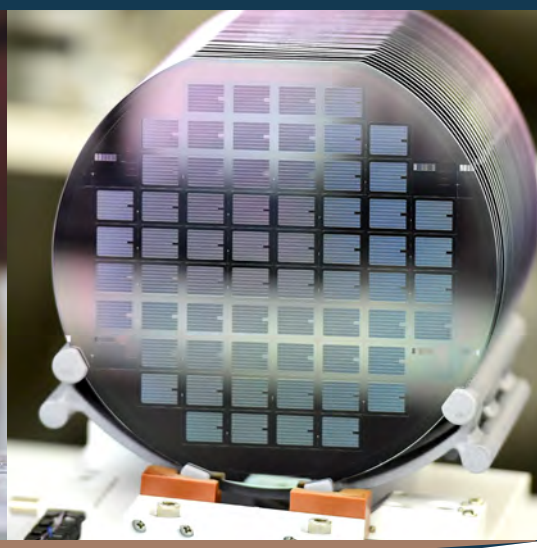
Lincolnshire UK

Advanced Engineering & Manufacturing Investment Opportunity



Lincolnshire COUNTY COUNCIL
Working for a better future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The Advanced Engineering & Manufacturing Investment Opportunity

Lincolnshire is one of the UK's outstanding manufacturing locations, offering high-value, integrated capabilities in advanced engineering and digital technologies.

The area is home to leading companies with specialisations including defence, agricultural, automotive and power systems technologies, as well as cutting-edge innovators in industrial robotics, automation and process industry systems. UK-leading Industry 4.0 expertise, in areas including AI, machine learning, human-machine interaction, Data Analytics and the Internet of Things, extends across multiple research centres and businesses, working in partnership to improve productivity, efficiency and sustainability.

Lincolnshire's technological strengths are complemented by a skilled advanced manufacturing workforce that is outstanding in the UK, supported by education providers working closely with businesses to deliver the skills they need. Additional benefits include available, cost-effective sites and properties, sites with large industrial power supplies, potential Freeport incentives, and the connectivity and logistics required for fast access to UK and global markets.

In the Industry 4.0/5.0 era, Lincolnshire can deliver competitive edge for investing companies in high-growth sectors, including defence and related technologies; agricultural engineering; industrial digitalisation, automation and robotics; and low-carbon, connected and autonomous vehicles. By locating in the area, they will be joining a prestigious community of businesses that includes BAE Systems, Raytheon, Siemens and Teledyne e2V.

UK growth opportunities in Industry 4.0 tech, defence and low-carbon transport

A diverse industry cluster integrating engineering and digital tech capabilities

UK-leading Industry 4.0 and 5.0 expertise in research centres and businesses

A skilled manufacturing workforce that is outstanding in the UK

Available, cost-effective, prime properties with large power supplies

Excellent connectivity and logistics, for fast access to UK and global markets

Dedicated support for your business investment project

UK Advanced Engineering & Manufacturing Market Opportunity

The UK is a global leader in Advanced Engineering and Manufacturing, presenting specific growth opportunities in areas including Industry 4.0 and 5.0 technologies and expertise, defence and low-carbon transport.

As a centre of excellence for both advanced engineering and digital technologies, the UK is at the forefront of the Industry 4.0 and 5.0 revolution, encompassing Artificial Intelligence (AI), machine learning, robotics and automation, Data Analytics and the Internet of Things. According to government data, 4,000 UK engineering companies (with 100+ employees) are likely to invest in robotics, and demand for Industry 4.0 technologies is estimated to be worth £8.9 billion per year.[1] For manufacturing companies innovating with digital technologies, funding is potentially available through national programmes including the Manufacturing Made Smarter challenge.

The UK's £22.8 billion[3] defence sector is a world leader in technology, innovation and advanced manufacturing. In April 2024, the government announced an additional £75 billion to be spent on defence over six years, bringing defence spending up to 2.5% of GDP by 2030. This presents growth opportunities for businesses in new technology areas including AI, digital tech, robotics and drones.[4]

Building on established, advanced automotive capabilities including electric vehicle manufacturing, the UK government has committed to 100% zero emissions on all new vehicles from 2035. The target is underpinned by multi-billion pound, government-supported research into key low carbon propulsion technologies including batteries, power electronics, motors and drives, in combination with related themes including Connected and Autonomous Vehicles (CAVs).

Source: (1) UK Government, DIT (2) madesmarter.uk (3) ADS Defence Outlook 2023 (4) gov.uk

Estimated UK Demand for Industry 4.0 Tech.

