

# CBOA NEWS

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## Cory new investment in water freight

New investment in transport on inland waterways is always to be applauded, but Cory's continued expansion and replacement of older vessels in the fleet is exemplary.

In late January Cory took delivery of a new barge from Newcastle-based shipyard A&P Tyne. As a tribute to the company's founder, the barge has been named *Wm. Cory*. Cory's have taken delivery of 12 of 35 new barges, to replace the existing four types of barges with just two types (20 and 30 box), adding a greater level of flexibility into operations. The older barges will be repurposed or recycled. Cory's proudly held a celebration in October for the 125<sup>th</sup> anniversary of its incorporation.

The latest addition to the fleet is the first of the new barges that can carry 30 waste containers, containing a total of 405 tonnes of non-recyclable waste – thereby removing the equivalent of 16 articulated lorry journeys from the roads, making London's streets safer and cleaner. Cory estimates that this could deliver 1.4 million tonnes of CO<sub>2</sub> savings per annum by 2030, with 2040 as the date committed for achieving net zero carbon emissions by the waste management sector, reducing their energy consumption and undertaking research and development into low-carbon river transportation.

The company has growth plans valued at £800 million, which includes the new Belvedere Riverside 2 energy from waste (EfW) facility, alongside the existing EfW facility and the acquisition of East London-based recycling and waste management company McGrath Group together with other carbon capture, storage and heat network operations.

Cory operates a fleet of five tugs, more than 50 barges and more than 1,500 containers, to transport non-recyclable waste from waste transfer stations along the River Thames to Cory's EfW facility in Belvedere and ash resulting from the energy recovery process further down the Thames to Tilbury where it is processed into aggregate for the construction industry. They estimate use of the river removes around 100,000 vehicle journeys from London's roads each year. That is an excellent achievement for water transport, which cannot go unnoticed by our government ministers with their barges passing the Houses of Parliament.



New barge *Wm. Cory*, named after the company's founder (Cory)

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## From the Chairman



As I write this report the UK government has removed all restrictions in England relating to Covid though we are still aware of the need for caution. I hope that any members who have caught the virus are now fully recovered.

Discussions regarding the Port Leeds (Stourton) project continue but it's not been possible to finalise arrangements by the year-end deadline and the WYCA funding is not now available. Hopefully planning issues can be sorted and a new bid made for the funding.

Members will be aware of the major leak at New Bridge (near Goole) on the Aire & Calder Navigation; this was finally repaired and barge movements resumed in the autumn of last year. Dredging was completed and as barge payloads increased in the New Year there were reports of fish mortality in the Knottingley/Ferrybridge canal section. CBOA operator members co-operated with CRT to run trials at different drafts to try and establish what was happening as this was not an issue anywhere else in the country. Studies highlighted the need for dredging along the affected section to provide sufficient water space for fish and loaded barges and it's hoped this will be completed by late April/early May if not before. Meanwhile operators can run at a reduced loaded draft and speed locally although in practice this isn't economic.

Storms and other weather-related issues plus staff shortage due to Covid have resulted in some extensions to stoppages around the system and members operating fuel boats have had to work hard to try and maintain vital deliveries to customers. The Trust's Stoppage sub group is discussing ways of limiting stoppage over runs in the future.

The Association will again have a stand (jointly funded by CRT) at the Recycling & Waste (RWM) show at the NEC on 14<sup>th</sup>/15<sup>th</sup> September. I am very grateful to John Dodwell who has organised these events for some years. John steps down from his role as marketing, corporate and public affairs officer and as a committee member later this year. John has served the Association with distinction since he joined the committee (and was appointed chairman) in 2007, and we are immensely grateful for all his hard work and advice over the years. It's good to know that John will remain a CBOA member keeping in touch with what is happening.

At the committee meeting (held on line) following the AGM officers and post holders were all re-appointed together with a new appointee, Dr. Chris Poole, who joins us as Research Officer (see page 7). Chris has practical experience of boating both in coastal and inland waters and his academic skills and enthusiasm will be of great benefit to the Association. Chris is teaming up with researchers at Strathclyde University to determine the true cost-benefit of maintaining inland waterways to ensure navigability for freight using advanced Computational Fluid Dynamics (CFD) methods to assess the energy efficiency and performance of a typical inland vessel under different realistic dredging conditions in the UK canals (see the report by Dr. Momchil Terziev - page 5). Combining these monetised findings with the benefits delivered through more efficient transport, flood prevention, heating and cooling to the economy, society, and public health may well demonstrate an increased value compared to current thinking. Another research project is looking into hull profiles and design (e.g., rudder design) and how this can increase efficiency. These research projects are, of course, subject to funding and support from partner organisations such as the Canal & River Trust and other navigation authorities and funding bodies.

