



**UK
FOOD
VALLEY**

Greater Lincolnshire

THE SEAFOOD PROCESSING & AQUACULTURE INVESTMENT OPPORTUNITY



www.ukfoodvalley.co.uk

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 122% between 1990 and 2018. With the world's population projected to increase by more than 1 billion by 2050, 'demand shows no sign of slowing', according to UN FAO.¹ In the UK, seafood has been the highest value protein category since 2017, with 96% of shoppers now buying fish.² Today's seafood consumers are typically younger, 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 products.³

Lifestyle changes accelerated by Covid-19 have boosted the UK seafood market. More home working, online shopping and home deliveries underpinned growth in total seafood retail values and volumes between 2019 and 2020,

across all segments and with sustained average prices per kilo. In summary, more people bought seafood more often, and spent more on larger baskets.⁴

While being short term and attributable to the pandemic, the potential for sustained growth driven by changing lifestyles was clearly demonstrated.

In June 2022, the government published the long-awaited Food Strategy. This further endorses much of 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 strategy, which includes the target to increase portions per person per week from 1.15 currently to 2.0 by 2040.⁵ 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.

THE SEAFOOD MARKET GROWTH OPPORTUNITY

UK Total Seafood Sector Growth¹

	Value Sales (GB£)		Volume Sales (Tonnes)		Price per Kg	
	June '19 June '20	% Chg. 2019-2020	June '19 June '20	% Chg. 2019-2020	Avg. 2020 (GB£)	% Chg. 2019-2020
Tot. Seafood	4.0 bn	+4.6	412 k	+5.0	£9.71	-0.4
Fresh	2.386 bn	-0.8	182 k	-2.0	£13.10	-1.2
Frozen	1.011 bn	+11.1	139 k	+5.9	£7.27	+4.9
Ambient	604.3 m	+10.3	91 k	+10.0	£6.62	+0.2

+122%

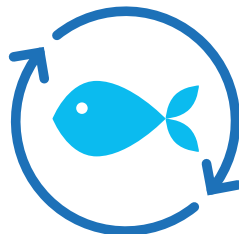
**Global Fish Consumption
1990-2018¹**



**More Home Working
& Dining Post Covid-19**

+8.7%

**UK Seafood Weekly
Volume Sales 2019-20³**



**Demand for More
Healthy, Sustainable
Proteins**

96%

**UK Market Total
Seafood Penetration²**



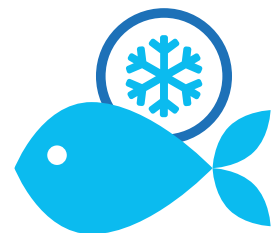
**Younger, More Affluent
Seafood Consumers**



**Growth in Online Buying
& Home Delivery**



**Demand for Convenient,
Value-Added Products**



**Strong Growth in Frozen
Seafood Sales**

Grimsby & The Humber: The Seafood Processing Investment Opportunity

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

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.⁵

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 Young's 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. Contact us to find out how.



SEAFOOD PROCESSING INVESTMENT OPPORTUNITY (KEY BENEFITS)

OPPORTUNITY Food Industry 4.0

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

OPPORTUNITY Value from Waste

The cluster's large-scale output of seafood coproducts can support circular economy investments targeting 100% fish utilisation, for products including fish oil supplements.

OPPORTUNITY Carbon Reduction

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

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 Advanced Technologies

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

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 Knowledge

Organisations in the cluster specialising in food research, safety, laboratory testing, industry regulation and representation, including Eurofins, FRPERC and Seafish.

CAPABILITY Cold Chain

Grimsby's 230,000 tonnes of cold storage capacity includes one of Europe's largest facilities, operated by Lineage Logistics. Leading cold chain transport providers include DFDS.

CAPABILITY Freight Connectivity

Adjacency to the UK's largest port by tonnage (Grimsby and Immingham) provides global sea freight connectivity and extensive expertise in fresh and frozen food logistics.

INVESTABILITY Track Record

Leading global businesses including Sealaska (USA), Sofina (Canada) Nissui (Japan), and Iceland Seafood International (Iceland) have recently invested in the cluster.