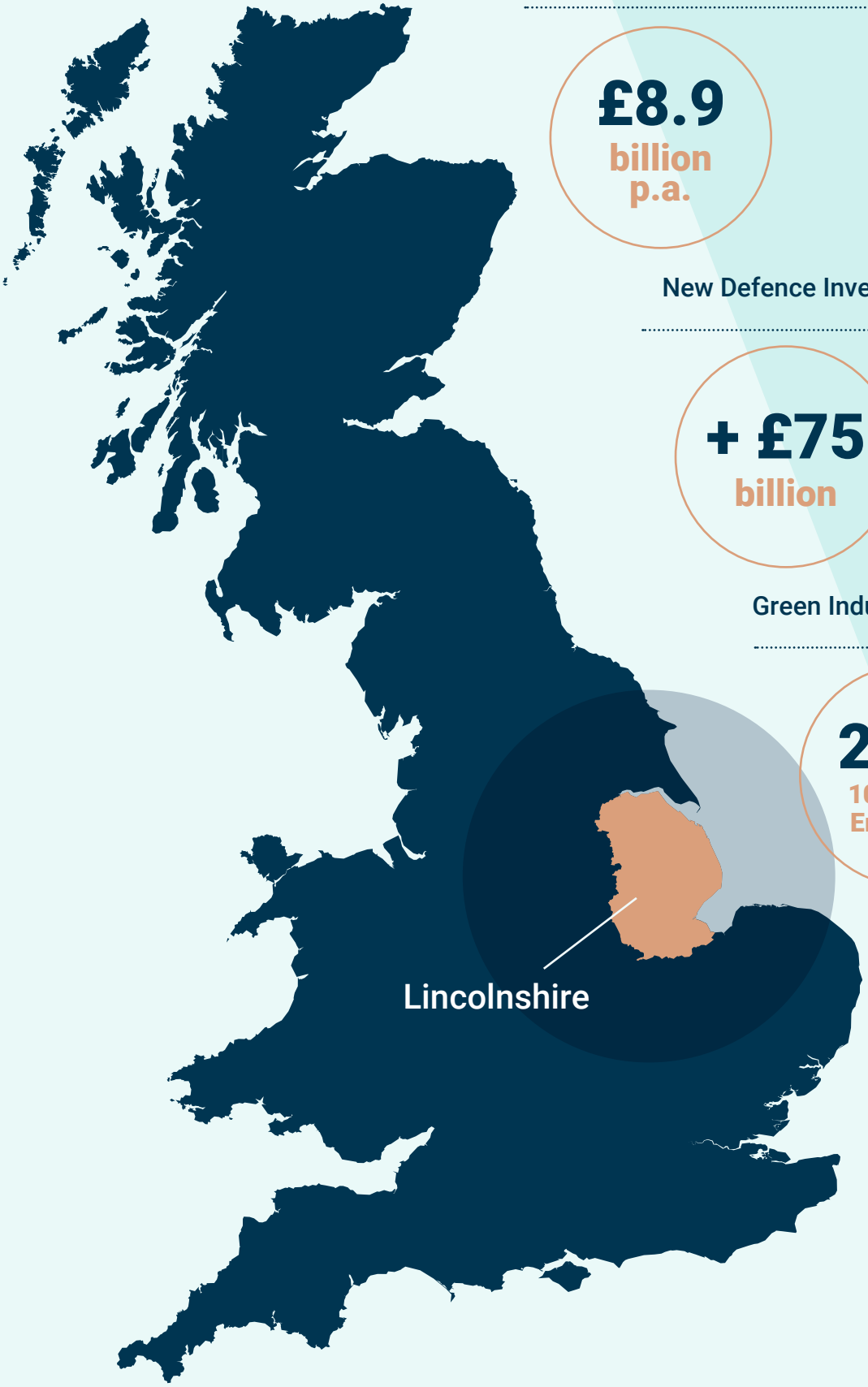
£8.9
billion p.a.

New Defence Investment to 2030

+ £75
billion

Green Industrial Revolution

2035
100% Zero Emissions



Data is for the United Kingdom. Northern Ireland is not shown on the map.

Outstanding Advanced Engineering & Manufacturing Industry Clusters

Lincolnshire is home to outstanding advanced manufacturing industry clusters in classifications including computing and electronics, and machinery and equipment.

These specialisations reflect the presence of leading companies in the defence, agricultural, automotive and power generation technology sectors, and the extensive application of industrial digitalisation technologies. The area is a UK manufacturing heartland, with industry concentrations above the national average across all areas. These established capabilities provide investing businesses with immediate access to technical expertise, and a wide range of engineering, manufacturing and digital potential supply chain partners.

Significant Manufacturing Industry Clusters in Lincolnshire (GB Average = 1.0)