CBOA has been very pleased to develop closer links with the Inland Waterways Association of late, especially in West Yorkshire, and to have been invited to joint discussions with DfT at ministerial level to emphasise the benefits of additional funding for water freight, and to support the Canal & River Trust in its discussion on future funding. We are also partnering the Work Boat Association in moves which may lead to the creation of an All-Party Parliamentary Group for the freight and work boat sector, through the interest of MP Kelly Tolhurst (Rochester and Strood). We are grateful to our member John Spencer of GPS Marine for taking the initiative in this venture which promises to offer great benefits for all parties. Of course, any new APPG would work closely with the existing AAPG Waterways which is administered by IWA.

CBOA's part time secretariat assists with administrative matters and this is easing the burden on officers and seems to be working well so the arrangement has been extended for a further period. All general or new enquiries should, if possible, be sent to [info@cboa.org.uk](mailto:info@cboa.org.uk) so the admin team can then forward as appropriate.

Our popular and respected journal CBOA News is sent out to all members (and to other interested parties) as hard copy. However, some organisations may prefer to receive an electronic version which can be circulated easily so if any members (or other recipients) would prefer to receive a digital copy by e-mail please let Louise at our membership office know (contacts are on the back page).

Wednesday 16<sup>th</sup> November is the provisional date for the 2022 AGM. We are in discussion as to whether this should be on-line (thus enabling people to attend who might not otherwise do so) or in person at a central venue, thus affording the opportunity for social interaction and networking. Any views on this would be welcome!

David Lowe

## UK News

### **Call for major upgrade of waterways to get freight off roads and onto rivers and canals to cut pollution**

The Commercial Boat Operators Association, the Canal & River Trust, the Inland Waterways Association and the Port of London Authority are working together to kickstart a revolution in the way goods are transferred around the country.

The aim is to get more freight off roads, where traffic pollution is known to cause severe health problems in built up areas, and onto freight carriers on the UK's rivers and canals.

"The problem is we're using 19th century infrastructure to solve 21st century problems," says John Spencer, director of GPS Marine, the largest multi-cargo intra-port barge operator on the River Thames and Medway, "but as an individual company we've been hitting our heads against a brick wall. We're now working with major canal and river organisations to get this moving."

The Port of London Authority has just launched a new consultation and vision for the Thames. The river is already the UK's busiest inland waterway. Thames Vision 2050 identifies the development of Trading Thames as a priority, with strong long-term potential for using the river to connect the deepsea port outside London with customers and consumers within London.

Richard Parry, chief executive of the Canal & River Trust, said: "The transfer of traffic from trucks to barges can play a significant role in reducing carbon emissions, improving air quality, and supporting the broader Government objective to achieve net zero and mitigate climate change."

Between them these organisations are approaching the Department for Transport, Defra and relevant select committees, aiming to deepen understanding of the opportunity and what needs to be done to make the most of it.

The above was issued by CBOA as a press release with contact details given for all the organisations mentioned.

### **CBOA joins Inland Waterways Association**

CBOA has joined The Inland Waterways Association (IWA) as a corporate member. The IWA has good Parliamentary connections and last autumn arranged for David Lowe, our chairman to make a presentation to the All-Party Parliamentary Waterways Group. This led to the IWA and CBOA Vice-Chairman Tim West presenting the case for water freight to Robert Courts, the DfT Shipping Minister, whose remit includes freight moving by water. IWA has also been vigorous in supporting the CBOA's objections about the temporary closure of the Aire & Calder Navigation for barges due to fish deaths, allegedly caused by barges stirring up contaminated silt in the Ferrybridge area.

### **The British Ports Association seeks to explore opportunities**

In addition to lead the decarbonisation drive in a way that works for ports, the BPA is also looking explore the opportunities to help ports be the hubs of local, regional and even national economic development and job creation, aware of the importance that ports have in the district and region.

Plans include funding and support around the sustainability agenda, such as energy infrastructure for shore power, planning and consenting improvements and resources for transport connectivity amongst other aspects. Roads were mentioned with potential development of the Major Road Network and last mile connections to ports, but no specific mention of inland waterway connection to ports was identified in the news bulletin. CBOA sincerely hopes that waterways will be equally considered.

Other BPA news is that Richard Ballantyne, Chief Executive of the British Ports Association, has been awarded an OBE in the New Year's Honours list; and that increasing use of surveyance technology including a constantly learning digital twin, remote infrastructure and asset monitoring, and upstreaming of border administration. Port assets are difficult to inspect and monitor over their long design lives yet are critical to port safety and resilience of operation; for example, use of drones for visual examination looks beneficial.

