Humber Energy Estuary on either bank of the Humber, both Greater Lincolnshire LEP and Humber LEP play a vital role in driving the clean energy agenda.

COMMITMENTS

- > Greater Lincolnshire will continue to support the expansions of the offshore wind supply chain, supported by the Offshore Renewable Energy Catapult and unlocking the potential for cluster development outlined in the Offshore Wind Sector Deal. This will include targeted support to SMEs through the Growth Hub, a growing portfolio of sites and purpose-built facilities, and access to established sector network.
- > Greater Lincolnshire will develop a "Living Lab" Rural Innovation Test Bed for Energy for the Greater Lincolnshire area looking at the application of new energy technologies in rural contexts. A first focus will be to link generation from local hubs to the national grid and address existing local capacity constraints.
- > Greater Lincolnshire and government will work together in an energy partnership to ensure that regional aspirations for industrial decarbonisation and clean energy generation align with and support government investment and policy including primarily Net Zero.
- > Work in partnership with energy intensive industries, the transport sector and other potential large-scale users to develop the demand required to support blue and green hydrogen production and distribution, and support the building of coalitions between companies to further develop hydrogen opportunities.

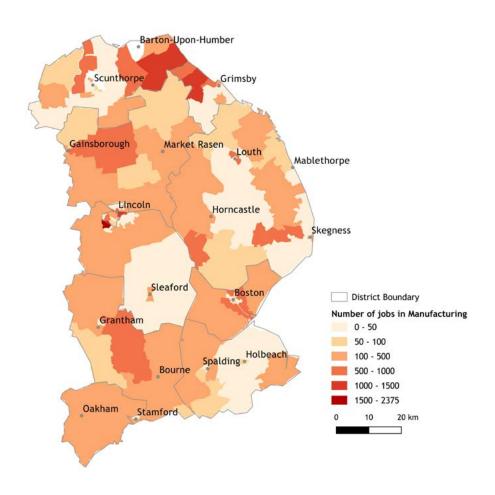
Greater Lincolnshire will continue to implement the ambitions set out in the local energy strategy, including to secure future investment into the Theddlethorpe Gas Terminal and the Carbon Neutral Business Zone.

CASE STUDY

ADVANCED MANUFACTURING AND CHEMICALS CLUSTER

The advanced manufacturing and chemicals sector specialisms are concentrated within a few areas, especially North and North East Lincolnshire. There are concentrations of activity such as the steelworks in Scunthorpe and the power generation cluster in Lincoln, and the sector has close ties with the energy industries along the Humber bank.

Across Greater Lincolnshire manufacturing employs 69,500 people across 2,400 businesses, creating £3.97bn GVA per year. In North Lincolnshire, 20% of people work in the sector compared to 10% nationally.



While Advanced Manufacturing is not one of Greater Lincolnshire's priority sectors, due to the geographically concentrated nature of the industry within the region, it remains an important aspect of economic strategy for the region, and a high value industry which will drive growth across Greater Lincolnshire.

COMMITMENTS

Greater Lincolnshire will work with the manufacturing sector to support diversification, innovation, decarbonisation and add value to the manufacturing sector.

Greater Lincolnshire will utilise government initiatives around training to support the needs of the manufacturing and engineering sector and build on the strong technical skills base in the area.

Greater Lincolnshire will work in partnership with the manufacturing and engineering supply chains to support local businesses to benefit from national infrastructure schemes and ensure Greater Lincolnshire is recognised as a first choice for manufacturing, processing and engineering.

04

PORTS AND LOGISTICS

Our ambition is to maximise the strategic advantages of our ports by leading their transformation into one of the most smart, clean and efficient port clusters in the world, leveraging greater value from the ports by handling increasing volumes of trade and attracting more value-added manufacturing activity.

PORTS AND LOGISTICS



19,590





ECONOMIC



THE PORT OF IMMINGHAM IS THE

UK'S LARGEST PORT BY TONNAGE

59M TONNES OF CARGO PER YEAR

12% OF UK CARGO HANDLED IN NORTH EAST LINCOLNSHIRE

25% OF UK RAIL FREIGHT PASSES THROUGH THE PORTS





75% OF UK POPULATION WITHIN A 4 HOUR DRIVE



£39,509 GVA PER HEAD

3% BELOW EAST MIDLANDS AVERAGE IN 2017

The government's Maritime 2050 strategy recognises that the UK economy is highly dependent on the maritime sector, with 95% of goods exports and imports moved by sea, including nearly half of the country's food supplies and a quarter of its energy supply. The UK's continued success as a global trading nation is dependent on its ability to import and export goods efficiently, and Greater Lincolnshire's role in this is vital.

Greater Lincolnshire has many ports, along the coast and further inland on the Humber Estuary, the River Trent and the River Nene. Major ports include Immingham and Grimsby, Boston, New Holland, and Sutton Bridge. Of these, the Ports of Grimsby and Immingham are the largest - indeed the Port of Immingham handles 46m tonnes of freight per year, more than any other terminal in the UK. In 2013 Immingham handled 68,000 container units; by 2017 this had increased to 183,000 units as cargoes originally destined for southern ports moved north. A 2018 £36m investment in Immingham's container terminal is expected to support a 50% growth in volume by 2020.

75% of all UK manufacturing and 40 million UK consumers are within a 4-hour drive of the Humber Estuary ports, which are strategically important to both the Northern Powerhouse and the Midlands Engine, forming their largest eastern gateway to international markets. 12% of all UK cargo is handled in North East Lincolnshire, and Greater Lincolnshire's ports originate over 25% of the UK's rail freight.

The ports are integral to Greater Lincolnshire's logistics industry, which includes 2,500 businesses - more than 6% of Greater Lincolnshire's total business base. In Boston, the port serves as a focal point for the town and will be an integral part of Boston's Town Investment Plan. The ports are also important assets for other industries which have grown around them, such as energy (in particular offshore wind), chemicals, petrochemical refineries, water transport services and warehousing.

The ports have been fundamental to Greater Lincolnshire's economy, particularly on the Humber Bank. After a period of growth and investment the next stage of their transformation is to raise the ports' productivity, increase trade, unlock investment in complementary industries around them and support clean growth in the region.

RAISING PRODUCTIVITY

Despite growth in the sector there are still productivity challenges to face. In Greater Lincolnshire 'transportation and storage' has a GVA per job of £39,509, which decreased by 8% from 2012 – 2017. Productivity is 3% lower than the East Midlands average and 34% lower than the Great Britain average.

One solution is to optimise existing infrastructure and introduce new smart technology to facilitate more efficient port logistics and operations. The ambition is to become a test bed for trialling new ideas and technology that optimise the use of port infrastructure and related road and rail connectivity – enabling the region to become one of the smartest and most efficient port clusters in the world.

Developments in international competitors point to the way forward for Greater Lincolnshire's ports. The sector is changing as a result of technological development, with digital systems being adopted by ports like Rotterdam to manage the transfer

of cargo and enable customers to track their goods. The move towards autonomous vehicles and driverless technologies is expected to have a significant impact on jobs and future skills requirements, including the oversight and monitoring of new technologies and advanced machinery. Innovation in logistics will be supported by the Humber Future Logistics Zone.

MAXIMISING TRADE OPPORTUNITIES

In 2017, total imports into Greater Lincolnshire were £8.8bn from a minimum of 3,100 businesses. Total exports were £4.7bn from a minimum of 2,200 businesses. This is an important trading economy, with 62.9% of exports destined for EU countries. Greater Lincolnshire export levels (based on 2015 value) per job, per business, and relative to economic size, outperformed many of those of comparator areas and were only slightly below the national average.

New shipping and trade opportunities are emerging as the UK leaves the EU. As one of the UK's major importing and exporting hubs Greater Lincolnshire's ports and logistics sector has a key role to play in maximising these economic opportunities. Ports in the Humber Estuary are already experiencing an increase in port traffic "switching north" from the congested southern ports and expect this to continue. Since 2017, the number

CASE STUDY

HUMBER FUTURE LOGISTICS ZONE

The Humber Future Logistics Zone would aim to make the ports in the Humber Estuary a test bed for trialling new ideas and technology that optimise the use of port infrastructure and related road and rail connectivity, and provide support for innovation in the logistics sector.

It would combine real-world trials on the local transport network of smart technology designed to reduce journey times, improve network resilience and reduce carbon emissions, with joining up support for logistics businesses to adopt innovations and improve their productivity.

The Future Logistics Zone would complement recent and planned infrastructure investment, and contribute to making the Humber Estuary one of the smartest and most efficient port clusters in the world.

of shipping services connecting Hull and Immingham to ports on the Continent has increased by over 30% with new services from Amsterdam and Ghent. This presents an opportunity for growth.

As well as the changes expected as a result of EU Exit, the Humber's strategic location means that it is well-positioned to benefit from other changes in global freight transportation, including the increasing use of rail to transport containers overland to Europe from China along the Silk Road, bringing UK-bound containers directly into the north via either the northern European ports or the Baltic; and the opening up of alternative northern shipping routes. As global attention on sustainable maritime activity increases, the Humber can also use the existing assets and wider decarbonisation of the region to position itself as a leader on this agenda.

UNLOCKING INVESTMENT IN COMPLEMENTARY INDUSTRIES

The ports enable a growing amount of manufacturing, processing, assembly and customisation activity to take place in the surrounding area, taking imported raw materials and components and adding value to them (see the Energy strategic opportunity chapter for more). Specialities include petrochemicals, steel, caravans and modular buildings, furniture and food processing. Efficient transport through the ports supports manufacturing and other sectors in the UK and abroad. but Greater Lincolnshire's ambition is to add more value to the goods transported through its ports creating new manufacturing jobs and supply chain opportunities through its Enterprise Zones.

North East Lincolnshire has a cluster of six Enterprise Zones which form part of the South Humber Industrial Investment Programme (SHIIP), a £42m investment including the creation of mitigation sites, infrastructure to link the ports of Grimsby and Immingham, and serviced sites to encourage and attract further business investment. SHIIP is providing enabling

infrastructure to unlock delivery of the Stallingborough Interchange Enterprise Zone (EZ) site and supporting a first phase of advanced industrial units on the site; bringing forward a new £8.4m link road connecting the Ports of Grimsby and Immingham and improving access to adjoining EZ sites; and delivering a comprehensive programme of ecological mitigation to de-risk future development of the area.

In North Lincolnshire nearly 600ha of Enterprise Zone can be found on the South Humber Bank, the Able Marine Energy Park (250.9ha) and the Able Logistics Park (290ha). The sites provide excellent access for rail and road and port related logistics operations. These sites make up two of the three Enterprise Zones in North Lincolnshire with the third located at Humberside Airport (62ha). Investment has been seen at the airport business park with the development of the Hampton by Hilton hotel and a training academy for BAE systems.

To achieve Greater Lincolnshire's ambition for the ports businesses will need more than access to land and skills in close proximity to the ports: they need to be positioned so they are globally competitive. To this end, a bid for a Humber Freeport, an area inside the UK geographically but legally outside of UK customs territory, which includes the ports of Immingham and Grimsby, will be submitted to government. Freeports are typically tax free or low tax areas designed to encourage more trade: raw materials can be imported to the free port and value-added or finished goods can be exported without tax being applied. The intention is to attract new investment, boost manufacturing and increase exports, ultimately creating new jobs in the process.

SUPPORTING CLEAN GROWTH IN THE PORTS AND SURROUNDING INDUSTRIES

The government's Clean Maritime Plan has helped increase the focus on clean growth in the sector. Greater Lincolnshire's ambition to achieve net zero carbon emissions across its economy includes its ports, which can build on their

recent success in supporting the offshore wind sector to become leaders in sustainable shipping. Through the Clean Maritime Plan, the Environment Route Map of Maritime 2050, the government has set out its ambition for the UK to lead the way in transitioning to a future of zero emission shipping. Greater Lincolnshire is well placed to support the UK in this ambition by accelerating its transformation into a clean maritime cluster. The ports are already playing a vital role in enabling the transition of the energy sector, hosting an expanding offshore wind cluster as well as biomass handling facilities for Drax power station.

The international nature of shipping makes decarbonisation challenging. However, Greater Lincolnshire can support the UK to play its part. For example:

- > Greater Lincolnshire is well placed to scale up supply of alternative fuels, such as hydrogen and ammonia, to the volumes required to support refuelling of ships, as well as trains and road vehicles. Greater Lincolnshire's established chemicals cluster is adjacent to its largest ports, a proposal for a hydrogen distribution network is being developed and the feasibility of scaling up electrolysis from clean offshore wind is also being explored;
- > The Humber Estuary is connected to a network of inland waterways that historically transported large volumes of bulks such as aggregates, timber and steel. The Canal and Rivers Trust has identified the Aire and Calder Navigation, which connects the Humber with central Leeds, as a priority waterway for development as a freight route – offering the potential for materials for large construction projects in the city centre to be brought in by barge instead of road.