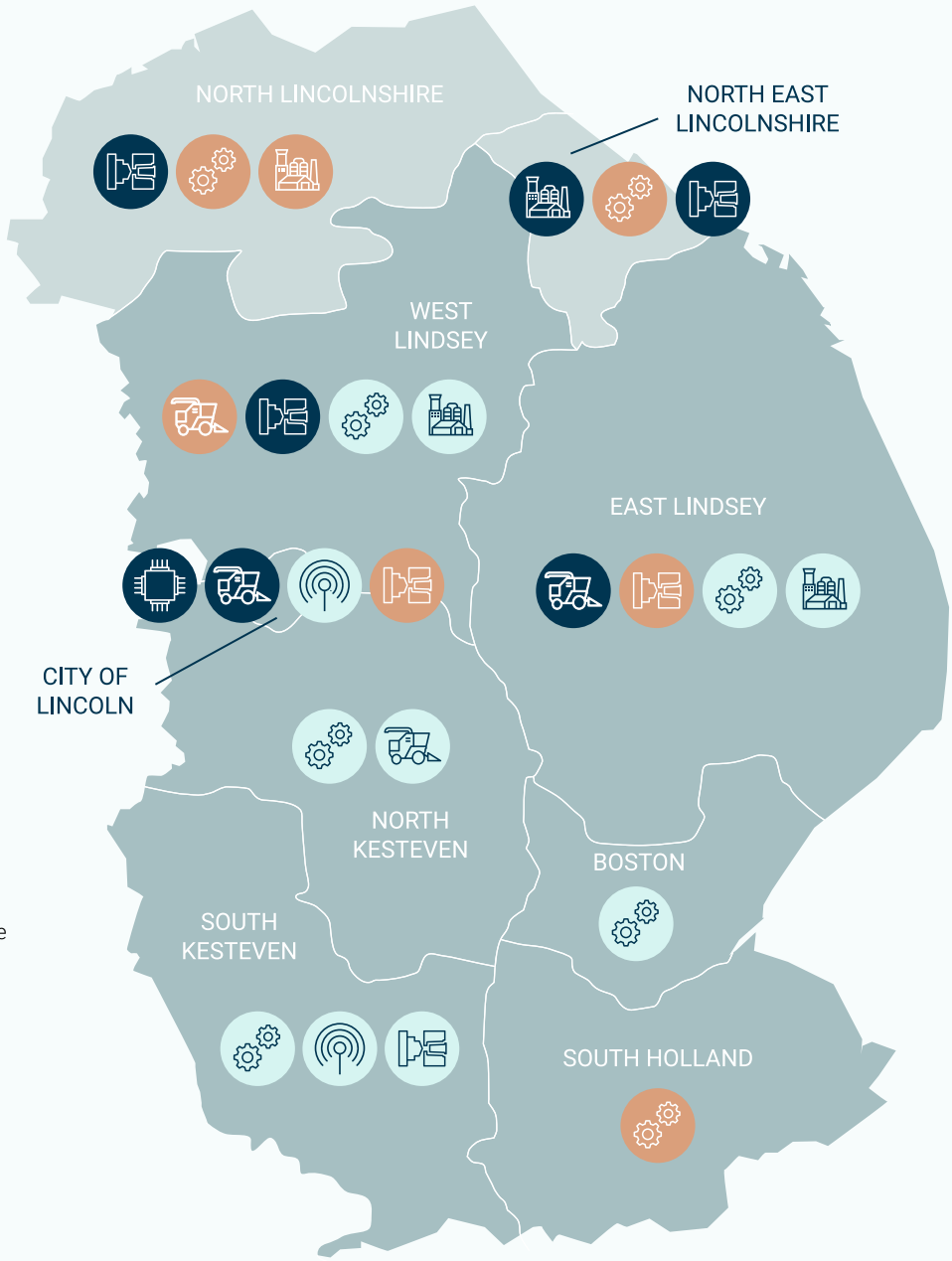
Area	Manufacturing (All)[1]	Computer, Electronics & Optics[2]	Electronics[3]	Machinery & Equipment[4]	Plastics[6]	Chemicals[7]
Lincolnshire	1.9			1.5	2.3	1.6
Boston	1.7			1.2		
East Lindsey	1.3			3.2[5]	2.3	2.0
Lincoln		2.0	10.3	4.6	2.6	
North East Lincs.	2.2				5.0	5.5
North Kesteven	1.9			2.1		
North Lincolnshire	3.4				5.4	2.0
South Holland	2.4					
South Kesteven	1.3	1.5				
West Lindsey	1.7			2.8	4.0	1.3

Location Quotients (LQs) are an established industry clustering metric, measuring the ratio of local industry sector workforce numbers to the GB average (represented by 1.0).

LQs (Industry Clustering)

- Very High
- High
- Above GB Avg.

Source: ONS BRES 2022. (1) SIC C (2) SIC26 (Computer, Electronic & Optical Products) (3) SIC261 (4) SIC28 (5) SIC30 (6) SIC22 (7) SIC 20



North Lincolnshire and North East Lincolnshire are unitary authorities. All other areas are districts of the county of Lincolnshire.

VERY HIGH INDUSTRY CONCENTRATIONS

HIGH INDUSTRY CONCENTRATIONS

ABOVE GB AVERAGE INDUSTRY CONCENTRATIONS

MANUFACTURING (ALL)

COMPUTER, ELECTRONICS & OPTICS

ELECTRONICS

MACHINERY & EQUIPMENT

PLASTICS

CHEMICALS

World-Class Advanced Engineering & Manufacturing Businesses

Lincolnshire's advanced engineering and manufacturing sector includes defence majors and supply chain businesses, machinery, automotive and power systems manufacturers, and pioneers in Industry 4.0 technologies.

The area's highly developed defence and aerospace cluster includes businesses engaged in R&D and manufacturing as well as engineering support to the Royal Air Force. Core competencies include advanced electronics, with research strengths in Industry 4.0 and 5.0 themes including autonomous systems.

The area's diverse agricultural engineering technologies cluster includes advanced machinery manufacturers and innovators in automation and robotics. UK-leading Industry 4.0 expertise, including AI, Big Data analytics and the Internet of Things, has been honed in food production and manufacturing, while being applied across sectors including warehousing and process industries. Automotive strengths includes drivetrain and lightweighting technologies.

In combination, these capabilities can provide value-adding expertise and supply chain partnerships for investing businesses in sectors including defence and related technologies, agricultural engineering, industrial automation and digitalisation, and low-carbon, connected and autonomous vehicles.

BAE Systems

Defence & aerospace systems

Teledyne e2V

Advanced electronics: defence, medical, science, aerospace

RFMW UK

Defence electronics – radio frequency & microwave technology

Raytheon

Airborne Intelligence, Surveillance & Reconnaissance

Collins Aerospace

Defence & aerospace systems

Dynex

Design & manufacture of high-power semiconductors

Siemens Industrial Turbomachinery Ltd

Industrial power generation systems

Autocraft

Automotive: EV Battery & Industry 4.0 technologies

Orderwise

Robotics & automation for the warehousing & manufacturing sectors

Saga Robotics

Robotics & automation for the agri-tech sector

GEA

Process industry robotics & automation technologies

myenergi

Energy control systems design & manufacturing

Garford

Robotic farm machinery

Grimme

Agricultural technology & machinery

Bright Lite Structures

Lightweight composites: aerospace & automotive sectors

SHD Composites

Advanced, high-performance composite materials

Advanced Engineering & Manufacturing Research & Technologies

Combining advanced engineering and digital expertise, the University of Lincoln delivers multi-disciplinary research and innovation in specialisations closely aligned with regional industry strengths and high-growth market opportunities.