### **CRT increase in toll charges**

The Canal & River Trust has increased its toll charges for the Commercial Waterways, the first increase since 2003. The new charge is 1.5 p / tonne / kilometre, with no discount for distance, which is considerably higher than the equivalent track access charge for Network Rail. The previously applied surcharge for oil and other dangerous goods has been scrapped. (Freight carried on the Trust's leisure waterways is covered by an annual licence with no toll levied).

## Research on inland vessel operational efficiency from a hydrodynamic point of view

We are grateful to Dr. Momchil Terziev, Postdoctoral researcher at the University of Strathclyde for the following article. Momchil gave an interesting talk on this subject at the CBOA AGM last year.

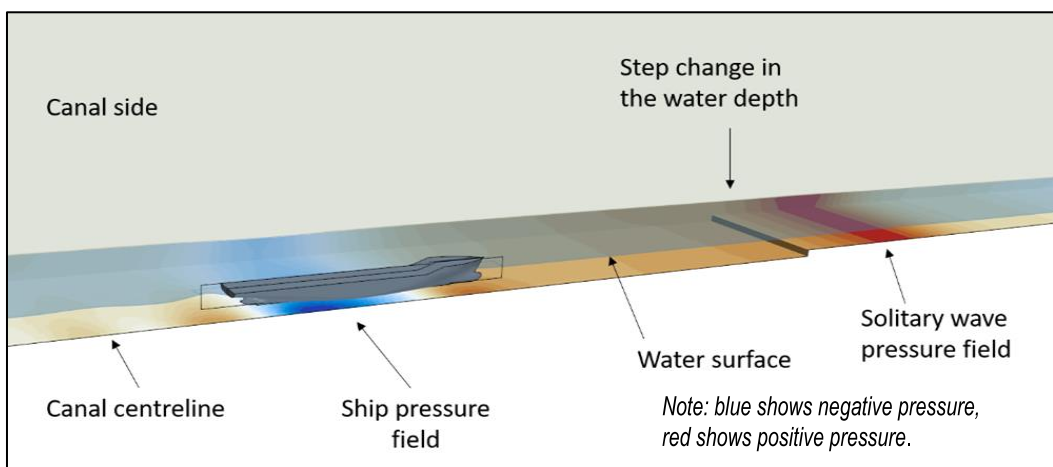
To propel a vessel, we must supply energy in some form, usually by burning fossil fuels. We typically think about the quantity of fuel we use in terms of the engine properties, other machinery, and boat size. If we trace out where losses occur as we translate the energy we extract from the fuel onto boat motion, we will find the numbers don't add up. Regardless of how efficiently we arrange the machinery, the boat's motion is resisted by the water, so to have a complete picture and understand why we need 2 litres of fuel as opposed to 1 litre to cover some distance, we must understand the hydrodynamic forces acting on a boat.

Following Newton's third law, boats must overcome some forces in order to move, which is what my work focuses on. That is, the fluid dynamics of boats, or more generally, ship hydrodynamics. In the field of ship hydrodynamics, we try to understand why the force opposing a vessel's motion (the resistance) has a particular magnitude, and what we can do with this knowledge to improve operational performance. For example, we know that a boat experiences two types of hydrodynamic forces: due to viscosity which causes among other things friction, and due to waves, which cause the so-called wave resistance.

Knowledge about how viscosity influences the friction of a submerged moving body can help in devising strategies to reduce the overall magnitude of friction. For example, we know that as a boat moves, water near the bow flows in ordered layers – we call this laminar flow which is characterised by the absence of mixing between layers. However, these layers quickly collapse into turbulence, which increases friction. One obvious way to reduce friction is then to delay the laminar-turbulent transition, which can be done by removing surface roughness and any defects or protrusions. Similarly, waves require energy to be generated and since we supply energy by burning fuel, we can think of the wave pattern of a boat as an indication of how much fuel we have wasted by radiating energy into the environment.

In rivers and canals, another category of effects influences the performance of a ship. These effects are governed almost exclusively by the blockage ratio and the depth Froude number. The former is a measure of the proportion of the cross-sectional area of a canal taken up by the hull, while the latter is the ratio of the vessel speed and the wave speed. Certain combinations of blockage ratios and depth Froude numbers are 'critical' because they cause a massive increase in resistance. When this happens, the vessel expends energy to accelerate a layer of water near the hull against the direction of motion, and a layer in the direction of motion typically observed near the banks. In extreme cases, the latter can move faster than the hull itself. The energy necessary to accelerate this body of water comes from the fuel source, so such conditions should be avoided because they are wasteful and cause damage to the waterway. Moreover, steering ability and general controllability of a hull becomes compromised in such cases, so critical conditions are not only wasteful, but also dangerous.