> The availability of electricity in Greater Lincolnshire, increasingly from clean sources, is a necessary enabler for installing the portside electricity infrastructure required to power – and in future potentially charge – vessels while in port, reducing emissions.

The sustainable growth of the Humber ports cluster also has direct benefits for local communities. Responsible management of the unique Humber Estuary means that new habitats are created to compensate for port development, while a new scheme is being piloted to turn plastic waste washed up in the Humber Estuary into shampoo bottles. In future, switching more suitable road freight to rail or inland waterways would improve air quality and reduce congestion. The option to switch the movement of goods from road to rail has been made easier as a result of the recently completed W12 gauge enhancement scheme from Doncaster to Immingham.

COMMITMENTS

- > Greater Lincolnshire will strengthen the position of the ports to attract new value-added manufacturing activity and further grow the share of UK trade they handle, including by:
 - Opening up more employment land for port-related commercial development through existing Growth Deal and other private and locally-led investment
 - Managing the pipeline of future sites and premises to respond to market requirements, and working with landowners to explore how barriers to development can be overcome, including on port-related Enterprise Zone sites
- Advancing discussions with government on the possibility of a Freeport on the Humber Estuary, which would include the ports of Immingham and Grimsby and the developing high value cluster of renewable energy industries, to support growth ambitions, open up new opportunities for local people, boost productivity and tackle deprivation
- Identify options for accelerating the decarbonisation of the Humber's maritime cluster, supporting the delivery of the Clean Maritime Plan.

05

DEFENCE

Our ambition is to create a cluster of innovation focused Defence companies, and ensure Greater Lincolnshire is a highly attractive, first-choice destination for Defence-related industries, service leavers and their families.

DEFENCE



ASSETS

RED ARROWS

THE RENOWNED UK AEROBATIC SQUADRON





ISTAR FORCE

AND DATA AND

9,000
SERVICE PERSONNEL





15%
OF RUTLAND'S POPULATION FORMS PART OF THE DEFENCE COMMUNITY



Through the LIS Greater Lincolnshire will grow the local defence sector, creating an innovative cluster linked to the RAF presence already in the region. This will help Greater Lincolnshire to increase its innovation activity, levelling up from the current low R&D spend in the region. Maintaining and building on strengths in Greater Lincolnshire's defence sector will help boost productivity and enhance the UK's defence sector's reputation as one of the best places in the world to innovate, do business and create jobs.

There are opportunities to benefit from the strong military presence in the area and the resulting need for effective and secure digital infrastructure. Actions will build aspiration and the reputation of Greater Lincolnshire for defence innovation, and innovation support to develop a thriving local defence cluster. It will do this by building on the physical assets, training, human capital, and investments which are already in Greater Lincolnshire, increasing the number of high growth start-ups and spinouts, including specific initiatives to encourage exiting service personnel to create new businesses in Greater Lincolnshire.

Greater Lincolnshire has a strong aviation heritage. Lincoln was one of the largest aircraft production areas in the world at its peak. Today the Defence sector is a strategically important sector for the UK, contributing to national security and economic prosperity. Locally the sector can be a major employer and a key part of society: it is estimated that 15% of Rutland's population are part of the Armed Forces community including veterans and dependents, with a British Army base at Kendrew Barracks in Cottesmore. The sector in the region is supported by a supply chain of international companies, such as Thales, Raytheon, AAR, Northup Grumman, Lockheed Martin, Leonardo, BAE Systems, L3, QinetiQ, Inzpire and 3SDL.

These high-productivity sectors provide thousands of highwage jobs and apprenticeships and deliver sustainable growth. Under current plans, there will be significant RAF investment in the Lincolnshire area, with several hundred additional service personnel and their dependants arriving at RAF Cranwell, RAF Waddington and RAF Coningsby over the next five years. In addition, a number of civil service and contractor posts will be created in order to support the development of these core sites.

ROYAL AIR FORCE BASES

There are five active RAF stations, with approximately 9,000 service personnel, civil servants and contractors working at RAF bases in the area; when combined with their families, this represents a community of around 30,000 people.

- RAF Scampton is home to the Red Arrows Aerobatic Team, soon to move to RAF Waddington.
- > RAF Waddington hosts the UK Defence's Intelligence, Surveillance, Target Acquisition & Reconnaissance (ISTAR) Force, which encompasses the Force HQ and a large proportion of its aviation assets and assigned to NATO as a lead capability.
- > RAF College Cranwell provides 'ab initio' officer and other rank training for the RAF as well as basic flying training for all three of the Armed Forces. It will also host the Defence Aviation Medicine facility in due course.
- > RAF Coningsby is also a very large base providing a substantial part of the RAF's air defence capability.
- > RAF Digby is another active station in the area with personnel from all three armed services and the MoD Civil Service.

In addition, RAF Wittering and RAF Marham sit close to the Lincolnshire border forming a triangle containing around 40% of the RAF's assets, A4 Logistic Force Headquarters, Air and Defence Colleges (located at Lincoln College, New College Stamford and the College of West Anglia) and the only two formal aerobatic teams in the RAF: the RAF Aerobatics Team (aka the Red Arrows) and the Battle of Britain Memorial Flight.

ADVANCED TECHNICAL CAPABILITIES THROUGH ISTAR

The Defence, Intelligence, Surveillance, Target Acquisition & Reconnaissance (ISTAR) Force provides a significant opportunity for Greater Lincolnshire. This is a high-tech, high-value capability, which relies on rapidly exploiting new technologies and integrating them with information and big data to be successful. It is dependent on innovation, research and high-level skills with development funding available from government (and through the MoD NATO) and industry.

This opportunity is based on the technology growth required by the RAF and associated defence entities to drive the development of intelligence, surveillance, target acquisition and reconnaissance (ISTAR), secure communications, data analytics and cyber (defensive & offensive) capabilities harnessing the RAF's, University's and Defence Industries' capabilities and strengths. These three actors are all located within Greater Lincolnshire.

The industrial base supporting ISTAR and its associated capabilities is increasing in and around Lincoln. R&D and innovation in this area will be nationally significant, high value and aligned with the region's strengths in skills and R&D.

PROVIDING TRAINING TAILORED TO DEFENCE SECTOR NEEDS

2016 marked the opening of the Air and Defence College (A&DC) at Lincoln College providing employer-led education and technical training for 16-19 year olds. Graduates are also employed in the private sector in

companies such as Anglian Water, Mercedes Benz, ITP Engineering and Minebea Engineering. Lincoln A&DC has three streams available to students with sub-streams available within them: Engineering (comprising of specialisations in Mechanical, Avionics, General, and Vehicle Engineering), Computer Science (comprising Cyberspace Communication Specialist and Avionics Technician) and Catering (comprising of Logistics Chef and Hospitality Specialist).

This new model in education has since been expanded to New College Stamford and the College of West Anglia and will in time serve as a feeder for the International Aerospace Academy being formed at RAF Syerston in Nottinghamshire, close to the Lincolnshire border. The BAE Systems Aircraft Maintenance Academy is at Humberside Airport and trains apprentices from around the world to work at air force bases.

COMMITMENTS

- > Greater Lincolnshire will work with partners to improve research and innovation capabilities of the nascent sector, exploring the potential for a defence cluster business park and workspace units at Lincoln Science and Innovation Park.
- > Greater Lincolnshire will develop tailored business support services, reflecting the finance, skills, advice and commercial premises required to start and grow a defence related business in Greater Lincolnshire. This will include a programme for RAF leavers to encourage them to stay and start a business in the region.
- > Greater Lincolnshire will work to better understand defence supply chain and trade potential to boost the sector and stimulate innovation and investment from a broad range of sources.

06

HEALTH AND CARE

Our ambition is to develop new efficient and innovative models of care for a dispersed and ageing population, building a cluster of local businesses to support active ageing.

HEALTH AND CARE



62,000





£1.3BN **GVA WITH BY 2025**

HUMAN HEALTH CONSTITUTES OVER 50% OF THE SECTOR'S TOTAL EMPLOYMENT





GROW BY 38.4%



PROJECTED RISE **OVER 75** BETWEEN 2014-2025

PROVIDING HEALTH AND CARE SERVICES TO GREATER LINCOLNSHIRE'S RESIDENTS

A major opportunity for Greater Lincolnshire is to find innovative and cost-effective ways of providing quality health and care to an ageing and rural demographic. A goal of this LIS is to spur productivity gains in one of Greater Lincolnshire's largest sectors by employment. Recent investment and national assets mean Greater Lincolnshire is well placed to respond. Lincoln has a significant cluster of medical expertise including at the University of Lincoln a School of Life Sciences and Pharmacy, a new Medical School (opened in September 2019), a Science and Innovation Park and the National Centre for Rural Health and Care. All of these institutions will help to generate innovative activity and raise the

profile of the health and care sector as an employer of choice. This also presents opportunities for Greater Lincolnshire to be at the forefront of the future of health and care delivery through innovations in digitisation and new forms of care provision that are specific to rural contexts.

While health and care is a significant source of employment in Greater Lincolnshire, as a sector it is relatively unproductive. Since 2014 Greater Lincolnshire's health and care sector has failed to keep pace with productivity gains made in the sector throughout the UK and now lags national metrics. Greater Lincolnshire's rural environment and distribution of smaller towns supporting an older, dispersed population does not fit the standard pattern for NHS provision, which tends to be focused on urban

concentrations of service delivery. There are also fewer NHS workers per head of population in rural areas due to recruitment and retention issues, which is a major driver of rural health inequalities.

Health and care services in Greater Lincolnshire must be delivered to a population which is relatively older and more rural than UK averages. On current trends the population will get older - in some parts of Greater Lincolnshire three over 60s arrive for every two 16-24 year olds who leave. Coastal settings are particularly challenged in terms of a skewed ageing demographic profile, a lack of clinical staff, linked in part to the relative isolation of the area, and higher than average level of poor health behaviours. There are also pockets of poor health outcomes in the major settlements in the LEP area in Grimsby, Lincoln

and Scunthorpe. These challenges must be met while the health and care workforce faces 13,000 vacancies over coming years. There is a dependency in coastal areas on migrant labour to address local skills shortages and hard to fill vacancies. Vacancy rates in the sector vary across areas, ranging from 3.4% (North Lincolnshire) to 11% (Rutland).

Greater Lincolnshire is typical of many rural settings in that:

- > 80% of rural residents live within 4km of a GP surgery, compared with 98% of the urban population and only 55% of rural households compared to 97% of urban households are within 8km of a hospital;¹
- > The ratio of NHS staff in the 10 most rural Sustainability and Transformation Partnership (STP) areas compared to England is 1: 1.45 and there are exceptionally acute shortages in Doctors, Midwives and Consultants;²
- > The seven most rural hospitals in England – including Pilgrim Hospital in Boston (3% of the total) account for 23% of all debt in the sector:³
- > Rural areas have a proportionately higher share of older people with more significant costs associated with health care. More than 40% of spending in the NHS is devoted to people over 65.4 The proportion

- of Greater Lincolnshire's population over 65 is predicted to grow by 38% by 2041;
- Adult Social Care is increasingly unaffordable across England and represents a disproportionately high proportion of county councils' budgets. For example, from 2013-18 the proportion of the Lincolnshire Council's gross budget spent on adult social care rose from 29 to 42%;5
- > The dispersed population makes it relatively more expensive to deliver adult social care because of the travel times involved in accessing those who are being cared for. The situation is exacerbated by the fact that rural local authorities have less to spend per head of population on the provision of care;
- > Across Lincolnshire⁶ the total population aged 65 and over with a limiting long term illness is projected to increase from an estimated 84,301 in 2017 to an estimated 123,865 in 2035, which is around 47% of that population. This is slightly lower than the national rise of 49% and the regional figure of 51%,7 however it points to the significance of the challenge of providing suitable housing and support for independent living to support healthy outcomes for the ageing population;

Some of the key health care facilities in Greater Lincolnshire are in need of improvements and upgrading.