The university has emerged as a leading UK hub for Industry 4.0 and 5.0 R&D. Dedicated research centres apply Artificial Intelligence (AI), machine learning, Big Data analytics, Robotics and Automation, and Internet of Things technologies to industry challenges including improving productivity, efficiency, agility and sustainability. Research into sustainable energy and power systems aligns with the core competencies of major local employers including Siemens, as well as the drive for low-carbon energy and propulsion technologies.

Through the Greater Lincolnshire Engineering and Manufacturing (GLEAM) Network, businesses can access the University of Lincoln's academic resources directly, and share best practice. As an example of close R&D partnerships with world-class companies, Lincoln is one of very few UK universities to hold Siemens Global Principal Partner status.

The university's R&D capabilities have the potential to deliver competitive edge for investing businesses in sectors including defence, agricultural engineering, process manufacturing, and low-carbon, connected vehicles.

Net Zero (Research Strength)

Delivering solutions to reduce carbon emissions, promote sustainable practices, and drive innovation

Industrial Digitalisation & System Intelligence Research Group (IDSI)

Industry-focused research areas include robotics, dynamics, systems and control, and artificial intelligence

Communications, Networks and Embedded Systems (Research Group)

Internet of Things and Wireless Sensor Networks research; Communication, Networks, and Embedded Systems technologies

Sustainable Energy & Power Research Group (PEG)

Low-carbon, smart and renewable power and energy research; sectors include automotive, aerospace, industrial & commercial

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Internet of Food Things Network Plus

Multi-disciplinary R&D into food supply chain digitalisation, using Artificial Intelligence, Data Analytics & emerging technologies

Lincoln Centre for Autonomous Systems (L-CAS)

An internationally renowned centre for cross-disciplinary research in robotics and autonomous systems

Lincoln Agri-Robotics

World's first Agricultural Robotics Global Centre of Excellence. (Integrates L-CAS & LIAT research)

Lincoln Institute for Agri-Food Technology (LIAT)

AI, Robotics, Engineering, Crop Science, Environmental Sustainability; for food manufacturing, product development & supply chains

Advanced Engineering & Manufacturing Workforce, Education & Skills

Lincolnshire provides access to a large, skilled and cost-competitive advanced manufacturing workforce that is outstanding in the UK.

Manufacturing: With 66,000 people working in the sector, Lincolnshire is one of the UK's manufacturing heartlands. As a percentage of all workers, the area's manufacturing labour force is 1.9 X the Great Britain average, and the largest in a comparison of leading UK advanced manufacturing regions.[1]

Local Area Specialisations: Lincolnshire's local areas all offer highly developed manufacturing labour forces, with 9 out of 10 being significantly larger than the Great Britain average (as % of total). Outstanding, localised advanced manufacturing workforce strengths include advanced electronics, machinery and equipment, and transport equipment manufacturing, supported by high workforce numbers in sectors including chemicals and plastics.[1]

Cost Advantages: Lincolnshire combines workforce availability and skills with significant labour costs savings: 10% lower than the Great Britain average.[2]

For businesses investing in Lincolnshire, the area's established, skilled manufacturing workforce enables recruitment, fast project delivery and productivity.

Sources: (1) ONS BRES 2022, SIC-C (2) ONS ASHE 2023, Gross Avg. Weekly Pay

Lincolnshire's educational institutions are focused on meeting the specialised skills requirements of the area's advanced engineering businesses.

Higher Education

The University of Lincoln is recognised for excellence in industry engagement with employers including Siemens, and has achieved the best possible 'Gold' award for high-quality teaching in the national Teaching Excellence Framework. In 2021, the university was named Modern University of the Year in The Times & Sunday Times Good University Guide.

UNIVERSITY OF LINCOLN

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Further/Higher Education Colleges and University Technical Colleges

Lincolnshire's colleges and University Technical Colleges (UTCs) work in partnership with businesses to deliver courses, qualifications and apprenticeships tailored to their skills needs, at all levels up to post-graduate. Subjects include Advanced Manufacturing Engineering, and Computer Automation, Internet of Things and Assistive Technology.

RISEHOLME College a part of Bishop Burton College

riseholme.ac.uk

Grantham College & University Centre

grantham.ac.uk

Lincoln College

lincolncollege.ac.uk

Engineering UTC Northern Lincolnshire

enlutc.co.uk

lincoln.ac.uk

boston.ac.uk

Advanced Engineering & Manufacturing Education and Skills

Lincolnshire's educational institutions are investing to deliver the skills needed by high-value businesses implementing new technologies.

Multi-million pound centres have recently been developed that combine state-of-the-art facilities, technology-focused education, and industry-led research and innovation.

lincoln.ac.uk

University of Lincoln: Schools of Engineering and Computer Science

The University of Lincoln delivers courses and qualifications including electrical, mechanical and integrated engineering, engineering management, mechatronics and computer science. A unique combination of advanced engineering and Industry 4.0 specialisations is reflected in courses including the MSc in Robotics and Autonomous Systems.

Boston College Engineering, Manufacturing & Technology Centre (EMAT)

EMAT is a £4.9 million, industry-driven training facility designed to stimulate growth and productivity across the engineering, manufacturing and agri-tech sectors. Engineering-related courses respond to employer needs and include Electronics, Renewables, Robotics, Machining, Computer Aided Design (CAD) and Computer Numerical Control (CNC).

boston.ac.uk

Lincolnshire Institute of Technology (IoT)

Led by the University of Lincoln with seven Higher and Further Education partners, the Institute of Technology supports technology sectors by delivering STEM (science, technology, engineering and mathematics) focused higher technical education. Through an investment of £15 million, the IoT will lead the transformation of Lincolnshire's skills base.

lincoln.ac.uk

Lincolnshire

Manufacturing Workforce[1]

66,000
Manufacturing Workers

X 1.9
vs. GB Average
(% of Total Workforce)

