



**UK
FOOD
VALLEY**

Greater Lincolnshire

THE SEAFOOD PROCESSING & AQUACULTURE INVESTMENT OPPORTUNITY

2024



www.ukfoodvalley.co.uk



**North
Lincolnshire
Council**

Lincolnshire
COUNTY COUNCIL

The Seafood Processing & Aquaculture Market Opportunity

The UK and international seafood markets offer significant growth potential for aquaculture and processing businesses. Key drivers include an expanding global population, strong demand for more sustainable, healthy and nutritious proteins, and changes to living and working patterns in the post-Covid-19 era.

Globally, total fish consumption grew by 85% between 1992 and 2022. With the world's population projected to increase by more than 1 billion by 2050, demand will continue to grow, according to UN FAO¹.

Today's seafood consumers are typically more health conscious, and more aware of the environmental impacts of their purchases. They are also busy, as reflected in strong demand for frozen and more convenient, value-added products².

Lifestyle changes, accelerated by Covid-19, with more home working, online shopping and home deliveries underpinned growth in convenience seafood product sales.

In June 2022, the government published the long-awaited Food Strategy³. This supports the UK Food Valley aims and acknowledged that Grimsby is England's leading fish processing hub. It also recognises that the UK's resilient food supply is reliant on a competitive and productive domestic sector to include increased output in sectors with sustainable growth opportunity. It states that the Grimsby Cluster, working closely with government, will play an important role in ensuring the sector can take advantage of new trade deals, adapt to climate change, and increase uptake of skills training.

In the context of robust UK demand, government, industry and stakeholders are working in partnership to deliver the industry's Seafood 2040 strategy⁴, which includes the target to increase portions per person per week from 1.15 currently to 2.0 by 2040.

Satisfying increased demand sustainably and productively presents opportunities for innovation and investment in both seafood processing and aquaculture – activities which Greater Lincolnshire's seafood and wider agrifood clusters are uniquely positioned to support.

Greater Lincolnshire presents a unique location opportunity for innovative seafood businesses pursuing growth in the UK market.

THE SEAFOOD MARKET GROWTH OPPORTUNITY

+122%

**Global Fish Consumption
1990-2018**

+8.7%

**UK Seafood Weekly
Volume Sales 2019-20**

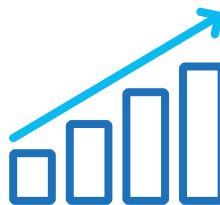
96%

**UK Market Total
Seafood Penetration**

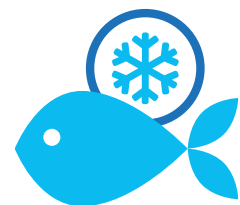
Seafood can deliver on major consumer and policy issues including:



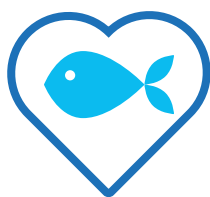
**More home working
and nights in can drive
demand for convenience
seafood products**



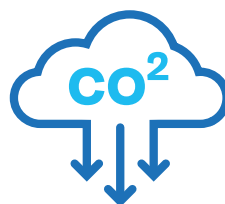
**Seafood sales in
hospitality grew more
than other types of
food in 2023⁵**



**Frozen seafood is
growing driven by
fish-fingers and
battered seafood**



**Seafood is popular
with health-conscious
consumers eating
more fish**



**Seafood is a lower carbon
protein source**



**Global market for
seafood expected to
grow by 10% from 2022-
23, a demand for an extra
19million tonnes per year⁶**

The UK Food Valley:

The UK Food Valley has the scale to support food chain investment and aims to be a Global Top 10 Food Cluster

Agriculture, Food Processing, Wholesale Logistics & Input Suppliers support 75,000 jobs, GVA of £4.0bn

UK Food Valley has scale, depth & breadth in the food chain, with nationally leading specialisms in:

- Seafood
- Fresh produce
- Poultry & meat processing
- Plant proteins
- Logistics
- AgriFood Technology

Agriculture in the UK Food Valley:

- 4,300 farms on 580,000 hectares
- 30% England's vegetables
- 20% England's sugar beet
- 16% England's poultry
- 15% England's oilseed rape
- 13% England's potatoes
- 12% England's wheat & protein crops
- ~ £2.5billion output

**Sales over
£10.7billion
per annum**

**>90 international
agrifood
companies**

**30% UK food
travels via South
Lincolnshire**

Investment:

- £1/2 billion per year in major projects
- £1/2 billion per year in upgrades
- Over 130 £1m+ investments since 2016
- Over 30 investments >£10m
- Over 10 investments >£50m
- Investments in fresh produce, greenhouses, food processing & supply chain

Grimsby and the Humber Seafood Processing Cluster⁷

The UK Food Valley is the home of the largest fish processing cluster in the UK and Europe. Focused on Grimsby and the Humber estuary, the cluster is Europe's largest - a unique, diverse and highly developed industry ecosystem.

The numbers speak for themselves. 50 approved seafood processing units employ 6,000 specialist workers to process 70% of the UK's seafood. Around 30 species are processed, sourced from 40 different countries, whilst more than 100 independent mobile fishmongers deliver fresh fish to UK customers.

Supporting the processing cluster is a robust and heavily invested supply-chain. World class global, UK and regional investment from all over the world supports the competitiveness of the cluster. Investment of skills and capital in transportation, shipping, cold-storage, engineering, laboratory testing and packaging, ensures that the 6,000 people who make seafood products in Grimsby deliver memorable products for customers and consumers across the country.

Within the cluster, a critical mass of businesses and supporting organisations ensures a comprehensive range of capabilities. Key areas of expertise include value-added

product innovation, processing and packaging technologies, laboratory testing, cold storage and transportation, and waste reducing circular economy processes.

Partnering with industry for research across the entire food chain, the University of Lincoln is a UK leader in applying industry 4.0 technologies to food sector challenges - helping businesses in the cluster to enhance productivity and sustainability, and gain competitive edge.

The presence of major companies including Youngs (part of Sofina Foods) and Hilton Food Group ensures an unrivalled array of skills, ranging from fish filleting to seafood buying, sustainability, senior management, and the marketing excellence required to influence consumers and drive sales.

The cluster's skills base is continuously replenished by regional educational institutions including the Lincolnshire Institute of Technology and the National

Centre for Food Manufacturing (NCFM) - the UK's largest food sector skills provider – delivering the industry's next generation of technologists, engineers and skilled workers.

All of which explains why the cluster has, in recent years, become a magnet for inward investment, with global seafood businesses from Europe, the USA, Canada, Japan and beyond establishing operations or taking stakes in its success, and building high-value global market linkages.

The cluster's established know-how ensures a 'soft landing' for new investors, enabling them to reduce project costs and risks, and maximise value over the long term.

The cluster is uniquely positioned to support companies investing in state-of-the-art, low-carbon, digitalised processing facilities; innovative, value-added products; circular economy processes; or aquaculture, with the potential for vertical integration with local processing.

Greater Lincolnshire's seafood processing cluster is uniquely positioned to support businesses seeking growth in UK and international markets.



SEAFOOD PROCESSING INVESTMENT OPPORTUNITY

OPPORTUNITY Food Industry 4.0

The University of Lincoln's excellence in AI, Big Data, Robotics & Automation, and Internet of Things can enable business to adopt digitalisation, boosting productivity and sustainability.

OPPORTUNITY Carbon Reduction

The cluster's location on the Humber 'Energy Estuary' create opportunities to access renewable energy, including from offshore wind farms, to achieve business decarbonisation goals.

CAPABILITY Advanced Technologies

Businesses within the cluster, including DS Smith and Ultimate Group, enable competitive edge through process automation and innovative, sustainable packaging.