COMMITMENTS

- > Greater Lincolnshire will become an international centre for innovation for rural H&C solutions, particularly through the National Centre for Rural Health and Care. A priority will be to develop a pharmaceuticals network based around the Science & Innovation Park.
- > Greater Lincolnshire will pilot 'Communities of the Future' to meet the needs of an ageing population. This will explore improved physical and digital connectivity to local services and transformation of health and care services.
- > Greater Lincolnshire will address workforce challenges around skills and retention through promoting alternative career pathways and enhancing the capability of the voluntary and community sector.
- > Greater Lincolnshire will work in partnership with partner organisations to ensure any capital investment in health care facilities provides wider social and economic benefits to the area.

CASE STUDY

NATIONAL CENTRE FOR RURAL HEALTH AND CARE

The establishment of the National Centre for Rural Health and Care (NCRHC) in Greater Lincolnshire brings national expertise in rural health and care to the area. The NCRHC is an independent body with links to the University of Lincoln, which has just appointed a Global Chair in Rural Health and Care. The centre is currently hosted within Bishop Grosseteste University with which it has a research partnership. It has approaching 70 trusts in membership across England and provides the secretariat for a Parliamentary Inquiry into Rural Health and Care.

The NCRHC has identified Lincolnshire as a "Vanguard County" as a place to explore innovation. Through its relationship with East Midlands Academic Health and Science Network it is planning a programme of innovation engagement, building on the Innovation Exchange of December 2018, which will extend the opportunities for business growth and development of the estimated 2,500 health and care businesses based in Greater Lincolnshire.

- 1 Public Health England Midlands Rural Seminar July 2018
- 2 Rural Workforce Issues in Health and Care, Green, Bramley, Annibal and Sellick, University of Birmingham October 2018
- Rural health care, A rapid review of the impact of rurality on the costs of delivering health care, Palmer, Appleby and Spencer, January 2019
- 4 Ageing Britain: two-fifths of NHS budget is spent on over-65s, Robineau, Guardian, 1/2/16
- 5 Lincolnshire County Council 2018
- 6 Figure is for Lincolnshire only, however Greater Lincolnshire as a whole is likely to experience a similar increase
- 7 Lincolnshire Research Observatory JSNA Topic: Housing & Health, June 2018

VISITOR ECONOMY

Greater Lincolnshire will develop the tourism sector levelling up and supporting some of the more deprived parts of the region by providing higher-quality and more reliable employment for workers in the sector.

VISITOR ECONOMY

COUNTRY AND NATURE MARKET TOWNS

FOOD AND ACCOMMODATION COASTAL

HERITAGE AND CULTURE



ECONOMIC IMPACT UP 13.4% SINCE 2016



2,660

BUSINESSES WITH MORE BELOW THE VAT THRESHOLD



7.3% GROWTH

IN ECONOMIIC OUTPUT **BETWEEN 2016-2017**

HERITAGE CITY





MULTIPLE AND VARIED

50 MILES OF COASTLINE AND COASTAL TOWNS

SKEGNESS IS THE UK'S

4TH MOST POPULAR **HOLIDAY RESORT**





LINCOLNSHIRE WOLDS AONB

IS THE ONLY AONB IN THE EAST MIDLANDS. **ASPIRATIONS TO EXPAND**



The sector's economic impact in 2018 was £2.39bn - a 13.4% increase since 2016. Direct expenditure in the sector was up by 6.4% in 2018 to £1.74bn. By area, the largest contributors are East Lindsey (£700m), which is working to extend the duration of its peak visitor season, and North East Lincolnshire (£622m), where the Cleethorpes regeneration project has secured over £7m in investment to refresh the town's vistor economy offer. The distinctiveness and variety of Greater Lincolnshire's visitor economy offer creates value greater than the sum of its parts. Visitors attracted to one aspect of Greater Lincolnshire's offering, such as its coastal resorts, are likely to be attracted to other offers too once they are in the area, such as culture and heritage assets of the Humber Estuary like the Grimsby Fishing Heritage Centre. A successful strategy for Greater Lincolnshire's visitor economy is one which draws visitors in through an improved cultural and heritage offer, and then disperses them throughout the area. In addition, that strategy would create an offer which attracts higher spending visitors throughout the year and creates more added value for businesses and their supply chains.

Greater Lincolnshire has a highquality and varied visitor economy offering across city, coast and countryside. It is a food destination with high quality restaurants and accommodation, coupled with nature and heritage assets and underpinned by an increasingly vibrant creative and cultural offer. Among other attractions, the area is home to a vibrant heritage city, 50 miles of coastline and coastal towns such as Skegness, Mablethorpe and Cleethorpes, Stamford - England's finest stone town, Rutland water and the Lincolnshire Wolds AONB. Promoted as 'The County of Good Taste' Rutland offers a range of high quality restaurants, pubs and accommodation. There are attractive walking and cycling routes throughout the region. Lincoln city continues to attract record numbers of tourists, generating over £216m for the local economy in 2018 and providing over 2,500 full time equivalent jobs.

Visitor numbers grew by 6% yearon-year whilst economic impact grew by over 30% in five years. In order to extend this offer, an extension of the Lincolnshire Wolds AONB is being explored, covering the areas of North Lincolnshire.

Humberside Airport offers potential to attract more international visitors to the area on top of the strong domestic market which already exists. The international market tends to be made up of higher-spend visitors, meaning more added value for businesses. To attract more international visitors requires developing a cohesive, broader offer with the East Midlands, the Peak District and/or the whole Midlands region. However, for this to be effective better connectivity is required throughout the Midlands particularly east-west rail links.

A LARGE AND GROWING SECTOR WITH OPPORTUNITY TO RAISE EARNINGS POWER

Recent investments are helping to raise the profile and quality of the visitor economy, including a £22m investment in Lincoln Castle, development of Lincoln Cathedral, plus improvements at the International Bomber Command Centre and North Sea Observatory. A renewed focus on cultural and heritage offerings seeks to reduce the seasonality of the visitor economy, particularly in the coastal towns which experience a slowdown in visitor numbers during colder parts of the year. More can and must be done to revitalise the high streets of Greater Lincolnshire's urban areas and market towns as they adapt to the future of retail, which will be more online and more automated. Extensive plans are in place to diversify and revitalise Scunthorpe Town Centre, resulting in a huge number of benefits to the area, including making Scunthorpe a destination for local visitors and those further afield.

The visitor economy supports at least 30,000 full time equivalent jobs, with many of these jobs often located in coastal towns with limited other employment prospects. This means that the visitor economy plays a substantial

role in alleviating place-based inequalities and providing employment opportunities in otherwise-deprived parts of Greater Lincolnshire.

Wages are often low, with temporary work, caused in part by the current 'seasonality' of the tourism offering. A priority is to promote Greater Lincolnshire as a year-round tourist destination, which would help to provide higher-quality and more reliable employment for workers in the sector. In addition, Greater Lincolnshire's residents would benefit from a joined-up marketing strategy to communicate the benefits of the visitor economy and the valuable employment opportunities it holds.

There are more than 2,600 businesses in the visitor economy, which account for 6.7% of Greater Lincolnshire's business base compared to 5.8% of the East Midlands business base and 6.0% of the UK's. Many businesses are micro 'lifestyle' businesses, which may be less inclined to focus on productivity gains and often are not integrated into Greater Lincolnshire's broader visitor economy through, for example, coordinated digital marketing. This makes it difficult to showcase to potential visitors the full range of experiences Greater Lincolnshire offers. Businesses need more support and encouragement to adopt digital tools such as booking websites and online marketing. Doing so is likely to attract more visitors to the area and make businesses in the sector more productive.

The visitor economy suffers as a result of Greater Lincolnshire's poor transport networks. It is difficult for visitors to get to Greater Lincolnshire from other parts of the country, and once there it is difficult to travel between places, particularly if relying on public transport. Improvements to the road network, plus enhancements to the quality and frequency of rail services between places in Greater Lincolnshire, will help to boost visitor numbers, increase the visitor economy's productivity and spread its benefits further through the region. The

improvements proposed in this LIS to Greater Lincolnshire's transport infrastructure are vital enablers of productivity growth in the visitor economy.

DELIVERING THE TOURISM SECTOR DEAL

The new Tourism Sector deal provides an opportunity to bid for funds through the five approved Tourism Zones and sets out a clear vision on how to raise wages and productivity and address seasonality within the sector. Tourism Zones will receive government support for growing their local visitor economy, through initiatives like targeted support for product and promotion development, mentoring support to businesses and digital skills training. The LEP has already invested in capacity - in 2017 the Greater Lincolnshire LEP established the Visitor Economy Board, which supports the sector and shapes and influences the future of the visitor economy in the area. Primary objectives include producing a comprehensive body of information about the market; producing a place marketing toolkit for visitor economy businesses; and identifying a branding hierarchy for Greater Lincolnshire.

CASE STUDY

LINCOLN CASTLE REGENERATION -ENHANCING GREATER LINCOLNSHIRE'S CULTURAL AND HERITAGE OFFERING

Lincoln Castle reopened in April 2015 after a £22m county-led regeneration effort backed by public and private funding to renovate this 11th century landmark. The project enabled the Castle to cement itself as Lincoln's premier visitor economy attraction. The renovations resulted in new attractions, including the Castle Wall Walk, a high-security underground vault to house an original copy of the 1215 Magna Carta and 1217 Charter of the Forest, and reopening the Victorian Prison. Visitor numbers to Lincoln Castle tripled on reopening. The Castle is also a community hub, hosting year-round events ranging from theatre and fashion events to a showcase of local produce.

COMMITMENTS

- > Greater Lincolnshire's partners will enhance and promote the local place offering, including designing a tourism zone, to draw in not only a greater number of visitors overall but also a greater number of high-spending visitors. It will do this by producing a refreshed visitor economy strategy and destination marketing offer, and to implement the Hotel Strategy.
- > Greater Lincolnshire will work to address barriers in sector related skills and employment provision to improve access to jobs and lift residents' earning potential. A priority will be to develop a sector skills plan and to focus on upskilling frontline workers.
- > Greater Lincolnshire will support SMEs to adopt digital technologies and platforms which will enable them to improve their productivity and attract greater numbers of visitors.
- > Greater Lincolnshire will maximise the benefits of the rural area to help enhance residents' wellbeing, protect and enhance the quality of the landscape and supporting recognition for the Area of Outstanding Natural Beauty.

IDEAS

Our ambition is to broaden and deepen the base of innovating firms in Greater Lincolnshire, aligning innovation with the priority sectors, trebling the level of innovation investment in the region.

IDEAS



14,500
STUDENTS AT THE UNIVERSITY OF LINCOLN

£4M
IN INNOVATE UK
FUNDING IN 2018





PIONEERING AGRIFOOD TECH AT

SAGA ROBOTICS

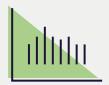


GREATER LINCOLNSHIRE INTENDS TO TREBLE INNOVATION INVESTMENT TO

0.6% **OF GVA**

R&D SPENDING
PER PERSON IS

18%
OF THE
NATIONAL AVERAGE





GREATER LINCOLNSHIRE IS THE

3RD LOWEST

LEP RANKED FOR BUSINESS

EXPENDITURE ON R&D

Greater Lincolnshire's ability to innovate - and to drive impact from those innovations – is an historic strength, from Isaac Newton through the World War I tank to industrial power and energy. Greater Lincolnshire is determined to play its part in levelling-up the UK economy and to achieve this it will increase the quantity and quality of innovation in the region – at least trebling the level of investment to 0.6% of GVA. This will ensure a spread of innovation across the whole of the region, focusing on the diffusion of existing technologies, ensuring that the economic and social value of these ideas are maximised.

ENCOURAGING MORE INNOVATIVE ACTIVITY

Much of Greater Lincolnshire's innovation occurs in the sectors which underpin the priorities identified in this LIS, and also in parts of the manufacturing sector, such as chemical and petrochemical manufacturing. While Greater Lincolnshire does enjoy pockets of innovation and a core of businesses which lead R&D in their sectors, the overall picture is one of limited innovative activity. The concentration of innovation across Greater Lincolnshire presents a polarised picture, perhaps reflecting the rural and dispersed economy.

Using Innovate UK grant applications (2014-2018) as a proxy for wider intent and investment (see map) the concentration of activity along the western and southern strips of the region is clear. While it is difficult to measure the amount of innovation occurring in an economy, metrics do suggest Greater Lincolnshire lags and differs from national averages:

- > R&D spend per inhabitant in Lincolnshire is 21% of the East Midlands average and 18% of the UK average;
- > Greater Lincolnshire ranked as the 3rd lowest LEP for total business expenditure on R&D;

- > 79.6% of R&D expenditure per inhabitant is by businesses, which is comparable to the East Midlands (79.8%) significantly higher than the UK value of 67.1%;
- > Higher Education providers account for 20.1% of R&D expenditure per inhabitant, compared to 16.6% in the East Midlands and 24.3% across the UK;
- > Government Sector R&D expenditure makes up less than 1% of the total for Greater Lincolnshire, compared to 3.5% across the East Midlands and 6.5% for the UK.

