



**INLAND  
WATERWAYS**  
ASSOCIATION

# BETTER BY BARGE: *A Charter*

**THERE ARE 5,000 MILES OF CANALS AND RIVERS THAT ARE NAVIGABLE IN BRITAIN, with some 2,700 miles of UK canals and rivers connected that form a waterways network.**

Traffics using inland waterways may be **INLAND, COASTAL (DOMESTIC), ONE-PORT** (*e.g. to offshore installations or for sea dredged aggregates*), **INTERNATIONAL**, or a combination of these.



# OUR AIMS:

- Increase the volume of goods moved by barge
- Promote multi-modal solutions, working with road and rail operators
- Alleviate pressure on the road network to help achieve Net Zero objectives
- Support the Government's 'Decade of Renewal' by reducing air pollution and road congestion



*Above:* A Branford barge being discharged at Knostrop Depot in Leeds (D Lowe)



*Right:* Rice being loaded in Hull on to 'Seagull', bound for Selby (D Lowe)

# WATER FREIGHT OFFERS:

- **DRAMATICALLY LOWERED EMISSIONS** and reduced road congestion
- **IMPROVED AIR QUALITY** and health
- **ALIGNMENT WITH CUSTOMERS** working to support the government's Net Zero targets
- **FEWER ACCIDENTS** compared with freight by road and rail
- **HIGH QUALITY TRAINING AND DEVELOPMENT** for apprentices and employment



*Left: Thomson River Transport move nearly 10,000 ton of quarry materials on the River Severn every week (J Mosse)*

*Below: Fusedale H loaded with aggregate on the Aire & Calder Navigation near Ferrybridge (D Lowe)*



# KEY BENEFITS:

- **ONE SELF-PROPELLED FREIGHT BARGE** carrying 1500 tonnes **REMOVES THE EQUIVALENT OF UP TO 75 HGVS**, each carrying 20 tonnes, off the road<sup>1</sup>
- Material in transit on a barge **CAN REDUCE STORAGE COSTS**
- A freight barge emits **76% LESS CO2** per tonne than road freight<sup>2</sup>
- Inland waterborne freight **REDUCES POLLUTION AND CONGESTION** in urban areas
- Inland waterborne freight **CONTRIBUTES TO BETTER HEALTH AND NET ZERO**
- **ESTIMATES FOR CONGESTION** costs for British business in 2025 are estimated to be **£18M<sup>3</sup>**



Congestion on the M1 near Wakefield (D Lowe)

# CURRENT WATER FREIGHT CARGOES:

Waterborne freight is integral to the success of local and national supply chains for delivering housing, aggregates by water in congested areas, small parcels to wharves for onward transmission by electric cargo vans, and for abnormal indivisible loads.

If a cargo can be carried by water direct to a shore-based facility such as storage, a readymix concrete plant, or a factory, the final delivery costs are cut. Moving by water is usually cheaper point to point – between ports, between wharves or between port and wharf – and loading ex terminal eliminates storage charges. Many barge operators use less polluting hydro treated vegetable oil (HVO) rather than diesel.



*Above:* GPS Marine's Racia pushing 3,000 tonnes of aggregates.

*Left:* DHL's last 'green mile' small package delivery on the Thames.

# CURRENT WATER FREIGHT CARGOES (CONT.)

- **CONSTRUCTION MATERIALS**
- **BIOMASS** to power stations
- **BULK CARGOES** such as construction materials, aggregates, grain, coal, fluorspar/minerals, coal, scrap, and cement
- **CHEMICALS** (to depots and large users)
- **CONTAINERS**
- **BREAK BULK CARGO** such as steel section, bar, coils, palletised goods, boxes, barrels



Wood Hall & Heward (WHH) Ltd delivering materials for the Kings Cross development in London for McAlpine.

*Above left:* loading cladding panels.

*Above:* loading steel beams.

*Left:* delivering cladding panels to Kings Place.