CAPABILITY Knowledge

Organisations in the cluster specialising in food research, safety, laboratory testing, industry regulation and representation, including Eurofins, Seafish⁸, Grimsby and Humber Seafood Alliance, Made Great in Grimsby⁹ and the University of Lincoln.

CAPABILITY Freight Connectivity

Adjacency to the UK's largest port by tonnage and the tax incentives of the Humber Freeport provides global sea freight connectivity and extensive expertise in fresh and frozen food logistics.

OPPORTUNITY Value from Waste

The cluster's large-scale output of seafood coproducts can support circular economy investments targeting 100% fish utilisation, a theme being actively pursued by the cluster with international partners.

OPPORTUNITY Vertical Integration

At present 90% of the fish processed by the cluster is imported, presenting opportunities for investment in local aquaculture and its vertical integration with processing operations.

CAPABILITY Education & Skills

Institutions including the University of Lincoln, NCFM and Grimsby Institute partner with industry to deliver education and training from apprenticeships to degrees and PhDs.

CAPABILITY Cold Chain

Grimsby's 230,000 tonnes of cold storage capacity includes one of Europe's largest facilities, operated by Lineage Logistics and major expansion by other companies including Constellation Cold Logistics.

INVESTABILITY Track Record

Leading UK and global businesses including Morrisons (UK), Hilton Seafoods (UK), Sealaska (USA), Sofina (Canada) and Nissui (Japan), have invested in the cluster.

Greater Lincolnshire: The Aquaculture Investment Opportunity

Today, only 62% of the world's wild fish stocks are within biologically sustainable levels¹⁰ – down from 90% in 1990. This partly explains the rapid growth of the global aquaculture industry, worth \$313bn in 2022, and already meeting more than 50% of worldwide seafood demand.

In 2022 51% of all aquatic animal production was farmed, or 94.4million tonnes. However, because some wild catch is used to feed farmed fish or for other uses (e.g fish oil), 57% of direct human consumption of fish is now from species farmed in aquaculture systems.

The UK's Seafood 2040 strategy specifies a range of innovations and initiatives to deliver a major expansion of the aquaculture sector by 2040. These themes were developed further in the English Aquaculture Strategy 2020¹¹, which targeted a 10 fold increase in production to 90,000tonnes per year by 2040, by when the aim was for domestic aquaculture to meet 15% of English seafood demand.

The strategy includes aims to develop new production systems, feeds and products, and support for low-trophic species and Integrated Multitrophic Aquaculture to boost productivity and sustainability. The strategy also addresses investor priorities including streamlining regulations and planning controls.

Greater Lincolnshire presents a unique combination of location benefits for aquaculture businesses investing in the UK. Greater Lincolnshire has 580,000 hectares of farmland, with many farmers keen to diversify or partner with investors, meaning the area offers space and available sites for on-land aquaculture developments.

With the world's largest offshore wind farms located off the coast and sustainable energy generation facilities on the Humber 'Energy Estuary', the potential also exists for direct access to reliable, cost-effective, low carbon energy sources.

Greater Lincolnshire has a long coastline with clean seas suitable for multiple species of aquaculture, but most development is expected to on land, using Recirculating Aquaculture Systems (RAS). These online RAS developments can access local water supplies which are under much less pressure than other areas of south and eastern England. This means investors have access to multiple sites for marine or on land aquaculture production.

The area's agrifood industry benefits from the University of Lincoln's expertise in core food sector competencies, including safety and microbiology, with leadership in Food Industry 4.0 technologies - encompassing digitalisation, Big Data analytics and Artificial Intelligence. This means that investing businesses can access the knowledge required to address the key challenges facing Recirculating Aquaculture Systems (RAS): fish health and welfare, and the optimisation of systems for energy, water and feed efficiency, productivity, sustainability, and product quality.