FIGURE 2: INNOVATE UK GRANT APPLICATION LOCATION, 2014-18



CASE STUDY

SAGA ROBOTICS - BUSINESS-LED R&D IN AGRI-FOOD

SAGA is pioneering agri-robotics technology through their autonomous, modular robot dubbed Thorvald. Their mission is to reduce risks to farmers, make farming more environmentally friendly and produce cheaper, higher quality food. The company was founded by Norwegian University of Life Science alumnus with close collaboration from the University of Lincoln. This partnership is instrumental to their growth, winning the company valuable clientele and national recognition. SAGA are looking to expand their R&D function plus further jobs in their operative arm to upscale their business. The company tests their robots at the Riseholme Campus to extend its capabilities to a wider variety of farm work. SAGA has won funding from Horizon 20/20 and five Innovate UK programmes.

North Lincolnshire and North East Lincolnshire will increasingly become centres of innovation as the effort to achieve net zero carbon emissions intensifies. Industries which were once carbon-intensive will innovate and deploy new technologies. Many of these technologies are on the threshold of commercialisation, and others are already available and have been tested elsewhere, but have not been integrated at a regional level before. North Lincolnshire and North East Lincolnshire can become a test bed for putting these technologies into effect, assisted by the ORE Catapult Offshore Renewables Centre of Excellence currently establishing itself in Grimsby. As part of this, demand for low carbon products and services will increase, and there will be opportunities to stimulate the development and commercialisation of ideas - testing them locally, and then marketing them around the world.

COMMERCIALISING INNOVATION

More must be done to ensure Greater Lincolnshire's focused excellence in discovery translates into its application in industrial and commercial practices, and so into increased productivity. To do this, Greater Lincolnshire will focus on critical innovation strands in the sectors that underpin the priorities identified in this LIS. This approach will be supplemented by efforts to raise the ambitions of Greater Lincolnshire's broader industrial base, supporting businesses of all shapes and sizes to drive innovation levels, in particular around better and wider use of existing technologies, impact and geographic spread. The £9.5m of Innovate UK grants which have already been allocated to Greater Lincolnshire's businesses

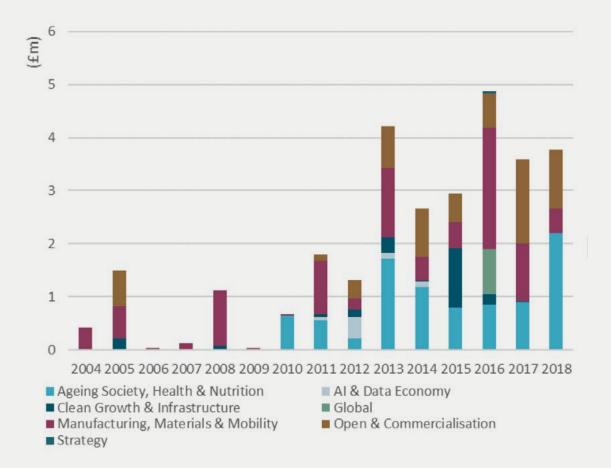
for Manufacturing, Materials and Mobility showcases the value of the innovation which has already occurred and points to the potential for more to come.

Substantial progress has been made in recent years as Greater Lincolnshire's businesses and Higher Education Institutions have responded to the need to drive innovative activity. Greater

Lincolnshire takes the leading role through the Midlands Engine on the 'Future Food Processing' priority, linking together innovation activity across the region. Although starting for a low base, Greater Lincolnshire Innovate UK funding allocations have increased rapidly in recent years, experiencing a five-fold increase in just eight years, from £0.75m in 2010 to

almost £4m in 2018. The standout feature of Innovate UK's funding allocation to Greater Lincolnshire is the proportion going to academic institutions (28.4% of total funding) relative to New Anglia (9.7%) and the UK (18.8%). Of this funding, most goes to the University of Lincoln (£7.8M out of £8.3M).

FIGURE 3: INNOVATE UK FUNDING TO GREATER LINCOLNSHIRE BY SECTOR, 2004-18



Greater Lincolnshire has operated a highly successful innovation support programme over the 2016-19 period, with a further three year extension now secured. This ERDF-funded scheme has achieved strong impact beyond the programme interventions and contractual outputs, in driving culture change around innovation. This track record in delivery provides a strong base for future innovation programmes through the LIS.

DRIVING A STEP-CHANGE IN INNOVATION

The world around Greater Lincolnshire is changing rapidly. Greater Lincolnshire is acutely impacted by global trends, particularly demographic change, climate change and a technological revolution. These global challenges need innovative local solutions. 'Business as usual' will not do – Greater Lincolnshire needs to raise ambitions for innovation throughout the community

or risk falling behind. Greater Lincolnshire's ability to thrive in the face of change depends on ideas, with innovative companies driving a productive, growing economy and solving the challenges society faces. To achieve this further intervention is required to stimulate and grow activity. Within this context, ideas and innovation cannot be considered independently; the connectivity between the different drivers of this foundation is critical. If Greater Lincolnshire is to create a leading

CASE STUDY

UNIVERSITY OF LINCOLN

By any measure Greater Lincolnshire lags the national economy in ideas and innovation. However, most statistics considered have a significant lag and don't yet reflect more recent (post 2010) efforts, progress and impact. Central to this progress has been the establishment (2001), development and growth of the University of Lincoln. Whilst the region also includes Bishop Grosseteste University and delivery by other Higher Education providers, the University of Lincoln's direct and indirect impact on the innovation agenda provides significant opportunities for the region to build from and crystalise.

Indicators of the University's progress, impact and potential for future impact include:

- > Ranked in the Top 50 in the UK and one of the fastest growing in the UK, with a growing, world-class, research base
- Opening six new STEM schools (engineering, mathematics and physics, chemistry, pharmacy, geography and life sciences) since 2011 – all based on regional industrial collaboration around skills and innovation needs
- > In partnership with the Lincolnshire Co-operative, establishing the Lincoln Science & Innovation Park which is co-locating industrial partners alongside the knowledge base allowing for greater and quicker collaboration
- A growing undergraduate and postgraduate (14,500) student base, increasingly connected into the regional labour market
- Securing funding (2019) to establish the world's largest agri-robotics research centre
- > Over 120 new start businesses established and sustained in 2018
- The Greater Lincolnshire LEP and the University share a closely aligned vision for the economic, social and culture development of the Greater Lincolnshire community, with strategic plans fully aligned and the Vice Chancellor (a founding LEP Board Director) chairing both the Growth Hub Board and the Greater Lincolnshire Innovation Council. This interconnectivity of the key innovation stakeholders in the region provides a strong forward comparative advantage.

innovation ecosystem then it is critical to ensure alignment between people, business environment, infrastructure and place. Building from McKinsey & Co (April 2015) suggestions on eight essentials of innovation, the basis for Greater Lincolnshire's strategic approach to this foundation is:

- Inspire ensuring that innovation-led growth is valued and seen as critical across the community
- Choose ensuring investment in a coherent and balanced portfolio of initiatives (balancing the sector focus against wider support)
- Discover supporting the community to develop insights into opportunities that translate into impact
- Evolution supporting the existing industrial base to create new models based on their innovation

- Accelerate ensuring innovative activity outpaces global competition
- 6. Scale –supporting business to launch innovations at the right scale and in the right markets
- Extend ensuring that Greater Lincolnshire is incorporated into wider networks and best practice
- 8. **Mobilise** ensuring that all assets (particularly people and infrastructure) are organised and aligned

COMMITMENTS

> Greater Lincolnshire's partners will develop innovation excellence in the priority sectors of agri-food, energy, ports and logistics, and defence, bringing forward locally led development of new initiatives and continuing to value Greater Lincolnshire as a 'living laboratory' and test bed that creates solutions to regional challenges that will have global applications.

- > Greater Lincolnshire will encourage innovation where it contributes to addressing local, national and international challenges, for example, decarbonisation, flooding, digitisation, health and social care.
- > Greater Lincolnshire will increase diffusion of existing technology in the priority sectors of health and care and visitor economy, alongside all local SMEs without an existing focus on innovation. This will develop an innovation hub and spoke model across the region.
- > Greater Lincolnshire will develop the networks and governance to support a thriving innovation ecosystem, building on the Greater Lincolnshire Innovation Council, Growth Hub and LEP Board connected leadership.

PEOPLE

Our ambition is to enable all residents to reach their potential in the local labour market and participate in a flourishing and inclusive economy.

PEOPLE



468,000

£25,720
MEDIAN WAGE





50%

OF JOBS ARE
IN RETAIL,
HOSPITALITY AND
PUBLIC SERVICES

22%

OF RESIDENTS ARE AGED 65
AND OVER, COMPARED TO A
UK AVERAGE OF 18.2%



LIVING STANDARDS



32%
OF EMPLOYEES ARE PAID BELOW THE REAL LIVING WAGE

AFFORDABILITY
MEASURED BY WAGES
AND HOUSE PRICES IS

6.8% BELOW
THE ENGLISH AVERAGE



The area provides many quality of life advantages for the people who live and work here (such as good schools, low crime, clean air, low cost of living) but its sheer size can cause barriers to communities at a distance from centres of learning and to employer-led skills training and development.

Greater Lincolnshire is experiencing slightly slower population growth of 3.4% than the UK average of 3.7%. There are variations in this population growth within the dispersed economy. The highest is in Rutland, while Lincolnshire county overall has seen a 4.5% increase in the population. North East Lincolnshire has seen little population growth (0.02% from 2012-17), and population decline in Grimsby and Cleethorpes. Large areas of East Lindsey have also experienced population decline (specifically along the coast).

Positively, the area is a net attractor of people and experiences net inflows across all age groups except for those aged 20–34. There are typically a higher proportion of young residents living in towns. The highest proportion

of 20-34-year olds reside in Lincoln, which has a student population of around 16,000.

In 2017, there were 468,500 jobs in the area, with job growth of 8.2% slightly below the UK's job growth of 9.6%. Employment is strong in sectors which tend to be labour intensive, relatively lower skilled and lower paid, and produce lower levels of value. 50% of the area's jobs are in retail and hospitality (111,600 jobs) and public services (111,500 jobs). There was an encouraging 3% increase in the share of residents who are employed as top managers and professions from 23.2% to current levels of 26.4% in 2018, although the same period also saw the share of low skilled service workers rise by 1.2%.

The area is home to two universities, two university technical colleges and seven colleges of further education. Notable educational and skills facilities include the industry-led CATCH training facility in the north, supporting energy, engineering and renewable industries, the Joseph Banks Laboratories at the

Science and Innovation Park in Lincoln, the BAE Systems training centre at Humberside Airport, and the National Centre for Food Manufacturing in the south.

In an area four and a half times the size of Greater London, distance to these facilities is a barrier for many residents and businesses. Figure 4 illustrates how communities in more sparsely populated areas do not have access to the full facilities of a main FE College campus when compared to less rural locations. Access to a main FE College Campus or a 6th Form school in East Lindsey, Rutland, South Holland and West Lindsey was well below the national rate when measuring the proportion of 16-18 year olds within 30 minutes travel time to FE Colleges and School 6th Forms via public transport / walking (2016). These hard to reach communities tend to be supported by local independent or third sector training providers because larger organisations based outside of the area cannot make training courses financially viable given the substantial travel involved and the smaller number of learners.

FIGURE 4: FE COLLEGES WITHIN A 30-MINUTE DRIVE, GREATER LINCOLNSHIRE – TAKEN FROM THE LINCOLNSHIRE AREA BASED REVIEW SO NOTE THAT THIS IS A FEW YEARS OLD.



= Main College Sites

College Satellite Campus/Building

 = Sites of Sixth Form Colleges, Independent Training Providers, Universities and other Colleges with a direct SFA Contract

A FOCUS ON INCLUSIVE GROWTH

Some parts of Greater Lincolnshire rank amongst the most deprived areas of England as measured by the Index of Multiple Deprivation. There are pronounced pockets of deprivation along the Eastern coastal towns from Mablethorpe to Skegness. Pockets of Lincoln and Gainsborough are also in the bottom deprivation deciles, while resort towns such as Skegness, Mablethorpe, and Grimsby are among the 10% most deprived. Slow progress on inclusive growth in these most-deprived areas is a substantial challenge which must be addressed – this will in part be developed through the visitor economy priority but also through broader support around skills development and infrastructure.