Greater Lincolnshire: The Aquaculture Investment Opportunity

Today, only 2/3 of the world's wild fish stocks are within biologically sustainable levels – down from 90% in 1990.¹ This partly explains the rapid growth of the global aquaculture industry – projected to be worth £173bn by 2022⁶ and already meeting more than 50% of worldwide seafood demand.⁷

In the UK, aquaculture satisfies just 17% of seafood demand, versus 40% from capture fisheries and 43% from imports.⁸ The UK therefore represents a significant growth and investment opportunity – to meet domestic as well as export demand through local production. The UK's Seafood 2040 strategy specifies a range of innovations and initiatives to deliver a 10x expansion of the aquaculture sector by 2040. These include the development of 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.⁹

Greater Lincolnshire presents a unique combination of location benefits for aquaculture businesses investing in the UK. Centred on

England's second-largest county, Lincolnshire, and with 400,000 hectares of farmland, the area offers space and available sites for on-land aquaculture developments.¹⁰ 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.

For sea-based aquaculture, research has identified the area as offering 'high suitability' for the farming of species closely aligned with consumer demand,¹¹ and 'excellent' sea water quality.¹²

Benefiting from deep integration with the area's agrifood industry, the University of Lincoln combines 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. Which means that investing businesses can access the knowledge required to address the key challenges facing closed-system, on-land aquaculture: fish health and welfare, and the optimisation of systems for efficiency, productivity, sustainability, and product quality.

With the UK's outstanding seafood industry cluster located in the area, aquaculture businesses can access the skills, supply chain partnerships and specialised expertise required for success. Together, these regional assets and advantages make Greater Lincolnshire the location of choice for investors entering the UK aquaculture market.

THE AQUACULTURE MARKET OPPORTUNITY

17%

Aquaculture % of UK
Seafood Demand⁸

50%+

Aquaculture % of Global
Seafood Demand⁷

£173bn

Global Aquaculture
Market Value by 2022⁶

90%

Import % of Seafood
Processed in the
Grimsby Cluster⁵

43%

Import % of UK
Seafood Demand⁸

10x

2040 Target for
Expansion of UK
Aquaculture⁹



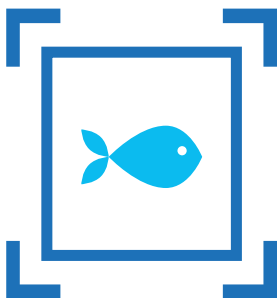
GREATER LINCOLNSHIRE:
The Aquaculture Investment Opportunity



Potential Access
to Renewable
Energy Sources



Leadership in
Food Industry 4.0
Technologies



Available Space for
On-Land Aquaculture

**LOCATION ADVANTAGES FOR
SEA-BASED AQUACULTURE**

Identified ‘High-Suitability’ Species ⁵	
Category	Species
Finfish	Atlantic Salmon, Brown Trout, Rainbow Trout
Molluscs	Pacific Oyster*, Native Oyster, Blue Mussels
Crustaceans	European Lobster