With the UK's outstanding seafood processing cluster located in the area, aquaculture businesses can access the skills, supply chain partnerships and specialised expertise required for success to access UK markets for seafood.

Together, these regional assets and advantages make Greater Lincolnshire the location of choice for investors entering the UK aquaculture market.

AQUACULTURE OPPORTUNITIES IN GREATER LINCOLNSHIRE

Key locational advantages of Greater Lincolnshire include:



90%

10x

57%

The largest seafood processing cluster in Europe, with established routes to UK and international markets

of Seafood processed in the Grimsby cluster is imported, creating a substantial opportunity for import substitution

2040 target for expansion of English Aquaculture

of global human consumption of seafood now met by aquaculture in a market worth \$313bn in 2022

GREATER LINCOLNSHIRE:

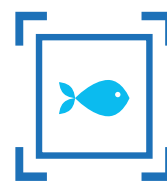
The Aquaculture Investment Opportunity



Potential Access to Renewable Energy Sources



Leadership in Food Industry 4.0 Technologies



Available Space for On-Land Aquaculture

Land & Property Solutions

Greater Lincolnshire offers a wide range of land and property solutions for seafood processing and aquaculture businesses and investors, including:

- Europark Food Enterprise Zone (FEZ, Grimsby): a dedicated, consented food industry site offering bespoke property solutions and co-location with food processors, cold chain logistics providers, and industry organisations including Seafish and the Seafood Institute
- Grimsby Seafood Village: food-safe seafood processing units, including office and storage facilities, at the heart of the Grimsby seafood cluster
- Humber Freeport: offering potential tax and customs incentives for investing businesses
- Extensive agricultural land across the area with sites with access to water and sustainable energy supplies for potential for aquaculture uses
- An unrivalled skills and innovation cluster for seafood

Low Carbon and Renewable Energy

Greater Lincolnshire recognises that as an energy intensity sector, for production, storage and distribution, it is essential to help the seafood sector embrace energy efficiency and to source its energy needs sustainably. It is therefore linking the development of the seafood sector to investments in low carbon and renewable energy.

Greater Lincolnshire is at the heart of the growth in renewable and sustainable energy generation in the UK with the South Humber Bank, offshore and Lincolnshire wide opportunity¹².

The Humber Freeport¹³, with Grimsby at its heart, is supporting the growth of the offshore renewable energy sector, as well as providing investment incentives for businesses in the seafood industry. The Freeport is also planning to support innovation targeting local priority sectors, including renewable energy, food production and logistics.

With the world's largest offshore wind farms located off the coast in the North Sea, the potential exists for energy-intensive businesses, including aquaculture, fish processing and supply chain companies, to access reliable sources of cost-effective, low carbon power across Greater Lincolnshire. The growth of the energy cluster is projected to attract £60billion of investment by 2040.

Greater Lincolnshire also has a large number of energy sources to support aquaculture heating and cooling needs, including:

- A cluster of large Anaerobic Digestion (AD) plants
- Industrial sites, data centres and energy park developments with 'waste' heat available

Greater Lincolnshire is also seeing the development of businesses using inset farming to meet the demand for low carbon fish feeds.

Industry Led Innovation

The UK Food Valley has innovation as its central focus, helping the food chain to adapt and evolve to meet changes in market conditions. Working with the University of Lincoln, the UK Food Valley area is the largest recipient of Innovate UK applied research funding for the food chain. There are many ongoing business-academia R&D collaborations, and substantial international research collaborations feeding state of the art knowledge into the region to support the agri-food sector.

The UK Food Valley is focused on three cross cutting innovation themes, all of which align with efficient fresh produce supply and their supply chains. The three themes are:

Accelerating food chain automation and digital technology adoption to deliver productivity growth and high value jobs;

Delivering low carbon food chains from farm to fork by focusing on low carbon technologies for production, processing and distribution;

Developing the market potential of naturally healthy and nutritious foods, such as fish, vegetables, salads, fruit, pulses and lean meat, in which Greater Lincolnshire specialises.