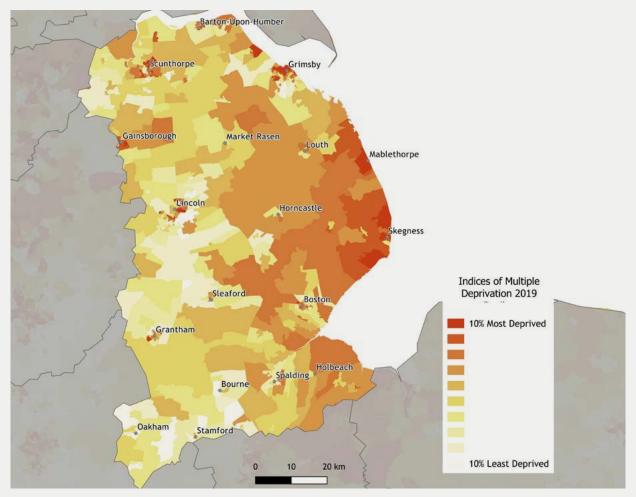
Across Greater Lincolnshire 32% of employees are paid below the real living wage. Lincoln is the lowest paid area of the UK which contains a university. Except for Rutland, the local authorities all have a higher percentage of workers earning below the real living wage than the UK (23%). This is an area of concern given that the real living wage acts as a proxy for in-work poverty, which remains a major issue for achieving inclusive growth, although living costs may also be lower in Greater Lincolnshire too. Affordability, measured by the ratio of median house price to median earnings (2018) is 6.8 for the county of Lincolnshire, 5.0 for North East Lincolnshire, and 4.8 for North Lincolnshire, compared to the average for England of 7.8, offering significant potential to develop a more inclusive and equitable economy.

In the last year Greater Lincolnshire has seen growth in wages faster than the national average. As of 2018, the median wage for full time workers in Greater Lincolnshire was £25,720, compared to £29,574 across the UK. In North Lincolnshire this figure was as high as £28,727,

whilst in Boston it was £22,414. These relatively lower wages do need to be considered alongside the higher quality of life and lower cost of living enjoyed by many, but not all, residents.

The Social Mobility Index identifies the most and the least socially mobile areas of the country by examining, in detail, the chances available to young people from poorer backgrounds in each of the 324 local authority areas in England. Based on this measure, North Kesteven is ranked 29 out of the 324 areas, which means that it is classed as a Hot Spot. Young people from disadvantaged backgrounds who live in these areas are far more likely to achieve good educational outcomes and have more opportunities to do well as adults than those in the rest of the country. Conversely, North East Lincolnshire is ranked 309th and is classed as a Cold Spot for social mobility.

FIGURE 5: INDEX OF MULTIPLE DEPRIVATION (2019) - DECILES



CASE STUDY

TECHNICAL, BUSINESS SKILLS AND INNOVATION HUB (TBSIH) IN NORTH LINCOLNSHIRE - SUPPORTING GREATER LINCOLNSHIRE'S INDUSTRIAL COMMUNITIES

Completed in October 2019, the Technical, Business Skills and Innovation Hub (TBSIH) channels £6.7m of government and private investment to close the skills gap and support economic growth in Scunthorpe. TBSIH provides quality apprenticeships including degree apprenticeships; short training courses; and opportunities for collaboration between the public sector, education institutes and businesses. The presence of TBSIH will reposition Scunthorpe's town centre as a hub for business and learning. TBSIH will support Scunthorpe and the wider community by delivering seamless skills progression from levels 3-8. Addressing local skills gaps will boost confidence for SMEs by providing them a well-skilled labour pool and extend career opportunities for Scunthorpe residents. TBSIH's proactive engagement with local businesses will align skills provision more closely with regional priorities – particularly in manufacturing, business management and engineering.

SUPPORT PEOPLE TO RETURN TO, PROGRESS WITHIN AND REMAIN IN WORK

Greater Lincolnshire will need to take concerted action to inspire young people to progress within work, enable people approaching later life to adapt their work to changing circumstances rather than leaving the workforce, and support people to return to work, for example after caring roles. This links to other workforce challenges, especially along the coast and in key service sectors. We need to help young people and adults see and take advantage of the opportunities that are available in their local areas.

ESF programmes have had the greatest impact when designed in response to local evidence and conditions, and implemented and delivered locally. CareerNet, The World Of Work and Industry Educator are good examples of unique schemes tailored to address local challenges such as pockets of young people not in employment, education or training (NEET).

Of those who are out of work, there are health barriers to employment for some residents – over one third of workers in North and North East Lincolnshire are economically inactive due to illness. And the overall figure masks large differences at local level - unemployment in Gainsborough South-West ward is as high as 11.3%. Poor mental health can be a barrier to work. At any one time, one in six adults has a mental health condition, and those with a long-term physical condition or learning disability are most at risk. This impacts on workplace productivity and almost a quarter of NHS activity.

The ageing workforce also presents issues, and it will be important to address mental and physical health barriers for those both in and out of work to ensure a healthy, productive workforce at all stages of life. The number of new jobs is rising far faster than the population though and, with unemployment dropping to a low rate of 3% in August 2019, there will potentially not be enough residents to meet employer demand. Like many areas in the UK, the population is ageing. Over 22% of Greater Lincolnshire residents are aged 65 and over compared to 18.2% in the UK. The total population is predicted to increase from 1.12m in 2019 to 1.20m by 2041, however this increase is skewed towards population growth in the 65+ age category.

The Centre for Ageing Better has selected Greater Lincolnshire as its strategic rural partner. This will focus on accelerating work so that Greater Lincolnshire's residents are enabled to live well as they approach later life. One of the goals is for 1 million more people aged 50 to 69 in fulfilling work by 2022.

HIGHER LEVEL QUALIFICATIONS ARE GROWING

Between 2008 and 2018 there was an 8% increase in the share of those with NVQ level 4 and above from 20.5% in 2004 to 28.5% in 2018. This mirrors the decline in those with NVQ level 1 and below over the same period. Lincolnshire is home to two growing universities and it is recognised that graduate retention and nurturing this supply of talent is part of the solution for future economic growth. Across both universities the graduate retention rate is placed the area in the mid quartile nationally. Rutland has a more qualified population with the highest share of those with NVQ 4 and above (43.8%). Whilst higher level skills will be important to the future economy, replacement demand will ensure that there continues to be job vacancies for people with level 1 to three qualifications. Investment in access to higher level skills has taken place throughout the area allowing resi dents easier access to gaining qualifications, skills training and development. One such example is the development of the University Campus North Lincolnshire, working with a range of universities including University of Lincoln, Sheffield Hallam University, University of Hull, and the University of Huddersfield to offer courses including many to support the growth ambitions of the area.

18% of the area's schools are ranked as outstanding and GCSE results exceed the national average. Educational attainment within Rutland is higher than the country as a whole - with 53% of pupils attaining Grade 5 or above in English and Maths GCSEs compared to 39.8% in England.

Despite the proportion of school leavers obtaining a level 2 qualification being amongst

the highest in England, Greater Lincolnshire has a higher than average proportion of adults with no qualifications. 27% of those over age 16 have no qualifications compared to 23% nationally. The position is improved at level 2 where 58% of the working age population have a level 2 qualification as their highest qualification compared to 51% nationally. However this means that we have far fewer people who have progressed to level 3, and that in turn means there are far fewer people qualified at level 4. At level 4, however, only 20% of the population are qualified to this level compared to 27% nationally.

REPLACEMENT DEMAND AND YOUNG TALENT

A major challenge for the area is to find suitably qualified and resilient residents to fill over 207,000 projected job vacancies by 2024. Greater Lincolnshire's working age population is shrinking; upskilling and retraining of existing work force is imperative.

Retaining and retraining workers to maintain and improve productivity and to reflect the pace of technological change, Greater Lincolnshire recognises the need to support people to continue to contribute to the economy into later life through longer and more flexible careers. This includes retention, retraining and progression for local residents aged 50+, armed forces personnel returning to the workforce, and retirees who have a wealth of experience and knowledge to contribute. It also includes supporting people who have returned to work after time away. This will be increasingly important as technologies disrupt the labour market. In order to support lifelong integration of skills and development, new approaches to access training and skills are required. Greater Lincolnshire is ideally situated to test new approaches, such as piloting a personal learning account, providing individuals with access to training and skills funding at the most appropriate time to support them throughout their whole life, enabling progression and flexibility. Apprenticeships can be one way for businesses to train and employ staff. Apprenticeship start numbers have fallen in Greater Lincolnshire since 2014/15, from just over 10,000 in 2014/15 to 7,870 in 2017/18, in part due to changes in the funding mechanism. This trend can also be seen at the national level. In 2017/18, there were 19,500 apprenticeship starts in the second quarter. This is a 31.5% decrease from 2016-17. A challenge is providing industry placements for learners in rural areas.

New models of skills provision are being implemented. The University of Lincoln and its Further Education college partners have been successful in their bid to host one of the country's twelve Institutes of Technology (IoT). The Institute will specialise in priority areas such as Agri-tech, food manufacturing, and energy, alongside broad skills to meet employer demand such as digital and engineering to train Greater Lincolnshire's next generation of workers. This will be supported by £170m of capital funding from government (for all 12 IoTs). The Institute provides unique collaborations between employers and further and higher education providers, aiming to close skills gaps and improve productivity. IoT's bridge the gap between University and Sixth

Form by offering level 4 and 5 qualifications in STEM subjects, for which Greater Lincolnshire has a strong business base.

MATCHING SKILLS TO BUSINESS NEED

Given the legacy of lower level qualifications within the population, combined with a history of traditional industries and small businesses, employers might have become accustomed to having a small pool of highlevel skills from which to recruit, and they have simply managed without. Local reports have, in the past, noted limited demand from employers, and possibly employees, to grow intermediate and higher skills because they do not recognise the need.

However, the landscape has changed. Many employees are starting to retire, and business owners cannot find people to replace them. New sectors have developed, technology has changed, and automation is displacing lower skilled jobs. Developing new business leaders and managers will be important. In addition to increasing the qualification levels of the population, and inspiring young people to remain in the area, smaller businesses may need

CASE STUDY

CATCH TRAINING - A UNIQUE TRAINING FACILITY SUPPORTING THE PROCESS, ENERGY, ENGINEERING AND RENEWABLES SECTORS

The CATCH facility was set up via a partnership established in 1999 to support the multi-billion pound Humber Chemical sector, in a collaboration between businesses and the public sector. CATCH offers world leading facilities and works in partnership with multiple training providers including local further education colleges and private organisations who are recognised as leaders in their field – finding the solutions for businesses. CATCH's membership is made up of partners from the process, energy and engineering sectors, their associated supply chains, and local authorities, including all four Humber local authorities. CATCH works collaboratively with the local authorities to attract inward and internal investment. CATCH's latest expansion was completed in 2017, with new training facilities supported by a £1.75m investment through the Humber LEP's Growth Deal with government.

support to plan their future workforce, consider wages levels and recruit.

The Greater Lincolnshire economy is seeing rising demand for occupations requiring qualifications at level 3 and above. Over 20% of Greater Lincolnshire's hard-to-fill job vacancies are due to skills shortages. Machine operative vacancies account for nearly one third (29%), and labourintensive jobs account for 35% of skills shortage. However many of these roles require technical skills, and there is an undersupply of level 3 technical skills. It is important that T levels are a success for Greater Lincolnshire.

There is an over-supply of level 2 and under-supply of level 3 technical and higher level skills; 126,000 additional jobs will require NVQ level 4 or higher by 2022 and currently not enough of the local workforce possess skills to this level. The most common reason for having a hard-to-fill vacancy is a low number of applicants with the required skills followed by a low number of applicants with the right attitude and lack of qualifications the company demands.

Automation will impact the jobs market. Skills Advisory Panel analysis calculations show that over the course of the next 15 years, nearly a third of Greater Lincolnshire jobs will be impacted by IR 4.0. The sector predicted to undergo the greatest changes in terms of jobs impacted (wholesale and retail trade) is also the same sector that is projected to have the largest elements of expansion and replacement demand.