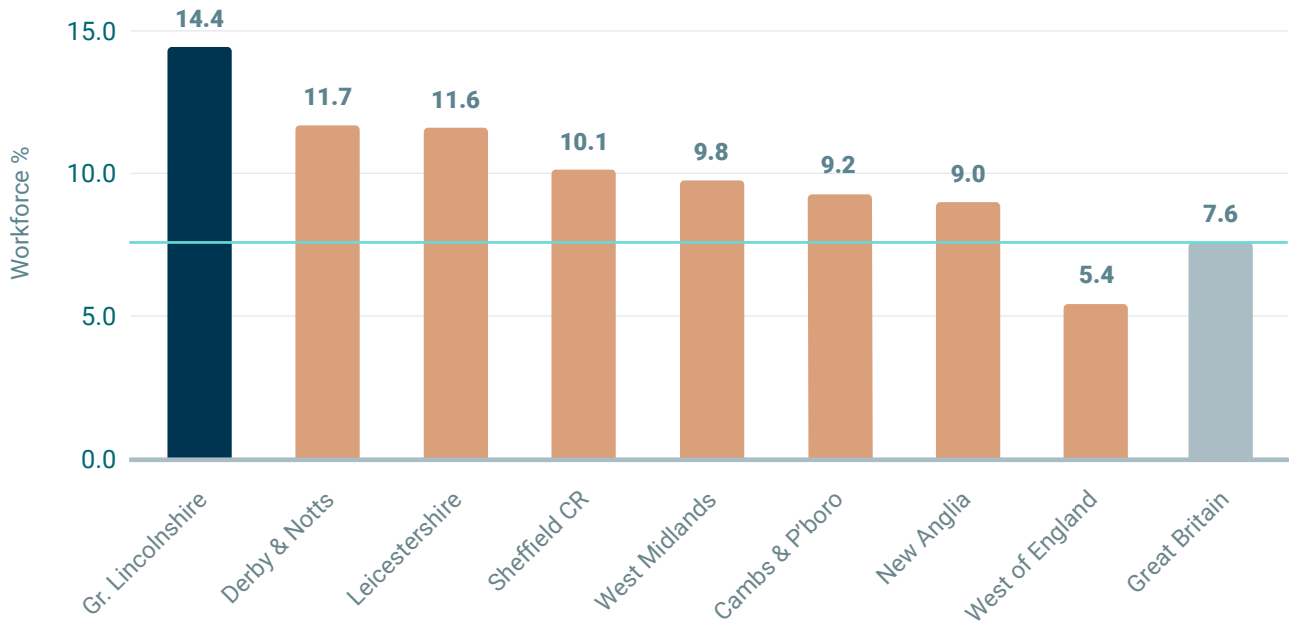
No.1
vs. Major GB Advanced Manufacturing Hubs
(% of Total Workforce)

Labour Costs (Average)[2]

- 10%
vs. GB Average

Manufacturing Workforce (% of Total): Regional Comparison[3]

Lincolnshire vs. Major UK Advanced Manufacturing Areas & Neighbouring Areas[1,3]



Sources: (1) ONS BRES 2022, SIC-C (2) ONS ASHE 2023, Gross Avg. Weekly Pay (3) Comparison of leading LEP/Combined Authority areas for advanced manufacturing / neighbouring areas (4) SIC261 (5) SIC28 (6) SIC30 (7) SIC29 (8) SIC20 (9) SIC22

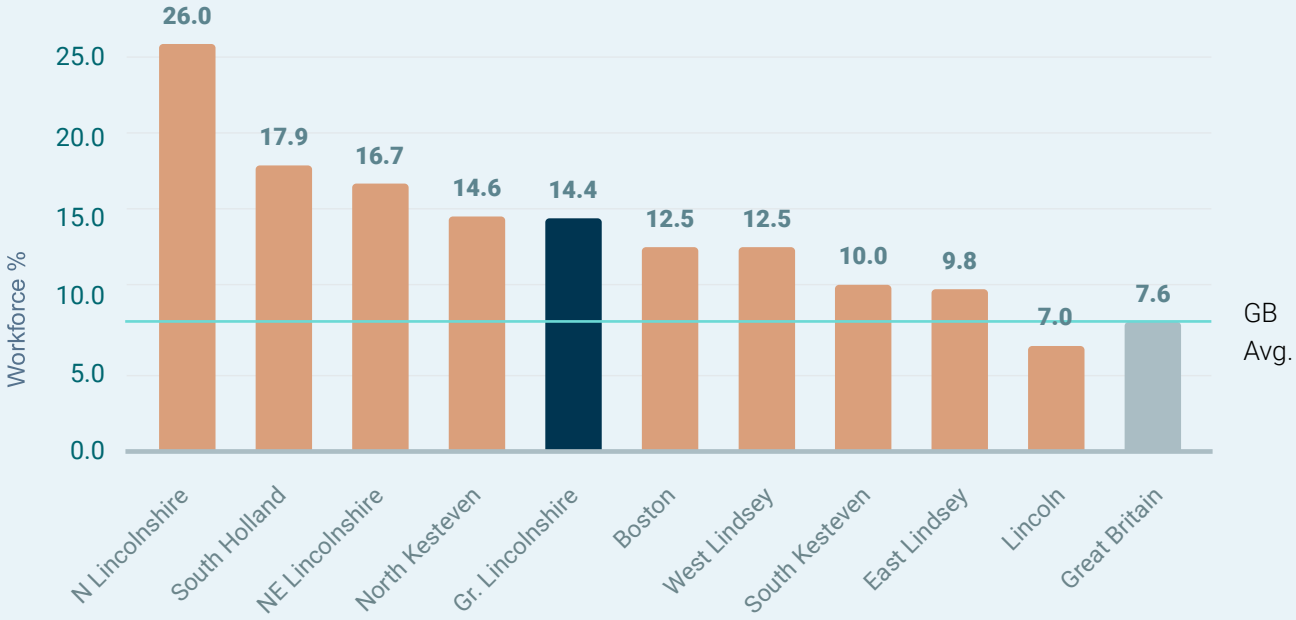
Lincolnshire Areas

Workforce in Key Advanced Manufacturing Sectors vs. Great Britain Average (% of Total Workforce)