In the last five years the University of Lincoln's National Centre for Food Manufacturing has expanded its work in Grimsby and the seafood cluster, with a team now based in Grimsby to work with the Seafood Grimsby and Humber Alliance. Key projects have included:

- A major project with Toyota to trial EV Fish Vans¹⁴, to develop a plan to decarbonise the delivery of fish across the country by the 100 mobile fish sales businesses based in and around Grimsby
- A Community Renewal Fund (CRF) project focused on supporting seafood businesses with small grants, training and access to innovation and business support to increase productivity and reduced their carbon footprints
- New short courses on seafood and the development of seafood options in degree programmes. In addition a £330k project was launched in 2023 to support future leaders in the industry¹⁵.
- Multiple businesses in the cluster accessing the UK Seafood fund, with project wins of many millions in total.

The approach to innovation in the seafood cluster is to:

Work with industry to identify problems

Assemble inter-disciplinary teams to tackle these problems




Co-create solutions through collaborative projects which accelerate development and adoption by industry.

The innovation team is led by experts with decades of direct industry experience so the solutions developed can be deployed by industry quickly and efficiently.

Greater Lincolnshire's Location & Connectivity

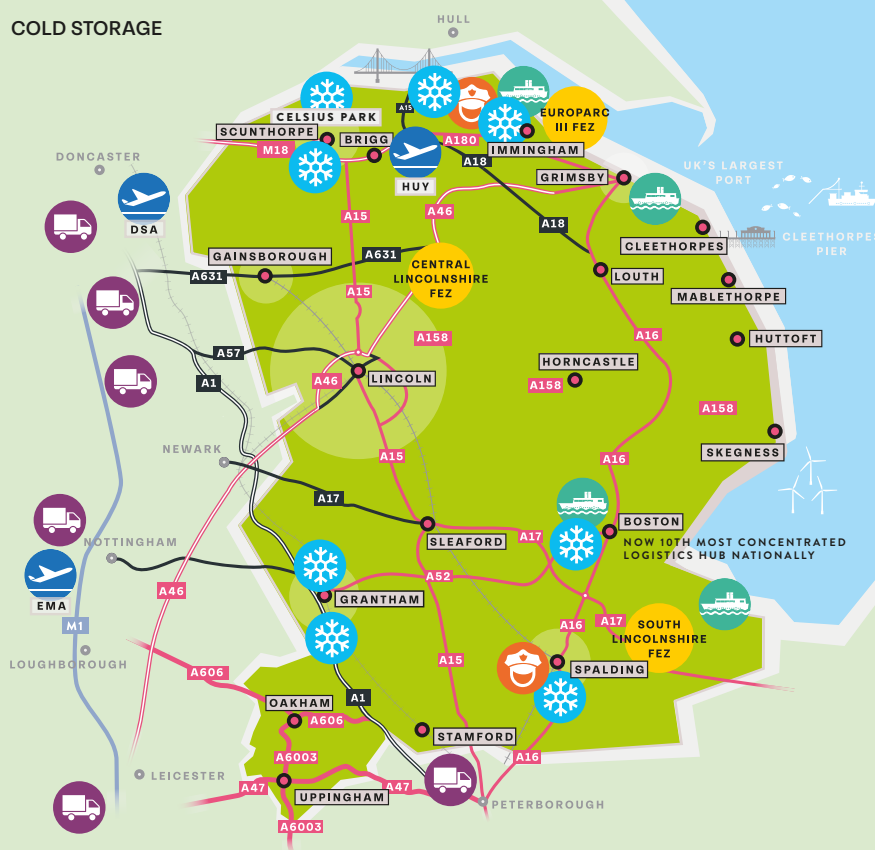
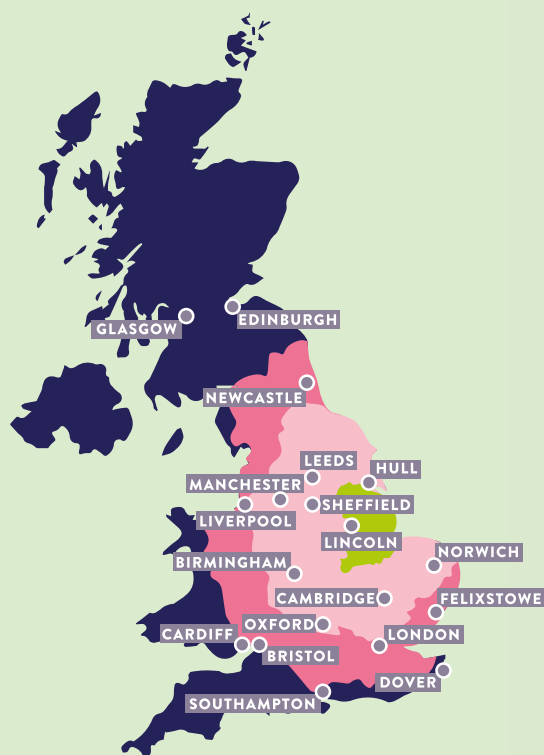
Greater Lincolnshire provides seafood sector businesses with fast, multimodal access to distribution hubs and consumer markets in the UK and worldwide.