The effects of confined depth and width on a vessels' hydrodynamics are complicated and not well understood. For example, we don't currently know what the exact benefit of dredging is on the performance of a boat: how much fuel can be saved if we dredged a canal by 1cm, or 1m? What should the trade-off between the width and depth of a waterway be; are trapezoidal, rectangular, or other shapes better? Can fuel efficiency be boosted by adjusting a vessel's trim, and can we use this reduce erosion? Are there any energy saving devices we can retrofit to improve the efficiency of the propeller? Researchers such as myself need to collaborate with those who experience the fluid dynamics we study on a daily basis. This helps us ask practically relevant as well as scientifically novel questions.



A Computational Fluid Dynamics (CFD) prediction of the disturbance caused by a ship moving in a canal with a reduction in the water depth. Only half of the canal is shown as the case is symmetrical. Dynamic pressure shows the changes with respect to hydrostatic pressure. (Terziev, M., Tezdogan, T. and Incecik, A., 2020. Modelling the hydrodynamic effect of abrupt water depth changes on a ship travelling in restricted waters using CFD. *Ships and Offshore Structures*, pp.1-17.) <https://doi.org/10.1080/17445302.2020.1816731>

## **CBOA to speak at Final Destination Logistics conference**

On the 18<sup>th</sup> and 19<sup>th</sup> May at the Final Destination Logistics conference, CBOA will be represented and speaking on how inland waterways can be used to address the question of sustainability and climate change. Jonathan Mosse from CBOA will be the speaker, putting together the resource data that CBOA has to demonstrate the benefit of water transport. In addition to the latest technology and practice with logistics innovation, the conference aims to provide attendees with the latest concepts available in the industry including futuristic delivery, shipping techniques and 'last mile'. See [www.finaldestinationlogistics.co.uk](http://www.finaldestinationlogistics.co.uk)

## **Government answers**

In a question in the Commons from Michael Fabricant MP and Chair All-party Group on Waterways (APPG), he asked what steps are being taken to use navigable waterways for freight traffic. Rebeca Pow, The Parliamentary Under-Secretary of State for Environment, Food and Rural Affairs, answered that the Government are providing £20 million through the Department for Transport's mode shift freight grant schemes in 2021-22 to support rail and water freight services on routes where they deliver environment benefits over road haulage but are more expensive to operate. She re-iterated that operational matters and management of the inland waterways rests with the relevant navigation authority.

Michael Fabricant replied that the APPG identified about 1,500 miles of our 5,000 miles of navigable waterways are suitable for freight, then asked if her Department given any thought to reintroducing the freight facility grants for wharfs and handling facilities? Rebeca Pow replied that her Department for Transport responsibilities do not include any plans as such to reinstate the freight facilities grant in England, but the Government are of course very interested in the shift to getting freight transported in other ways. The "fund" (the £20m referred to presumably) has mostly gone to rail because the case has to be made for whether it is better to do it by water, so she suggested that her honourable friend "got in there" and made the case for it.

(The cessation of the Freight Facilities Grant (FFG) and introduction of the Modal Shift Revenue Support (MSRS) to CBOA thinking is that FFG was more useful than MSRS as the latter cannot be used for investment in infrastructure such as new wharves/facilities; it can only be used for operational costs, potentially including plant leasing. CBOA has recently obtained a change with the MSRS values following CBOA representation: ordinary motorways now generate 11p/mile as a value for removing HGVs rather than the previous value which was a minus figure. The Denham aggregate contract on the Grand Union in 2003 for example would most likely not have come to fruition without the FFG. CBOA has argued for additional DfT funding for waterway improvements e.g., widening part of Bulholme lock, (A&CN) which would not be covered by MSRS and of course European funding is no longer available. DfT would probably argue that funding is being made available on a local basis e.g., the West Yorks Combined Authority offer to fund Stourton, Leeds).

In January, Mayor of London Sadiq Khan was asked by Hina Bokari MP "what actions are you taking to tackle the increase of freight on London's roads?" He replied of course praising the efficiency of the freight industry generally, but then continued with how TfL is promoting cargo bikes, reducing freight during the morning peak by 10% (2026) and encouraging use of rail and water freight. Acknowledging cargo bikes, Hina Bokari said that European cities were using larger cargo bikes with dedicated parking for them and suggested there was more to be done with local deliveries and was hoping that TfL would get support from the Government. Sadly, the interchange then got a bit lost amongst bikes, the ULEZ, the vehicle scrappage scheme and poor old TfL not getting money that other cities had got.

## **Small craft electrical safety guidance development**

The Institution of Engineering and Technology (IET) is looking at producing this guidance to assist with wiring installations and have asked CBOA to assist in the study work for producing this. 'Stakeholders' such as ours are seen as important to get on board so that working craft's operational characteristics can be taken into account. CBOA member and Surveyor Mike Carter has agreed to assist. It seems that there is a lack of knowledge amongst some electricians when dealing with wiring on small craft (up to 24m length on inland waterways and coastal marinas and moorings), with insurance companies confirming this. The guide is not meant to be a formal code or standard but to be helpful, accessible and updated easily when necessary.