* ‘Very high potential’ identified



Greater Lincolnshire's Location & Connectivity

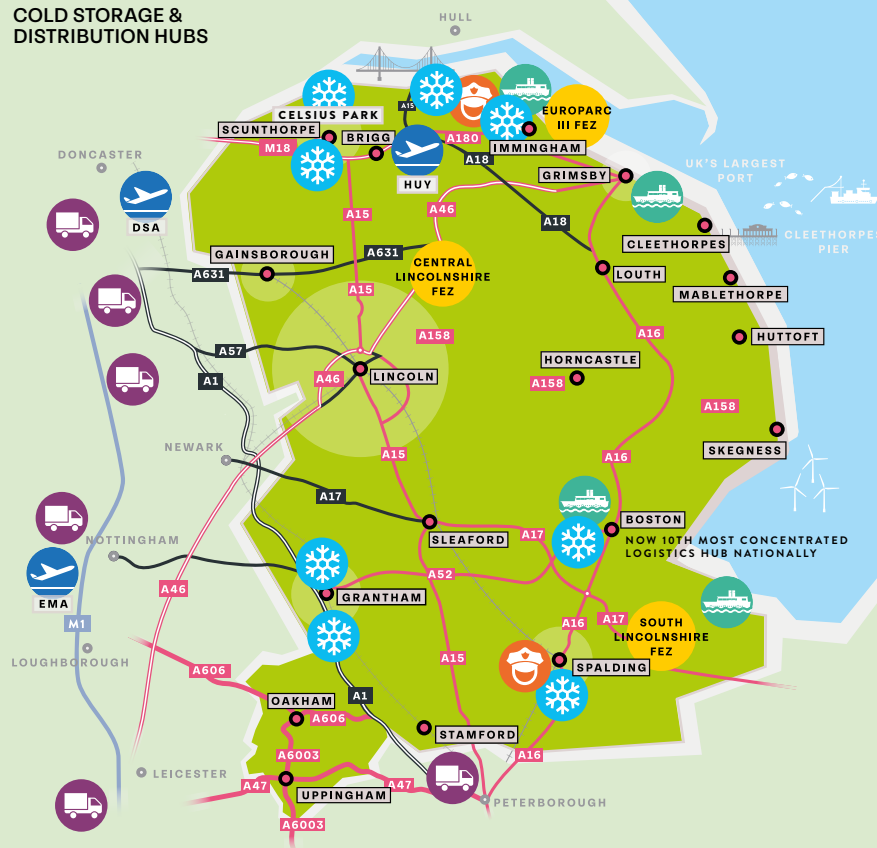
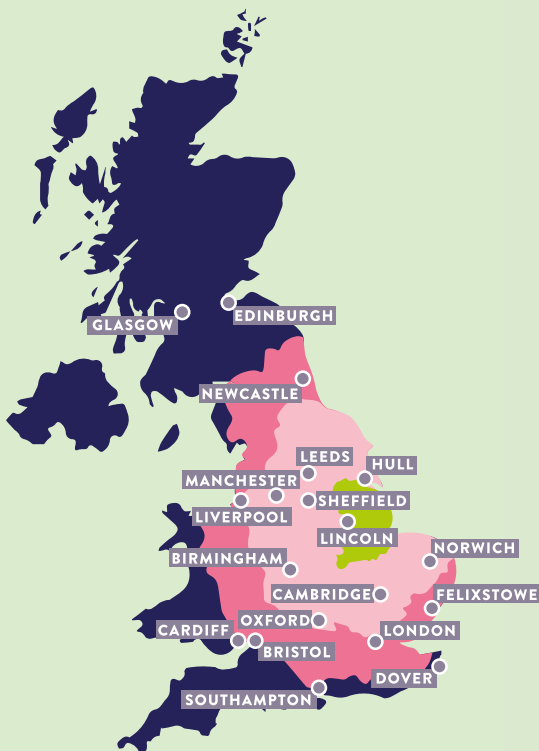
Greater Lincolnshire provides seafood sector businesses with fast, multimodal access to distribution hubs and consumer markets in the UK and worldwide.

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 & DISTRIBUTION HUBS
-  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.

LAND & PROPERTY SOLUTIONS

Greater Lincolnshire offers a wide range of land and property solutions for investing seafood processing and aquaculture businesses, 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 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 potential for aquaculture uses

SUPPORT FOR YOUR BUSINESS INVESTMENT

Support for investors from the Greater Lincolnshire Partnership

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

REFERENCES

- 1 UN FAO, fao.org 2021
- 2 Seafish, 2021, Total Seafood Penetration
- 3 Seafish, 2021
- 4 Seafish: Seafood in multiple retail (2020 update)
- 5 Grimsby & Humber Seafood Alliance
- 6 Gov.UK Invest in UK Aquaculture
- 7 PNAS.org (announced 50% reached in 2009)
- 8 Future of the Sea: Trends in Aquaculture, Foresight / UK Govt., 2017
- 9 Seafood 2040 industry strategy
- 10 DEFRA (2016) Structure England County/Unitary Authority
- 11 MMO 1184, Identification of areas of aquaculture potential in English waters
- 12 Environment Agency: environment.data.gov.uk





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