HGV Drive Times (from Lincoln)

-  GREATER LINCOLNSHIRE LEP AREA
-  3 HOUR HGV DRIVE TIME
-  4.5 HOUR HGV DRIVE TIME (1 DRIVER SHIFT)

Key:

-  GREATER LINCOLNSHIRE
-  DISTRIBUTION HUBS
-  COLD STORAGE
-  BORDER CONTROL POST
-  FOOD ENTERPRISE ZONE
-  PORTS
-  AIRPORTS



By Road

Greater Lincolnshire's central Great Britain location (north-south) enables fast access to key Midlands distribution hubs (on the M1 and A1 corridors). More than 75% of the UK's population can be reached within 4 hours' HGV drive time - less than one driver shift.

By Sea

The ports of Immingham and Grimsby are the UK's largest by tonnage, offering deep water facilities, frequent lo-lo and ro-ro services to European ports, and deep-sea feeder services for global market access.

By Rail

The ports of Immingham and Grimsby are both freight rail connected, with W12-gauge access ('high cube' containers). For business travellers, Greater Lincolnshire also offers fast passenger rail connectivity to destinations across the UK.

By Air

Humberside Airport provides global connectivity via Amsterdam and a temperature-controlled airside Perishables Hub. East Midlands Airport, the UK's largest dedicated air cargo hub, is less than 2 hours' HGV drive time from Grimsby.

REFERENCES

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- 4 Seafood 2040 | A Strategic Framework for England | Seafish
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- 9 Made Great In Grimsby | A Bright New Future
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- 13 Humber Freeport | Britain's Global Gateway
- 14 Sustainable Seafood as Grimsby Fish Van Fleet Goes Electric | lincoln.ac.uk
- 15 Grimsby Seafood Cluster Launches Future Leaders Skills Programme | madegreatingrimsby.co.uk

SUPPORT FOR YOUR BUSINESS INVESTMENT

Working together UK Food Valley partner organisations, including local authorities, education providers and businesses, provide dedicated support to ensure a 'soft landing' for companies investing in the area. Contact us to find out how we can support your business relocation or expansion project.

Our services to business include:

- Support in finding the right site or property to lease or buy
- Location, economic and food cluster market intelligence
- Access to workforce recruitment, education and training solutions
- Access to sector specialists
- Access to sector-specific support programmes e.g. for food chain innovation
- Access to local supply chains and business networks
- Access to funding for business investment



Contact Us

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