## Committee Profile – Dr. Chris Poole

Although Chris is not a professional boat operator (hopefully a competent amateur, he says) his day job as Health Economist and Outcomes Researcher has afforded him some transferable skills for his new role as CBOA Research Officer.

There's an open brief but one specific goal in 2022 he has defined is to establish a research programme to comprehensively evaluate water freight in the UK, along the lines of that recently published by the [Rail Delivery Group \(RDG\) for rail freight](#). The RDG report demonstrated that UK rail freight accrued annual user and social benefits valued at three times the industry revenues;



he is confident our analyses of water freight will demonstrate a similar ratio surplus, providing quantitative evidence to support investment in our water freight infrastructure.

So far, in addition to the Marine Engineering Group at the University of Strathclyde, Chris reports that we have secured support in principle for the project from Canal & River Trust and Svitzer Global Marine Services, and are seeking engagement from other UK stakeholders.

He will be pleased to keep us updated with progress.

## Regional News

### Fish kill on the A&CN

CBOA welcomes the return of barges carrying sea-dredged aggregates from Hull to Leeds using the Aire & Calder Navigation. Each barge can take up to 600 tonnes off the road, the equivalent of 20 or more Heavy Good Vehicles, each taking 20-30 tonnes. Barges are far less polluting than lorries when it comes to air pollution – and avoid the noise, road wear and tear of HGVs. At a time of concern about global warming and when the City of Leeds badly needs to reduce its own air pollution, the general public can see the benefits which barge operators can bring. Not satisfied with this, barge operators are moving to use HVO fuel which itself further reduces air pollution.

After the cover story in the last issue of CBOA News that the marine aggregate traffic has re-started, unfortunately the traffic soon became affected with the issue of a large number of dead fish found – seemingly from the passage of the barges. Various theories and approaches were put forward, ranging from ‘anti-barge’ from anglers and naturalists, to the more pragmatic requiring analysis of the problem and a satisfactory solution to be found.

The barges *Farmdale* and *Fusedale* passed up at the end of January with samples of water and silt being taken for examination after their passage. Dredging – or lack of it – was thought to be contributing to the issue, the excess silt causing problems for the fish but this needed careful evaluation. One theory was that if the silt is contaminated/polluted from past industry this could exacerbate the problem for the fish, the previously sedimented silt not presenting the same level of hazard but this is not now thought to be the case. After barges to Whitwood and Fleet stopped in 2013, it left the waterway undisturbed for fish to multiply to very large numbers, especially in winter when the canal offers a slightly warmer and more sheltered environment. Barge movements do assist with oxygenation but as a barge passes through the narrow channel fish may be trapped in the silt and suffer lack of oxygen hence the deaths; some are struck by the propeller. The Trust's experts have come to the conclusion that the remedy is to dredge the short affected section and it's hoped to complete this by early May. In the meantime, barges can load to 2.3 metres and pass through at slow speed. Once the dredging has been carried out (plus any further dredging needed at Lemonroyd) the Trust has said that barges will then be able to load to the statutory 2.5 metres (8ft 2 in) draft.

## Freight on the River Cart



Another consignment for Hinckley was seen being pushed down the River Cart (River Clyde tributary) on the 18th October (R Davies)

## West Yorkshire water freight promoted

The [www.sameskiesthinktank.com](http://www.sameskiesthinktank.com) web site is a voice for people in West Yorkshire, helping to define what they want from their locality. It contains an article by Ian Moore, Honorary Secretary of the West Riding Branch of the Inland Waterways Association on 'West Yorkshire's Low Carbon Freight Waterway' – how the Aire and Calder Navigation and Sheffield and South Yorkshire Navigation can greatly assist in removing HGVs from the roads and reduce hazard and emissions locally. As he says, many are no doubt unaware of their existence. The aggregate traffic to Leeds and the oil to Rotherham are featured as is the spare capacity on these waterways for more freight.

The A&CN should be upgraded by widening part of Bulhome lock, thus enabling Euro II size barges to reach Leeds with increased tonnage. Electric/fuel cell propulsion could be applied, barges being more easily adapted for this than lorries. He stresses the need for global shift from road to waterways and rail wherever possible to get the environmental gains we want.