# CURRENT WATER FREIGHT CARGOES (CONT.)

- **TIMBER / FOREST PRODUCTS**
- **PETROLEUM PRODUCTS** (to distribution depots and large users)
- **VEGETABLE OILS** and other bulk liquids
- **WASTE** (bulk or containerised, e.g. Wandsworth recycling facility)
- **UNITISED CARGOES** (containers and swap bodies)
- **STEEL AND OTHER METAL; heavy-lift and out-of-gauge project cargoes**



*Above left:* a very large load holding up traffic on the roads.

*Above:* a very large load off the road on water with Robert Wynn's Terra Marique.

# RECOMMENDATIONS:

- **SUPPORT AND INVESTMENT** to deliver capacity enhancements and growth
- **MAKE HYDRO-TREATED VEGETABLE OILS (HVOS) COMPETITIVE WITH RED DIESEL** as a transitional fuel to net zero.
- **SUPPORT FOR THE DEVELOPMENT AND INTRODUCTION OF LOW CARBON FUELS, SUCH AS HVO**, in inland waterborne freight, through policy and investment
- **PROTECTION OF KEY INLAND WATERWAYS FREIGHT SITES AND INDUSTRIAL LAND**, including implementation of the agent of the change principle, to protect freight customers and adjacent neighbours
- **REINTRODUCTION OF FREIGHT FACILITIES GRANTS (FFGS)** in England to help support the high capital costs of connecting sites to the inland waterways network
- **SUPPORT FOR TRAINING**
- **DOUBLE, RETAIN AND MODERNISE MODE SHIFT REVENUE SUPPORT (MSRS)** to help bridge the cost gap on traffic where barges are more expensive than the road alternative in England. Retain the schemes in Scotland and Wales



# CASE STUDIES

**GPS MARINE** has been at the forefront of maritime logistics for more than 30 years and are, and were, key contractors for the Thames Tideway tunnel, Tunnel Wharf, the Elizabeth Line (Crossrail 1) and the Northern Line extension.

## THAMES TIDEWAY TUNNEL

The massive project to create the Thames Tideway tunnel for a new super sewer to transport London's sewage waste provides a significant case study for the benefits of transporting material by water. Opposite are key figures from The River Transport and Training Sustainability report for 2023. Note the carbon savings emissions and the number of HGVs moved off the road. The expected HGV transport loads were **REDUCED BY GOING ON THE RIVER THAMES FROM 43.4KM KM TO JUST 12.3KM.**

## TUNNEL WHARF

Transporting goods to and from Tunnel wharf by water helped improve kerbside air quality in Greenwich because emissions are on the river and congestion is reduced. GPS Marine's barges each carry up to 1750 tonnes of cargo, **ELIMINATING SOME 206 TIPPER TRUCK MOVEMENTS** on the roads in the vicinity.

Moving cargo from the Isle of Grain Aggregate Terminal to Tunnel Wharf by water in 1,750 / 3,500 tonne parcels creates direct **CO<sub>2</sub> SAVINGS, COMPARED WITH ROAD TRANSPORT, OF UP TO 78%.**<sup>4</sup>

## THAMES TIDEWAY (2023)

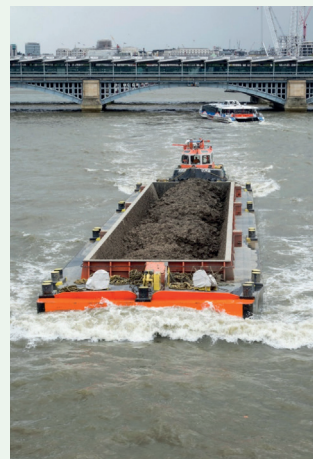
**5,633,000** TONNES MOVED

**SAVING**

**17,200,000** HGV MILES

**24,000** TONNES CO<sub>2</sub> EMISSIONS

**672,000** HGV JOURNEYS



Left: GPS Arcadia outward bound with a barge load of spoil from the Central Section of the Tideway Tunnel. Below centre: Unloading tunnel lining ring segments and loading spoil at the temporary Jetty at Kirtling Street for the Tideway Tunnel Central Section. Below: GPS Battler outward bound with two barges from the Silvertown Tunnel bound for East Tilbury.