Advanced Electronics[4]	Machinery & Equipment[5]			Transport Eqpt.[6]	Motor Vehicles & Trailers[7]			Chemicals[8]
X 7.0	X 4.3	X 2.7	X 2.0	X 3.2	X 1.7	X 2.7	X 2.0	X 5.0
Lincoln	Lincoln	West Lindsey	North Kesteven	East Lindsey	Boston	West Lindsey	South Kesteven	NE Lincs.

Manufacturing Workforce (% of Total): National Comparison[1]

Lincolnshire Districts vs. Great Britain Average[1,3]



Industrial Sites & Property Solutions

Lincolnshire offers a range of high-quality, industrial sites and property solutions for investing Advanced Engineering and Manufacturing businesses, including:

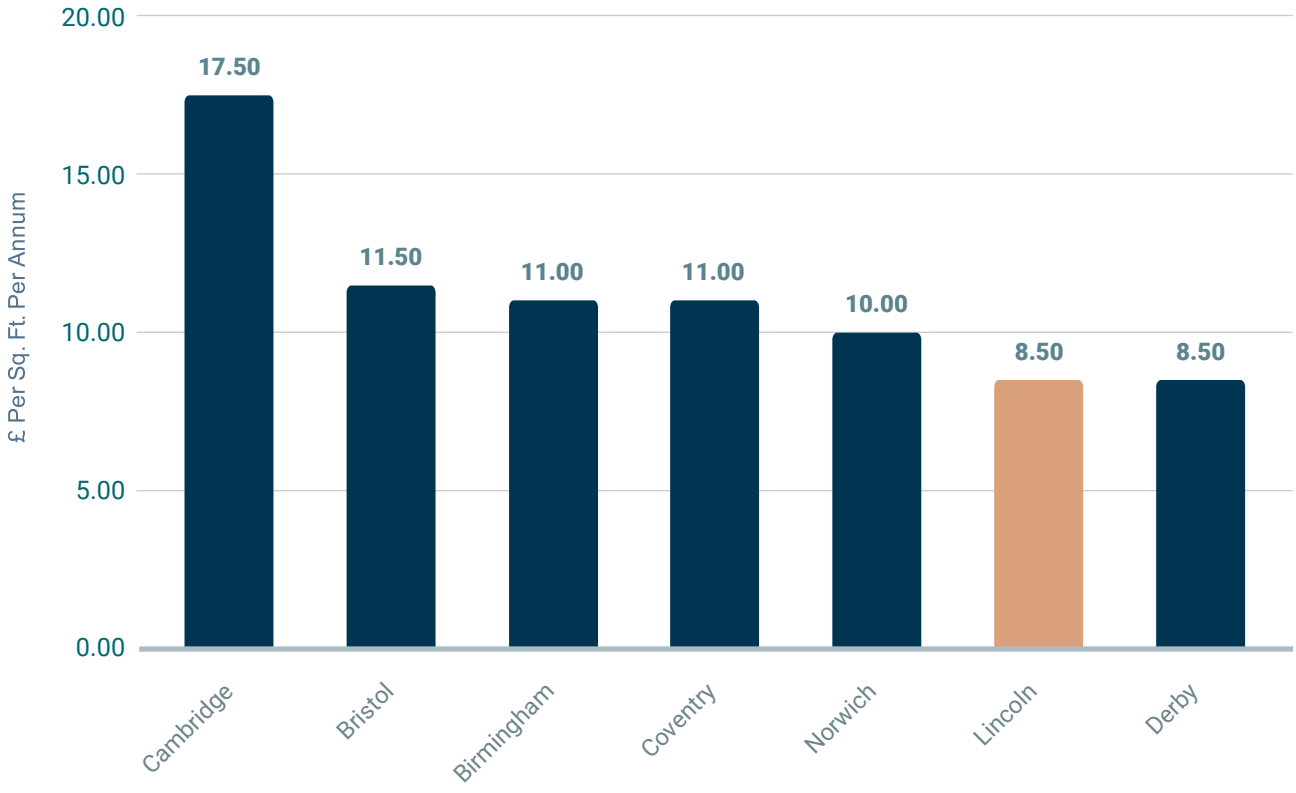
- Ready-to-go sites for built-to-suit prime properties
- Sites with Freeport tax incentives for eligible investing businesses
- Sites with large industrial power supplies
- Potential access to renewable energy sources, for sustainable supply chains
- Fast access to key UK manufacturing and logistics hubs, ports and airport

Property Cost Savings

- 23% vs. Birmingham
- 23% vs. Coventry
- 26% vs. Bristol
- 51% vs. Cambridge

Industrial Property Rents: £ Per Sq. Ft. Per Annum

Comparison of Key UK Advanced Manufacturing Locations[1]



Source: (1) Carter Jonas & regional property agents, Q3 2023-Q1 2024

Fast UK & Global Market Access

Lincolnshire provides Advanced Engineering and Manufacturing businesses with fast, multimodal access to UK and international markets.