## West Yorkshire Mayoral support

CBOA Chairman David Lowe wrote to the West Yorkshire Mayor, Tracy Brabin to highlight the benefits of the Aire & Calder Navigation with its European sized capacity of 600 tonnes linking the Humber Ports with Leeds and Wakefield and other waterways. This with the benefit of being able to reduce freight on the roads. He also mentioned the support given by the West Yorkshire Combined Authority (WYCA) for the creation of an inland port ('Port Leeds') on a disused site at Stourton and the scope for aggregates, waste and other products to be transported by barge. He asked firstly if the WYCA would assist CRT in pushing this forward to an early completion and secondly if a meeting could be arranged to further the project to upgrade/modernise the locks on the A&CN to a higher standard – an estimated £7.5m over ten years, perhaps from 'Levelling Up' or other initiatives.

David received a reply from Yusuf Ukadia, Policy and Casework Support Officer for WYCA, to say that the Mayor acknowledges the benefits water transport can offer with HGVs and vans contributing over 34% of all road transport emissions in the region, with the reduction of emissions provided. The benefit of modal shift for freight was also realised and that the Mayor "...would be supportive of measures that increase the viability of these routes, including increased funding for maintenance, where they lead to freight being transported in a low carbon manner and take vehicles off the roads." The WYCA was also aware that under the Local Transport Plan which was adopted in 2017 it recognises the potential to increase the transport of goods by inland waterway from both Stourton and Wakefield Europort (the rail 'port!') The Policy and Casework Support Officer also said that the plan states "We will work with the Canal and River Trust and other stakeholders to secure appropriate improvements to the infrastructure and facilities of the inland waterway necessary to facilitate such use, and to safeguard and enhance local wharves."



## Further Groveport expansion on the Trent

Following on from the report in CBOA News Autumn/Winter 2019 Issue 25, PD Ports announced in December a £0.5 million pound warehouse facility that will boost trade efficiencies and reduce costs for port customers as part of a long-term plan to continue growing business on the Humber. The 10,000sq.ft. transit warehouse – an interim storage location for cargo – will improve the turnaround time on vessels carrying weather-sensitive cargo, including fertiliser and steel hollow sections, allowing for temporary, covered quayside storage before transportation to a main warehousing facility on site.

PD Ports Chief Commercial Officer, Geoff Lippitt, said: “We are delighted to be able to offer this new facility that will directly benefit multiple valued customers at Groveport and further demonstrates our on-going commitment to providing unparalleled levels of service without compromising on sustainability. All Steels Trading, will be one beneficiary of the new transit store, with steel hollow imports now able to be temporarily housed in covered, quayside storage whilst discharge completes and before transfer to All Steels Trading’s on-site warehouse.”

PD Ports owns and operates five strategically positioned, well-connected and complementary sites on the Humber; Groveport, Hull, Howden, Immingham and Keadby.

## Birmingham & Midland Marine Services expand course provision

A recent press release from Birmingham & Midland Marine Services highlights the extent of the course subjects offered. The company offers a wide portfolio of services to the Civil Engineering, Rail, Utilities, Environmental, and Ecology sectors, working in an open water environment.

Occupational Water Safety & Rescue Training, Procurement, Project & Safety Management, Commercial, Support, Safety & Rescue Vessel Services, Boat Coxswain & Crew Training – Workboat, Powerboat & Safety /Rescue boat are covered.

The logistical complications ranging from obtaining workboats, floating welfare vessels, pontoons, safety boats, licences, permissions, marine risk assessments, obtaining lifejackets and rescue equipment, plus sourcing the appropriate training specific to the environment in which they will be operating are all taken care of. Training requirements can be confusing for Human Resources and Health & Safety Managers: The HSE, DEFRA and the CDM Regulations 2015 all have a requirement for training and the levels of training required also change depending upon the location of the watercourse, the specific environment and the expected level of water contact those personnel are faced with. A ‘Rescue & Recovery from Lock Chambers’ course and a boat-based HIAB Operator course are also planned for the 2022 season.

Richard Gray and his staff welcome enquiries from anyone involved with waterside work and with potential for staff training.

[www.midlandmarine.co.uk](http://www.midlandmarine.co.uk) [Office@midlandmarine.co.uk](mailto:Office@midlandmarine.co.uk), 01902 544329

## EA Thames licensing overhaul implementation

As we mentioned in the previous issue of CBOA News, the EA licensing overhaul has now been implemented and most likely for the better as far as cargo carrying is concerned. A £100 annual fee is now levied, as against 5.6p per tonne/mile last year; this may not sound much until you do the calculation with a boat load over some distance – and with a minimum charge for a powered cargo vessel (‘tug’, as was defined by the EA) of £67.20! (£30 minimum for unpowered cargo vessel / ‘butty’).

There will be a yearly percentage increase on the £100 but it is still a better option, certainly if 2 or more loads are carried. This should help our member the Narrow Boat Trust who carry solid fuels twice yearly for customer delivery on Thames, and occasionally some other operators also.