# CASE STUDIES

**CASPAR RIVER & CANAL TRANSPORT** is a subsidiary of Casper Chartering Limited that was launched to enable clients to keep freight on the water in the Humber region.

## KINGSFERRY TO LEEDS

Casper River and Canal Transport's new 600 tonne barge 'Off Roader' carries bagged cement. It has also made a successful trip, in ballast, to test the new wharf in Leeds.

Right: Casper 'Off Roader' in service between the newly re-opened Kingsferry Wharf on the River Trent (Burton-upon-Stather) and the AMA Rotherham wharf.

**CASPER RIVER & CANAL TRANSPORT**  
KEY BENEFITS OF MODAL SHIFT PER  
BARGE IN OPERATION, PER ANNUM:

**SAVED:**

**5,893**

**HGVs REMOVED FROM UK ROADS**

**1,434** TONNES CO2 EMISSIONS



## OTHER EXAMPLES

Below left: **WHH LTD** motor barge 'Clitheroe' loading 1 tonne bags of aggregate directly from a lorry at Rye House, Hoddesdon, EN11 0EH on the River Lee.

Below: loading sand directly from the quarry via conveyor at Denham, West London for delivery to Hanson's concrete plant (now Heidelberg) in West Drayton.

Below right: **BRANFORD BARGE OWNERS'** Fossdale H loading timber in Goole Docks bound for Gainsborough on the River Trent.



# OPPORTUNITIES

## BOW GOODS YARD

The London Legacy Development Corporation's (LLDC) has approved the application to regenerate more than 30 acres of brownfield land at the Bow Goods Yard. Planning applications are now with the relevant local councils: Newham, Hackney, Tower Hamlets and Waltham Forest. The initial concept was for a multi-modal development and yet, with a direct waterway connection to the Thames, it is only being put forward as a road/rail venture.

Yet water freight must play its part: there is a network of waterways (known as the Bow Backwaters) ringing this development. They in turn feed into the Bow River and from there connect to the Thames.

## REOPENED WHARF IN NEWARK

There are proposals to re-open a wharf in Nottingham to move scrap for export and handle import cargoes, and a further proposal by the same company to open a wharf in Newark for general cargo. This would return the River Trent to regular freight use above Keadby, where another wharf at Althorpe is also being considered for re-opening.

The last regular freight on the Trent above Keadby was aggregate from Besthorpe (Newark) to Whitwood and Hull. This ceased in 2013 following a merger of Tarmac with quarry owner Lafarge when a policy decision was made not to supply West Yorkshire/Humberside from Besthorpe but use the nearer, but non-water connected, quarry at Nosterfield near Ripon. Unfortunately, North Yorkshire Council approved the extension of workings at Nosterfield quarry.

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## ABOUT IWA:

This report was produced by the Inland Waterways Association (IWA), the membership charity that works to protect and restore the country's 7,000 miles of canals and navigable rivers. IWA is a national organisation with a network of volunteers and branches which deploy their expertise and knowledge to work constructively with navigation authorities, local and national government and other organisations.

IWA's Freight Group was set up to promote the use of inland waterways for freight, and is comprised of industry experts.  
Chair: Gerry Heward.

## MORE INFORMATION:

### INLAND WATERWAYS ASSOCIATION

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## REFERENCES

- 1 Tideway (2021) *Every Boat Counts* <https://www.tideway.london/every-boat-counts/>
- 2 Commercial Boat Operators Association (2021): *The Case for Water* <http://www.cboa.org.uk/environmental-benefits>
- 3 Oxford Economics (2023): *Logistics: delivering a solution to the UK's productivity puzzle.*
- 4 Commercial Boat Operators Association (2021): *The Case for Water* <http://www.cboa.org.uk/environmental-benefits>