The ports of Immingham and Grimsby are the UK's largest by tonnage. Capabilities include:

- **Deep water facilities**
- **Large-vessel handling**
- **Multiple cargo types**
- **Global sea freight services**
- **Rail freight connectivity**

By Road

Lincolnshire's central Great Britain location (north-south) means that key Midlands advanced manufacturing centres, including Derby, Coventry and Birmingham, are accessible within 2 hours' HGV drive time.[1]

More than 75% of the UK's population and all of England's major advanced manufacturing centres can be reached within 4 hours' HGV drive time – less than one driver shift.[1]

By Sea

The South Humber ports (Immingham and Grimsby) are the UK's largest by tonnage,[2] providing frequent services to European ports and deep-sea feeder operations for global market access. Multiple cargo types are handled including Lo-Lo, Ro-Ro, general, project and bulk. Facilities include extensive warehousing and vehicle storage.[3]

The Port of Boston serves UK and European destinations for cargo types including container, general, and bulk, and offers extensive port-side warehousing.[8]

The Port of Felixstowe, the UK's busiest container port, is accessible in less than 3½ hours' HGV drive time.[1]

By Air

Airports accessible within 2 hours' drive time[4] include East Midlands (EMA), the UK's no.2 air cargo hub[5], Birmingham and Leeds Bradford (LBA).

Within Lincolnshire, Humberside Airport (HUY) offers frequent 'hub-feeder' services to Amsterdam Schiphol (AMS) and onward connections to hundreds of global destinations with KLM and SkyTeam partners.[6]

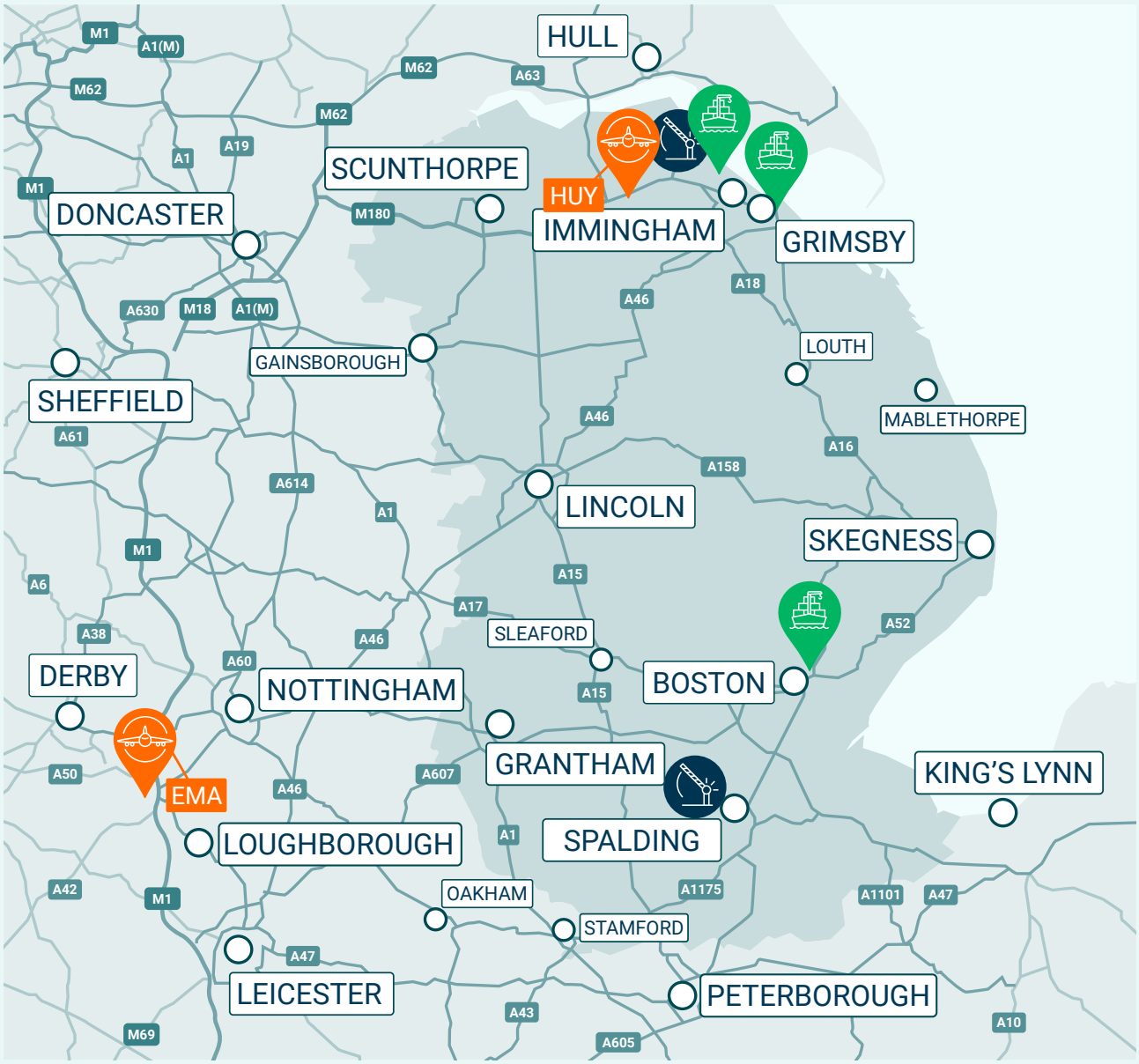
By Rail

The Lincolnshire ports of Immingham, Grimsby and Boston are all freight rail connected, with W12-gauge access ('high cube' containers) at Immingham and Grimsby. For business travellers, the area also offers fast connectivity to UK destinations including London, which is accessible from Lincoln in less than 2 hours.[7]

Rail system upgrades are currently in progress to further improve passenger and freight capacity and service speeds.