## Piling in investment

Much further downriver and as part of £2.6m investment, one hundred 22.5m long steel piles are being sunk in the quayside adjoining Plaistow and Royal Primrose wharves in Newnham, ready for a new concrete deck to be fabricated. The next stage will involve re-grading the river bed and installing berthing piles for arriving vessels.

Together with Peruvian wharf already in use, the three will handle grain cargoes during this year. This is part of the PLA’s long term investment plan to increase the volume of freight carried on the river and so cut road pollution and congestion.

## GLA Whole Life Cycle Carbon Assessments

The Mayor of London has adopted two new pieces of London Plan Guidance (LPG), which set out the requirements for Whole Life-Cycle Carbon (WLC) Assessments and Circular Economy Statements. (These apply to the largest developments in London that are referable to the mayor, however, boroughs are also encouraged to apply the policies for smaller developments).

This also supports the mayor’s other environmental policies such as SI2 – Minimising Greenhouse Gas Emissions. Perhaps there is some scope here for barge operators to make use of both these guidance policies in submissions to persuade developers and councils to use water transport for waterside developments.

## **Ross Barlow and Roman get new batteries**

Reported in the CBOA News Autumn/Winter 2016 Issue 19, the hydrogen converted ex-maintenance boat *Ross Barlow* and the *Roman* are now to get new batteries owing to a government grant, successfully applied for by Prof. Allan Walton (Professor of Critical and Magnetic Materials, University of Birmingham). The boats are used for research into use hydrogen in powder form as metal hydride and batteries, which could be a safer and cheaper use of hydrogen, all in aid of developing alternative motive power. The *Ross Barlow* is currently undergoing dock work at Stafford.

Weight of batteries is not thought to be an issue in marine use, as ballast is often necessary anyway.

## **In the press**

### **Freight to Salford**

The December issue of *Coastal Shipping* reported that the coaster *Bonay* was seen on 20<sup>th</sup> September at Latchford Locks on the Manchester Ship Canal with a cargo of grain loaded at Dover for Esprit, Salford. Less usual today than in the past, fog or mist was seen to hold up her progress at Latchford and at the Moore layby.

In the same issue, the coaster *Orbit* was seen approaching Latchford from Drogheda on the east coast of Ireland, loaded with cement for Weaste, near Salford.

*Coastal Shipping* also reported that the East Jetty of Dagenham Dock had been returned to commercial use with three visits by vessels from the H&S fleet during July and August. They all loaded scrap destined for the Netherlands.

### **Waterways World feature on HVO**

In the February issue of *Waterways World*, there was a detailed feature about use of Hydrogenated Vegetable Oil in the historic wooden tar carrying narrow boat *Spey*. *Spey*'s single cylinder Bolinder engine being perhaps one of the more extreme types of Diesel engine for a test of HVO. Designed before the modern type of high compression Diesel was invented, they can smoke quite a bit and can stop when idling if the hot bulb temperature drops.

After the test run from Stretford to London in October, skipper Tom Kitchling apparently reported that less fuel was used, was less smoky and fumes were less. Also, she ran more quietly and was more predictable and controllable he reported. Reversing the rotation was also easier apparently. No-one seems to have faulted the claims that HVO is cleaner, mixes with Diesel easily, does not attract water as does Diesel – so no Diesel 'bug', emits fewer lung-hostile particulates and is stable and climate friendly the article said.

But then perhaps the nostalgia will be missing without all the smoke, fumes and thrill of it stalling when attempting reversal entering a lock.

### **Logistics Manager report on DHL and hospitals using water transport**

A delivery service started in October in London with DHL using Thames Clippers Logistics to facilitate this, reported *Logistics Manager*. The parcels are loaded from electric vehicles at Wandsworth Riverside Quarter Pier then taken to Bankside Pier in London for onward delivery by DHL courier bikes. Investigation is under way for alternative power sources for the vessels to reduce the carbon footprint and emissions in London.

In addition to commercial freight, hospitals Guys and St Thomas Foundation Trust say they can get urgent supplies to the wards in an hour or so as opposed to road freight taking 2 hours. The Trust's supply chain hub at Dartford is a half mile from a wharf, from there they are taken by river to Butler's Wharf near Tower Bridge by CEVA Logistics using Livett's vessels, then by e-cargo bikes to the hospitals. During the night, bulkier items are carried on the vessels, such as syringes, examination gloves and PPE. Three delivery trucks travel about 1500 miles weekly, reported *Logistics Manager*, each truck emitting about 708kg of CO<sub>2</sub> which can be saved each week. The Trust hopes to extend the service with other partners also using the service to reduce overheads.