CASE STUDY

DIGITAL SKILLS CENTRE, STAMFORD - ENHANCING DIGITAL SKILLS DELIVERY IN GREATER LINCOLNSHIRE

Opened in January 2019, the Digital Skills Centre at New College Stamford is a £1m investment of public and private funding to enhance the delivery of digital skills training and education in Greater Lincolnshire. Through onsite or flexible and distance learning options, the Digital Skills Centre will deliver industry recognised certifications (awarded by CISCO and Microsoft) from its refurbished and upgraded computer learning facilities. The Centre also supports new technology developments such as cyber security; cloud computing; mobile technologies; and green IT. The Digital Skills Centre will support all sectors and businesses – particularly strategic opportunity areas such as agri-food and clean energy – to adapt to emerging technologies such as data centric decision making and automation. The Centre's four ambitions by 2022 are to create a digital skills hub in Stamford; double the number of learners accessing high quality education; deliver 10 additional qualifications; and work with at least 150 new employers.

CASE STUDY

BISHOP GROSSETESTE UNIVERSITY -SUPPORTING PEOPLE INTO LEARNING AND EMPLOYMENT

With a long and rich history, Bishop Grosseteste University is renowned for its initial teacher education and training, as well as offering undergraduate and postgraduate study in a broad range of other subjects. The university supports people into education and employment through a variety of programmes and interventions. The university hosts the National Collaborative Outreach Programme, LiNCHigher, which is a consortium of HE and FE providers throughout Lincolnshire which aims to raise the aspiration for post-compulsory education amongst those typically under-represented. Bishop Grosseteste University is working in collaboration with the University of Lincoln to embed High level/ Professional skills through a partnership between the universities, employers and local authorities. Through the generation of 30 business challenges, the project will offer 130 students a unique opportunity to work in multi-disciplinary teams and pitch their solutions to medium to large businesses across Greater Lincolnshire. The university's careers and employability arm, BG Futures, delivers European Social Fund and Big Lottery funded projects working with adults in the community to help them get into learning and / or employment. BG Futures staff have been working one to one with participants who are long term unemployed or who are economically inactive to help them identify goals and barriers, and then support them to put remedies and plans into action.

COMMITMENTS

- > Local partners will work to identify local solutions to level up on digital skills, with a focus on tackling digital skills gap in rural areas and market towns. This could potentially include developing a Digital Skills Partnership.
- > Greater Lincolnshire and partners will build on the SAP to develop more detailed and localised labour market information to better inform people, business and education, living in economically different parts of the LEP area by 2021.
- > Greater Lincolnshire will design local programmes to address skills gaps identified in the SAP and through local research to respond to the needs of local employers in the dispersed and rural economy, including hyper local responses in areas of deprivation such as the coastal Opportunity Areas.
- > Greater Lincolnshire will work to maximise the effectiveness of the Apprenticeship Reform, Levy and T levels in all areas and especially in the priority sectors.
- > Government and local partners will work together over the next five years to successfully open, promote and deliver better results for Greater Lincolnshire through an employer led Institute of Technology. This investment in skills and training in the area opened late 2020.
- > Greater Lincolnshire will prioritise employment programmes which focus on healthy ageing and maintaining a healthy and diverse workforce. This will include promoting the National Retraining Scheme for adults and engaging with DWP's programmes around productive healthy ageing.
- Greater Lincolnshire will pilot a personal learning account to support lifelong integration of skills.
- > Greater Lincolnshire will encourage more businesses to employ graduates and offer internships to build skill levels, and recruit higher skilled labour into businesses supporting innovation.

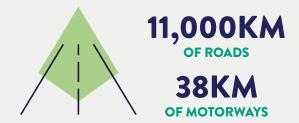
INFRASTRUCTURE

Our ambition is to develop the infrastructure needed to support business growth, connect people, and be prepared for future growth and challenges.

INFRASTRUCTURE











BROADBAND



SUPERFAST BROADBAND COVERAGE IS AT 92% COMPARED TO A UK AVERAGE OF 96%

RURAL MOBILE
COVERAGE IS AT
90%
WITH MANY PLACES
RECEIVING LIMITED
4G ACCESS

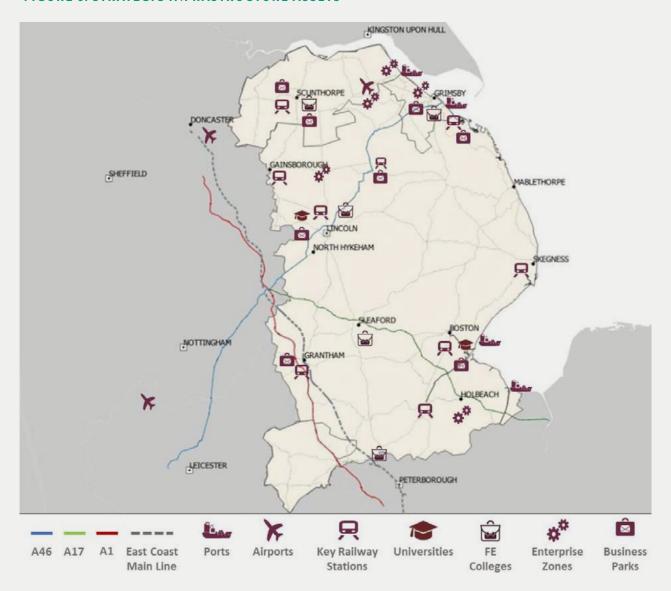


Poor connectivity limits business connections and inhibits residents from accessing jobs which traps them in a low wage, low skill environment. Greater Lincolnshire's infrastructure requires renewed investment and a strategic approach to overcome three

challenges: providing essential infrastructure in a large, rural area with a dispersed population; increasing connectivity with the rest of the country and the world; and future-proofing the region against significant future changes including climate change, the

future of mobility, and digitisation. Greater Lincolnshire is developing its first Strategic Infrastructure Delivery Plan, which will align with the priorities of the LIS.

FIGURE 6: STRATEGIC INFRASTRUCTURE ASSETS



ROAD NETWORK

Greater Lincolnshire is poorly connected by internal roads. The road network totals 11,000km yet includes only 38km of motorway. There are 1,374 km of A roads but of this just 129 kms (9.4%) are dual carriageway and 9,600km of the network comprises 'B' class roads and below.

Poor road connectivity creates challenges for Greater Lincolnshire's industries. Employer surveys in 2014 showed that 30% of businesses in Greater Lincolnshire stated that poor transport infrastructure was a factor preventing the business from growing, while 12% stated that poor transport infrastructure was the single biggest barrier to growth, more than any other single

category, and a key reason why they do not invest in their own sites and businesses.

Highways England's assets in Greater Lincolnshire are the M18, the MI80 and the A1. The section of the A1 between Peterborough and Blyth needs further improvement to improve safety and to prepare it to meet growing future demand as outlined in the spatial plan for Greater Lincolnshire. Longer term priorities for road investment across Greater Lincolnshire are the North Hykeham Relief road around Lincoln, A46/A15 Trade corridor, upgrading the A1 to smart motorway standard, and enhancement on other strategic routes such as the A15 and the A17.

The A46 is an important east-west route, but it does not cover the

south, and so distribution links in the area are particularly difficult. Agri-food businesses operating in the area face high transport costs to reach priority national markets to the south. Rising demand for road travel is placing extra stress on the core highway network. This results in increasing delays and congestion. Improvements to roads such as the A46/A15 would see significant economic and other benefits for the area. Investment in these corridors could result in increased housing growth, improved road safety, as well as economic gains for businesses such as logistics companies.

RAIL

Greater Lincolnshire's rail network provides services that connect

the area's sparsely populated places with a small number of larger centres, and link Greater Lincolnshire with the rest of the country. A rail study carried out in 2016 for the LEP indicated that the wider economic benefits delivered by the rail services in the area are worth around £161m per annum. Improvements to rail can therefore play an important role in strengthening the economy across Greater Lincolnshire, supporting business, tourism and labour markets. However, there is a need for further investment to fulfil its potential.

Direct trains from Lincoln to London on LNER started in 2019, with local partners developing areas around the station to capitalise on the investment. Longer term line speed improvements between Lincoln and Newark are a priority, as is the introduction of an extension to this to create a direct Cleethorpes to London service. The difficulty of crossing the East Coast Main Line has impeded developing better east - west links, with the City of Lincoln particularly affected by the East Coast Main Line crossing at Newark. An interchange at Nottingham or Sheffield is required for east - west trips, leaving the city isolated from others in the East and West Midlands and Yorkshire. Improvements to journey times on the South Humber Main Line are a priority for Northern Lincolnshire to enable faster journey times east - west from Cleethorpes, through Scunthorpe to Sheffield and beyond. Improvement in line speeds could bring considerable benefits to the operation of passenger and freight services, supporting economic growth and increasing access to labour markets and skills. Enhancing east – west strategic connections across the North to support UK competitiveness is recognised in Transport for the North's Strategic Transport Plan Investment Programme.

The importance of the Lincoln-Nottingham rail corridor is recognised by its inclusion in Midlands Connect's recently published 'Midlands Engine Rail' initiative. The aim is to deliver a step-change in rail connectivity

which will support jobs growth and housing development across the Midlands region. Specific to the Lincoln-Nottingham corridor is the aspiration to deliver two trains per hour (currently one train per hour) and line speed improvements.

The rail network, especially in Northern Lincolnshire, plays an important role in the UK rail freight network. Much of the area has benefitted from major investment in infrastructure to improve services such as the recent upgrade to the Great Northern and Great Eastern (GN/GE) Joint Line. The South Humber Main Line has also recently seen W12 enhancement to enable large cube container freight access from the Port of Immingham to the East Coast Main Line at Doncaster. The existing line which links Grimsby to Immingham docks, and runs alongside North East Lincolnshire development sites and Enterprise Zones would, if upgraded, enhance infrastructure links and attract investment onto these sites. Aside from the port-related freight, there is limited rail freight traffic originating elsewhere in the Greater Lincolnshire area. One exception to this is the approximately weekly flow of imported steel that goes from Boston Docks to Washwood Heath (Birmingham).

NEW PUBLIC TRANSPORT METHODS SUITABLE FOR RURAL AREAS

In Greater Lincolnshire it can be difficult to provide cost-effective public transport across such a large area with a dispersed population, and the market for public transport is relatively small. Bus usage is declining. In 2017/18 Lincolnshire bus operators provided 13.5 million passenger journeys compared to 13.7m in the previous year. Strong public transport infrastructure must be prioritised to deliver inclusive growth and reduce congestion.

Changing this will require innovative responses. In North Lincolnshire, Lincolnshire and to an extent in North East Lincolnshire policy decisions have recast the network as a hub and spoke model of demand-responsive services. The system is designed to provide maximum flexibility against a constrained budget. Artificial intelligence and machine learning will create new forms of mobility as a service. There is an opportunity to look at Future of Mobility Grand Challenge in a rural context and the University of Lincoln are collaborating with Midlands Connect to raise the national profile of the issue.

CASE STUDY

LINCOLN TRANSPORT HUB INTEGRATED TRANSPORT SOLUTION FOR LINCOLN CITY CENTRE

Opened in January 2018, the Lincoln Transport Hub is the result of £29m of public and private funding to deliver a decades-awaited integrated transport hub in Lincoln City Centre. The ambitious, mixed-use project was delivered collaboratively in a public-private partnership and took 16 months to complete. The project was built on a brownfields site in the centre of Lincoln. It comprised a new fit-for-purpose bus station adjacent to the improved train station; public realm improvements; parking space for 200 bicycles and 1,000 cars; 325m² of retail and traffic calming measures to support pedestrians and cyclists.

The development is revitalising Lincoln City Centre, benefiting residents and visitors by making the city centre more accessible via all modes of transport. The project has already secured additional private investments in adjacent areas, building momentum for more jobs in the city centre. The Transport Hub will facilitate future investment by unlocking brownfield land, enhancing Greater Lincolnshire's place offer.