Sources: (1) Google Maps, drive times from Lincoln adjusted for max. HGV speeds (2) ABP, Immingham (3) ABP (4) Google Maps, car drive times from Lincoln (5) CAA (6) Humberside Airport (7) thetrainline.com, 2021 (8) victoriagroup.co.uk

Lincolnshire's Location & Connectivity



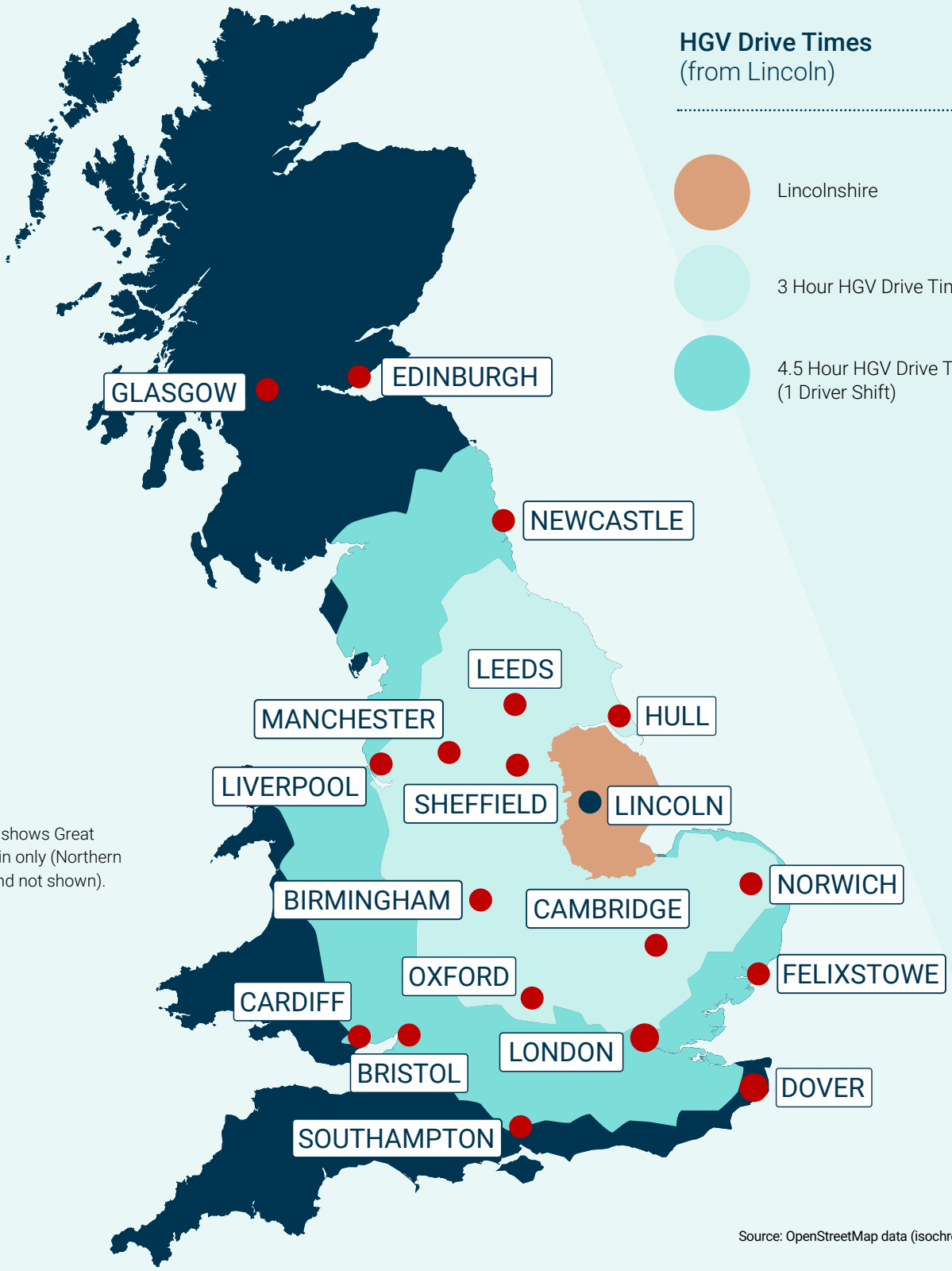
Lincolnshire

Ports

Airports

Border Control Post

UK Market Access



Map shows Great Britain only (Northern Ireland not shown).

Source: OpenStreetMap data (isochrones)

Support for Your Advanced Engineering & Manufacturing Business Investment

Contact us to find out how we can support your business relocation or expansion project.

Support for Investors from the Lincolnshire Partnership

Working together, Invest Lincolnshire and our partner organisations, including local authorities, education providers and businesses, provide dedicated support to ensure a 'soft landing' for companies investing in Lincolnshire.

Our services to business include:

- Support in finding the right site or property
- Planning application support and guidance
- Location, economic and market intelligence
- Access to workforce recruitment, education and training solutions
- Access to sector specialists
- Access to sector-specific support programmes
- Access to local supply chains and business networks
- Access to funding for business investment

Contact Us

The Inward Investment Team
e: investment@lincolnshire.gov.uk

Address:

Invest Lincolnshire
Lincolnshire County Council
Lancaster House
36 Orchard Street
Lincoln, LN1 1XX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Lincolnshire COUNTY COUNCIL
Working for a better future

TEAM LINCOLNSHIRE

North Lincolnshire Council

NORTH EAST LINCOLNSHIRE COUNCIL

SOUTH HOLLAND DISTRICT COUNCIL

BOSTON BOROUGH COUNCIL

East Lindsey DISTRICT COUNCIL

West Lindsey DISTRICT COUNCIL

served by One Team

CITY OF Lincoln COUNCIL

North Kesteven DISTRICT COUNCIL

SOUTH KESTEVEN DISTRICT COUNCIL


Credit: Viking Signs