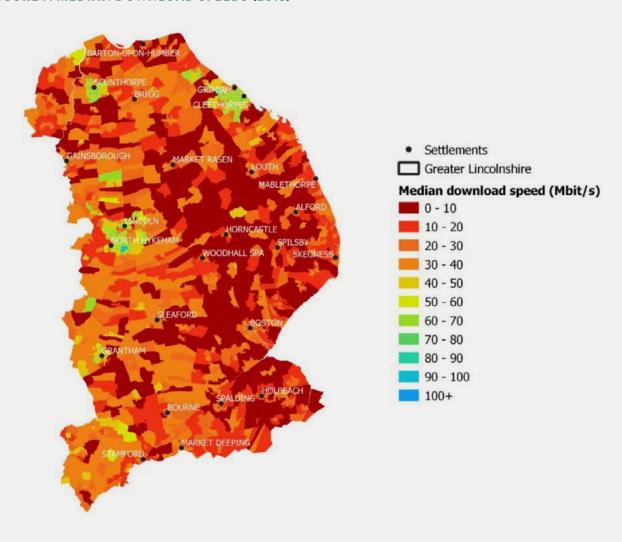
DIGITAL CONNECTIVITY

The need for Ultrafast broadband is increasing as industry and business in general move to greater use of online and real-time applications. Areas of the rapidly expanding agrifood industry, for instance, would already use at least symmetrical gigabit connectivity⁸ in their operations if it were available, but

it is not. The map below shows the median broadband speed across Greater Lincolnshire (Mbit/s). The distribution of good broadband connectivity is poor, particularly in coastal regions. Current levels of both fixed line broadband and mobile connectivity remain well below national averages. Superfast broadband coverage⁹ currently

sits at 92.1% against a UK average of 95.9%. The gap increases further when considering Ultrafast broadband¹⁰ where current coverage in Lincolnshire county sits at 27.7% against a UK figure of 58.1%.¹¹

FIGURE 7: MEDIAN DOWNLOAD SPEEDS (2018)



- 8 Defined as download and upload speeds in excess of 1Gb/s
- 9 Defined as download speeds in excess of 30Mb/s
- 10 Defined as download speeds in excess of 100Mb/s
- 11 All figures are taken from 'Thinkbroadband' data

Large pockets of the east have access to slower broadband speeds, mainly concentrated in the area between Woodhall Spa, Sleaford and Boston.
Larger towns have better connections - areas within Lincoln, Grimsby, Scunthorpe and Grantham have median speeds in excess of 100Mbit/s.

Midlands Engine has made digital connectivity a part of its ambition to make the West Midlands an Ultra-Connected Region, and 5G connectivity is a part of this. Midlands Engine notes that implementing 5G networks across the region will facilitate advancements in remote monitoring and servicing in the manufacturing and health sectors, plus the use of autonomous vehicles and improved mobile connectivity. At this point, none of the four network operators have advanced plans to deploy 5G into the area. However, recent moves to establish part of the West Midlands as a 5G multi-city test bed area will present opportunities for Greater Lincolnshire to capitalise on strong digital infrastructure in the region.

Rural mobile coverage has grown significantly to 90% coverage yet there are still too many people without access to this essential part of modern life. Access to 4G mobile coverage varies by location, with some coastal places, smaller towns and rural areas receiving sporadic coverage or none at all. These places include the Wolds, areas on the East coast and the coastal areas around Boston. On that basis, it is recognised that a stable 4G signal to these more remote areas will improve both mobile and broadband coverage.

AIRPORTS

Humberside Airport is to the west of Grimsby in North Lincolnshire and includes an Enterprise Zone with a business park. It provides passenger connections to destinations in the UK and Europe and also offers freight services for business. Two other airports service the broader region – the East Midlands Airport and Doncaster Sheffield Airport.

FLOOD DEFENCE AND WATER MANAGEMENT

Flooding is a problem for Greater Lincolnshire's priority sectors, and future climate change and flooding could impact the economic success of the region. Greater Lincolnshire's low laying land provides fertile soil where food producers have clustered. The entirety of the Grade 1 Agricultural land falls within Flood Zone 2 as defined by the environment agency, with around one third of Greater Lincolnshire's area falling within Flood Zone 2 or 3. The topography places 30,000 homes and 45% of its land mass at risk from flooding - much of this is in the coastal areas and along the LEP's western border. Seven different flood defence projects are listed in Greater Lincolnshire's Strategic Infrastructure Delivery Plan, with these projects ranging in location from North Lincolnshire to Boston, with a combined capital cost in excess of £160m.12

Greater Lincolnshire's LEP's strategy to water management is to develop an integrated approach which will maximise the services water provides, including drinking water, input for business, crop irrigation, tourism and recreation, and improved biodiversity. Its strongest economic performers - the agrifood, tourism, and manufacturing sectors - are highly dependent upon water, yet this is also one of Britain's driest areas. This approach recognises that water management priorities vary across places, with, for example, coastal areas focusing on flood mitigation while agricultural areas focus on the provision of clean water and land drainage. This strategy is set out within the Greater Lincolnshire Water Management Plan.

COMMITMENTS

> Greater Lincolnshire recently published the Greater Lincolnshire Strategic Infrastructure Delivery Plan, which sets out infrastructure projects for the area. Greater Lincolnshire will maintain a pipeline of strategic infrastructure projects,

- developing locally and with partners the necessary business cases and feasibility studies to remove pinch points and increase network capacity and resilience.
- > Greater Lincolnshire will work with Midlands Connect and others to build the business cases and prioritisation for regionally significant improvements in road, rail, and trade as part of an integrated Midlands transport strategy.
- > Greater Lincolnshire will work with Transport for the North where infrastructure improvements fall within Northern Lincolnshire and engage with the Northern Powerhouse on aspects of joint priority.
- > Greater Lincolnshire will work with service providers and other partners to find solutions to improve rural digital and mobile connectivity for businesses and residents, and champion the delivery of Full Fibre to the Premises.
- > Greater Lincolnshire will address strategic flood risk management issues and deliver effective water management linked to economic growth and climate change. This includes implementing the Water Management Plan, and supporting innovation, research and development around flooding.
- > Greater Lincolnshire will explore how to increase bus provision in rural areas, this will include looking at where there are blocks to innovation in public transport.
- > Greater Lincolnshire will explore and support transport decarbonisation in support of the government's target of reaching net zero greenhouse gas emissions by 2050.

BUSINESS ENVIRONMENT

Our ambition is to create a supportive business environment for entrepreneurs, micros and SMEs to grow and become more productive and resilient.

BUSINESS ENVIRONMENT



GREATER LINCOLNSHIRE IS THE 3RD HIGHEST

LEP AREA FOR EMPLOYMENT IN SMES

PRODUCTIVITY

PRODUCTIVITY IN THE THREE LARGEST SECTORS IS

BELOWTHE NATIONAL AVERAGE





IN THE REGION

1 IN 4

BUSINESSES DO NOT HAVE A WEBSITE

39,650
BUSINESSES





NEGATIVEBUSINESSES BIRTH RATE

MANUFACTURING ACCOUNTS FOR 20% OF GVA



SMEs make up the majority of businesses in Greater Lincolnshire in comparison to the national picture and that of other regions, with 64% of employment in microenterprises and SMEs. Among all LEP areas, this is the third highest proportion of employment in micro and SME-sized businesses. The business base consists of 39,650 VAT registered businesses – 88% of these are micro and this is complemented by a large number

of small businesses that are not VAT registered. In more rural places – such as in parts of West Lindsey micro businesses account for up to 98% of the business base.

This is a broad and diverse business base, however three sectors account for over half of GVA and employment share (manufacturing, retail and hospitality, public services). Manufacturing comes through in the evidence as a diverse, large sector, accounting

for 20% of GVA and 20% of jobs (double national averages for both). But all these sectors are less productive than the national average. Public Services and retail and hospitality are also less productive than the East Midlands average. Uptake of digital technology is low. The 2014 Business Survey showed 1 in 4 businesses do not have a website; 7 in 10 are not using a website for e-commerce.

PRIORITISING HIGH GROWTH POTENTIAL SCALE-UPS AND START-UPS

There are currently 358 VAT registered businesses per 10,000 population. This falls below the UK level of 404 VAT registered businesses per 10,000 people. The region sees positive business growth rates and fair business survival rates particularly in strategic opportunity areas, however, there was an overall negative net business birth rate (-1.17%) across the area in 2017 compared to positive growth at UK level (+1.9%). Lower than expected levels of new business start-ups potentially means less opportunity for scale-ups and frontier firms and to expand the business base more generally.

Greater Lincolnshire needs to develop a supportive environment for high growth scale-ups and start-ups. This includes access to finance, premises, equipment, and skills. Access to capital is an issue with Growth Hub grants helping SMEs invest in machinery to boost productivity. Tailored support is ongoing through the three Technology Hubs which provide an environment where businesses are given the opportunity to use stateof-the-art equipment, as well as having the option to take advantage of workshops and other advice. The hubs can help businesses to create a prototype product, develop a new service or provide a greater level of detail to help improve production lines. Alongside this, Mosaic Digital Hub is a community of innovative technology entrepreneurs, creative technology builders, designers, engineers and researchers as 'collaborative solution providers' to attract large corporate clients, investors, media and up-coming talent.

ENGAGING THE GLOBAL ECONOMY

With a good supply of affordable land there is an opportunity to increase investment coming into the region and maximise the local impact of existing investment. To encourage businesses into the area Greater Lincolnshire LEP provides a business toolkit which helps with

CASE STUDY

MADE SMARTER - DIGITISING THE MANUFACTURING INDUSTRY

Made Smarter is a national, government-backed initiative aiming to position the UK as the global leader in the creation, adoption and export of advanced digital technologies by 2030. The scheme's three-pronged approach targets business leadership; adoption of technologies; and innovation. Successfully adopting industrial digitisation is one way of creating new, high-value jobs throughout the country, helping to rebalance the UK economy. A 2017 Made Smarter review already highlighted Greater Lincolnshire's work on driving digitisation in the agri-food industry through its work on robotics at the University of Lincoln and at the National Centre for Food Manufacturing in Holbeach. The LEP continues to maintain a strong focus on robotics and automation, particularly in its strategic opportunity areas.

set-up and relocation plus initiatives and advice to fast-track growth.

Siemens, Northrup Gunman, and the University of Lincoln have all invested in new facilities in the area and, under current plans, there will be significant RAF investment in the Lincolnshire area. Meanwhile, nascent plans for a Freeport in Greater Lincolnshire could allow for an attractive proposition for inward investors.

Food processing is anticipated to have the largest trade and labour market impacts of any sector now that the UK has exited the EU, while the visitor economy is likely to see implications for the sector's workforce. Ensuring that businesses are supported to continue and expand as new arrangements become clear will be important. This means a focus on advice and support, particularly around trade and skills.

SITES AND PREMISES

The South Humber Bank is home to businesses in the energy, chemicals and process sectors, including the Humber's two oil refineries, as well as the Ports of Immingham and Grimsby and other jetties and terminals. The area has the largest quantity of land allocated for new employment use in the Humber Estuary region, much of it included in the Humber Enterprise Zones and is directly connected to the strategic road network. Enabling infrastructure for new development

is being provided through North East Lincolnshire Council's SHIIP programme, with other advanced manufacturing, logistics, marine and energy operations also being targeted. With an existing cluster of industry and power -generation, the transition to net zero carbon emissions presents the opportunity to develop a green industrial corridor along the South Bank.

The provision of suitable sites and premises for business is an important precondition of economic growth. Across Greater Lincolnshire there is a reasonable supply of land for business development and development opportunities for business premises. However, the property market is relatively weak and very few speculative business premises in the form of new office or industrial units are built without some form of public sector intervention. Therefore businesses are faced with a relatively limited choice of premises. Where the public sector has intervened and brought forward business premises, the occupancy levels are high.

A wide range of employment sites and new land allocations have been identified through local plans. Due to the size of Greater Lincolnshire, no comprehensive single assessment of demand and supply of employment land and premises has been undertaken. There are different markets operating in different parts of Greater Lincolnshire and different supply positions, in the city, coast and northern and southern countryside. Greater Lincolnshire has a distinct challenge around the high costs to develop employment sites and premises, with low land value, and significant costs to secure infrastructure and utilities.

COMMITMENTS

- > Greater Lincolnshire will develop programmes to support high growth start-ups and scale-ups alongside the 'Made Smarter' pilot that will drive industrial digitalisation across Greater Lincolnshire and beyond. This will use the area's Technology Hubs to link businesses with technology businesses. Greater Lincolnshire will also develop links with Be the Business to develop targeted programmes for micro and family owned businesses with potential to grow.
- > Greater Lincolnshire will continue and enhance Growth Hub activity focusing on business resilience, access to finance, digital, clean growth and productivity across all sectors. The programmes will include the Business Lincolnshire Supply Chain Support programme to help businesses become more competitive.
- > Greater Lincolnshire partners will develop a coordinated internationalisation offer, focused on maximising opportunity from the priority sectors and infrastructure assets, and working with regional and national partners such as Midlands Engine to showcase local investment opportunities. It will include an investor development programme (soft landing package) targeted at businesses in priority sectors.

CASE STUDY

ST GEORGE'S DEVELOPMENT

St George's has the potential to provide a significant number of units that could accommodate both small and growing businesses. The St George's Business Zone sites sit within the proposed garden community development at the former St George's Barracks site at North Luffenham. For nearly 80 years the St George's Barracks site played an important role in the nation's defence, first as a heavy bomber base during World War II and more recently as an army barracks. In November 2016 the Ministry of Defence (MOD) declared the 300-hectare site will be surplus to operational requirements by 2020 as part of its Defence Estate Optimisation Programme. Rutland County Council entered into a partnership with the MOD and has subsequently been progressing plans to redevelop the 300ha site to create a new garden community which will include employment and residential elements. It is proposed that around 14 hectares of the site will be developed for employment purposes and that this will comprise two business zones measuring 9.28ha and 4.78ha respectively.

PLACE

Our ambition is to capitalise on the dispersed economy to create a leading polycentric, productive economy.

GREATER LINCOLNSHIRE'S SPATIAL CORRIDORS



SOUTH HUMBER BANK

Strategic Opportunities:

- Energy and Water
- Ports and Logistics
- Advanced Manufacturing

Strategic Opportunities:

COASTAL LINCOLNSHIRE

Food Production

Visitor EconomyHealth and Care

Requirements for Growth:

- Skills Development
- · Labour Market Support

Requirements for Growth:

Access to Skills

• Flood Defence

· Better Infrastructure

RURAL HEARTLAND

- Visitor Economy
- Health and Care
- Access to Skills
- Infrastructure

AND RUTLAND

SOUTHERN LINCOLNSHIRE

Strategic Opportunities:

- Agrifood Defence
- · Visitor Economy

Requirements for Growth:

- Sustainable Housing
- Infrastructure · Freight Links
- Climate Mitigation
- Innovation Drivers

GREATER LINCOLN

- Defence
- Advanced Manufacturing
- Health and Care

Requirements for Growth:

- Innovation Drivers
- Sustainable Housing

Broadly described as the South Humber Bank, Coastal Lincolnshire, Greater Lincoln, the Rural Heartland, and Southern Lincolnshire and Rutland, Greater Lincolnshire has identified different spatial corridors, which link to the various priority sectors and also which have specific requirements to growth related to the foundations of productivity.

The variety of dynamic places in Greater Lincolnshire is outlined earlier in the document. Greater Lincolnshire possesses an attractive quality of place offering, with low population density, plenty of rural space and built up areas. Each spatial corridor has different opportunities and challenges which must be supported and nurtured. Larger urban areas provide diverse heritage, industry and living which can and should be supported through the LIS.

The identity of the Rural and Coastal areas in Greater Lincolnshire is strong, although the peripherality and sense of isolation from other parts of the UK in some of these areas – particularly East Lindsey – must be managed carefully. The importance of sectors such as the visitor economy is clear in some of these communities, which is why, despite being a low productivity sector, this is a priority for this LIS.

Accounting for approximately 5% of the land mass of England, the area extends from the south bank of the Humber in the north to Stamford in the south (a distance of 140 km by road with a two hour drive time). This scale makes it challenging to reach businesses and individuals when trying to roll out policy. Networks are more difficult to establish and often recruitment and access to training is a challenge. There is also a large inclusion challenge given the spatial inequalities within the area. This is prevalent not only in rural and coastal locations but also in some of the towns. Providing solutions to promote inclusion growth is vital in terms of human capital and increasing the prosperity of areas.

HIGH STREETS

High streets are a fundamental part of the identify of Greater Lincolnshire's dispersed network of market towns, as well as its larger urban centres. High streets will require specific support in order to thrive in an increasingly uncertain future for high street retail. The Grimsby Town Deal provides a leading example of the opportunities and interventions which can be taken and work is underway to develop Town Investment Plans as part of the Stronger Towns programme. The regeneration and diversification of Scunthorpe Town Centre's offer is in development supported by funding opportunities presented via the Local Growth Funds, the Future High Street Fund and the Town's Fund. Investment would see Scunthorpe becoming a diverse and engaging town and a centre for learning, living, leisure and business. The urban areas, in particular Lincoln and Grimsby, are driving innovative and creative industries in the local area and are showing potential for further growth, as is Grantham with its ongoing investment in the Southern Relief Road and strong transport links being on the A1 and East Coast Mainline.

NATURAL CAPITAL AND HERITAGE

Greater Lincolnshire is unique within the Midlands in that it is the only part of the Midlands Engine which has a coastline. There is significant natural capital, including the Lincolnshire Wolds AONB, and six National Trust attractions. Rutland Water is the largest manmade lake in England and one of the largest in Europe, sprawling across 3,000 acres of green space in the heart of the East Midlands.

There are fewer built up areas compared to most other regions of the UK. Greater Lincolnshire's natural capital will play a vital role in helping the area achieve net zero carbon emissions and increase resilience to the impacts of climate change.

The region's natural capital supports substantial employment in industries including agri-food, energy, and tourism. It is also a key

part of the area being attractive to live and work in, and supports the health of residents and workers with green space, fresh air and access to wild places offering great opportunities for exercise and recreation.

Given the expanse of green space in the region, there is potential to expand the AONB as environmental tourism is increasing in significance. The national nature reserves at Gibraltar Point and Donna Nook combining with the Wolds AONB draw a national and international audience. which benefits from growing local access and the inclusivity promoted by the development of accessible networks such as the English Coastal Path, the Coastal Observatory and the coastal country park. This also provides connectivity within the coastal area and promotes links through the Wolds AONB to the market towns of Louth, Horncastle, and Caistor, among others.

Greater Lincolnshire has a rich and diverse heritage of international. national and local significance, dating from evidence of man's earliest inhabitation of the areas 250,000 years ago through the Stone Age, Iron Age, Roman, Medieval, Georgian and Victorian Britain through to the 20th Century. The heritage is evident in historic towns, churches, monuments, airfields, windmills, canals, country houses, parks and ancient woodlands. The value of heritage and the Historic Environment 2019 captures the value, impacts and benefits of the historic environment.

HOUSING IN GREATER LINCOLNSHIRE

Greater Lincolnshire has a plentiful supply of land, making it a significant provider of new housing, delivering 12,510 houses between 2013-18. Median house prices remain some of the lowest in England. This reflects relatively low land values and wage levels rather than a lack of developer interest (which is substantial, especially for green field sites). Good housing design and appropriate planning will help to further reduce living costs for residents.

Housing delivery has been slower than expected, with developments constrained through viability and local infrastructure. There is strong evidence that without further action the housing delivery targets contained in Greater Lincolnshire's Local Plans will not be delivered. The objectively assessed need as reflected in current local plan figures total 4,805 dwellings per year or approximately 120,000 dwellings to 2036 (the end date of the majority of local plans). Support will be needed to overcome the existing undersupply, and to unlock housing sites that can be delivered by a wide range of suppliers including developers, investors, RSLs and the SME sector.

Flexibility is required to pilot new housing design, delivery and policy solutions which are specific to coastal towns. Under current national policy guidelines, planning authorities must consider a sequential approach to allocating new housing sites. In larger geographic areas, such as East Lindsey, there will always be an opportunity to locate new housing sites away from the rapid inundation zone on the coast. As a result, housing allocations are dispersed across the inland market towns, and few new houses are delivered in coastal towns, adding to the challenges they already face. With challenges come opportunities. To deliver more houses will require more people with construction skills, particularly the skills required to support Modern Methods of Construction (MMC). With access to training, opportunities will exist for Greater Lincolnshire's residents to help construct the houses the region needs.

CASE STUDY

GREATER GRIMSBY TOWN DEAL

Once the centre of the Humber fishing industry, today Greater Grimsby lies firmly at the heart of the Energy Estuary. It presents significant opportunities for economic growth and job creation alongside challenges arising from industrial change, including low productivity and wage levels and high levels of unemployment, particularly for 18-21 year olds. North East Lincolnshire lies in the bottom 10% of English local authorities for attainment at both KS2 and KS4.

Greater Grimsby is already home to high-growth, clean energy industries, notably offshore wind, with Orsted's East Coast Hub providing the largest operations and maintenance centre serving the southern North Sea. The Port of Grimsby and Immingham offer global sea freight connectivity for exporters. Local partners want to accelerate export-led growth in port-related logistics and manufacturing, chemicals/petrochemicals and food processing. The South Humber Industrial Investment Programme (SHIIP) is delivering a pipeline of investment -ready Enterprise Zone sites and premises to unlock these opportunities.

Improving Greater Grimsby's quality of place – and in particular the place offer of Grimsby Town Centre - is an essential part of the Council's strategy to attract and retain mobile businesses, people and investment through the Greater Grimsby Town Deal. The Deal brings together £67m of government and local investment to help create 8,800 new jobs and over 9,700 new homes by 2032.

The Greater Grimsby Town Deal will focus on four core themes: drive economic growth; accelerate housing delivery; transform Grimsby's waterfront; and improve skills and educational attainment. The Town Deal marks the beginning of a stronger relationship between central government and local partners to support the regeneration of Greater Grimsby.

CASE STUDY

LEADER PROGRAMME SUPPORTING GROWTH

The particular opportunities and challenges in terms facing businesses is exemplified through the LEADER programme. Greater Lincolnshire is split into five EU LEADER funding areas; Coastal Action Zone, Lindsey Action Zone, Wash Fens Local Action Group, Kestevens Local Action Group and Northern Lincolnshire Local Action Group which cover specific places, each with their own unique set of challenges and opportunities.

The Lindsey Action Zone predominantly covers the rural centre of Lincolnshire and has a buoyant business base and take up of funds, particularly around investing in innovative business practices and new technologies that help businesses become more productive and economically sustainable. The over-demand for funding in this area demonstrates the need for this type of funding and the ability of businesses to access it.

The Wash Fens area in the South of the county has also had high demand for the funding, particularly with the inclusion of the farming productivity investment priority that was included in the 2014-2020 programme. This enabled support to the strong agri-food/food production sector within this area and demonstrated how funding aligned to the right investment priorities at the outset had much better impact – processing agricultural products to add value, environmental investments, robotics/automated equipment.

The Kestevens area is a new LEADER area and, covering the rural parts of the westerly North and South Kesteven. Demand for this type of funding from businesses has been high.

The Coastal Action Zone has probably been the most challenging of areas where there are pockets of high rural deprivation and less appetite for business growth and expansion. This is reflected in the lower take-up of funds under the current LEADER programme and similarly under the previous programme.

COMMITMENTS

- > Greater Lincolnshire will develop hyper local responses to enhance the roles of town centres, market towns and high streets as economic, creative, and cultural hubs using the Towns Fund, Future High Street Fund and Local Growth Funds as catalysts. This will include development of a new creative hub through the Cultural Development Fund.
- > Greater Lincolnshire will develop local place-based responses to opportunities and challenges focused around the Spatial Corridors and level up across the dispersed economy, for example reducing inequalities in coastal areas working with the Coastal Communities Alliance.
- > Greater Lincolnshire will explore and work with partners around an extension to the Area of Outstanding Natural Beauty (AONB).
- > Greater Lincolnshire partners are working together with Homes England to deliver the housing pipeline to attract and support the working age population required by the region's businesses. This includes Housing Infrastructure Fund bids from Grantham and St George's Barracks.

IMPLEMENTATION

This strategy sets out Greater Lincolnshire's response to opportunities and challenges that need to be addressed to enable increased productivity and inclusive growth. This LIS does not include new spending commitments outside of existing budgets. Instead, it will inform the strategic use of local funding streams and, where relevant, spending and decisions at the national level.

LOCAL INDUSTRIAL STRATEGY



To demonstrate progress towards the long-term vision set out by this LIS, the strategy contains specific actions. The actions set out here will be implemented alongside existing plans and broader regional strategies, including the Strategic Infrastructure Delivery Plan.

This strategy does not represent all the priorities and action being developed in Greater Lincolnshire. This strategy sets out long term ambitions and will continue to evolve as the economy changes. Greater Lincolnshire will regularly review the latest evidence to continue designing the most effective approaches and interventions to achieve its objectives.

Successful implementation of this strategy will require the coordinated efforts of a wide range of partners, including local government, business, wider public services, universities, and community and voluntary organisations. The LIS is therefore a further route to strengthening the focus of the strong partnerships in place within the region.

Implementation of this plan will also depend on collaboration with partners beyond the regional boundaries. Greater Lincolnshire will engage with partners in neighbouring regions to ensure the success of this LIS.





Lancaster House | 36 Orchard Street Lincoln | LN1 1XX

T: 01522 550540 **E:** greaterlincslep@lincolnshire.gov.uk

WWW.GREATERLINCOLNSHIRELEP.CO.UK