*Logistics Manager* also reported that in Paris, the claimed first commercial cargo vessel to move pallets and containers on the River Seine will be operational soon. The vessel uses fuel cells producing compressed hydrogen via electrolysis. Influenced by Blue Line Logistics' *Zulu* vessels' successful operation in Belgium, the initial design for pusher tugs was changed to a self-powered cargo vessel.

In a report by the charity Centre for London, it highlights the problem of 25% of road transport emissions arising from goods vehicles. One of its key recommendations is that national government should invest in reactivating London's piers, wharves and rail-road interchanges so that the river and railways are viable alternatives to road freight and public investment should target the electrification of boat and train fleets to reduce pollution. A single freight train removes up to 76 HGVs from the roads; water freight is estimated to currently shift the equivalent of 265,000 HGV movements yearly (TfL Freight and Servicing Action Plan; PLA provided figures).

## CRT lock gates by water

The CRT staff magazine *The Source* carried an article on lock gates for Newark lock on the Trent being carried by barge from the CRT works at Stanley Ferry to site. This is a welcome change to the usual waterside to waterside lorry shipment and Construction Manager Julian Rasen said "...by using traditional transport methods and crane boat *Pride of Collingham*, instead of hiring in a 100-tonne crane, we have been able to save a significant amount of money." We know that water transport can be cheaper in some instances and it is good to see this is recognised here. He also pointed out that the in-house construction team had 220 years' service between them; it is also good to see that long service with CRT maintaining the skills acquired, still occurs.



Newark Town lock gate replacement (CRT)

CBOA has been in discussion with CRT for some time about carrying gates to lock sites from their other lock gate making site at Bradley, West Midlands.

## BP hydrogen on Teeside

BP reports it is planning a new large-scale green hydrogen production facility in the North East of England that could deliver up to 500MW (megawatt electrical input) of hydrogen production by 2030. Aiming to start production by 2025, with an initial phase of some 60MW of installed hydrogen production capacity, the project will be developed in stages. A final investment decision on the project is expected in 2023.

This project forms part of BP's commitment to decarbonizing hard-to-abate industrial sectors including heavy transport. With the Tees Valley Hydrogen Transport Hub, it will help pave the way for its use across all transport modes, BP say. The proximity of the docks will hopefully make this possible for water transport also, either as electrical power or as hydrogen for vessels.

## John Branford on ITV

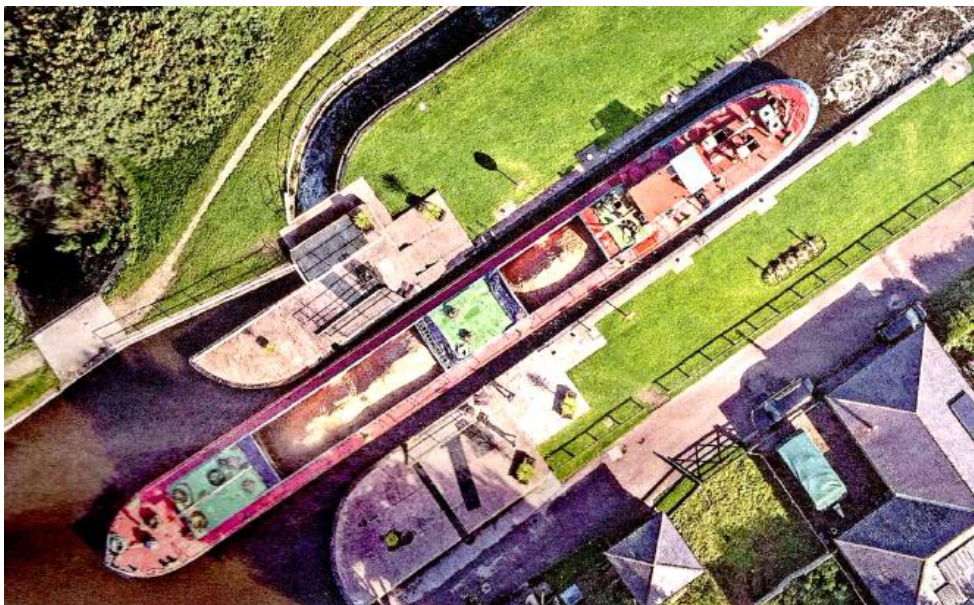
In November, John Branford speaking from the fore end of his loaded barge *Farndale H*, made the case plainly and profoundly that barge transport has to be the thing of the future for reduction of road transport and helping to meet COP 26 with lowering of emissions. Having carried an estimated 4million tonnes of freight by barge in his lifetime, it all seems very convincing indeed. Using the tide ebb and flow to aid passage between Hull and Goole also reduces fuel use – this can't be done on the road, he says. "It's about connectivity across the north, not just in London", he said. "The arithmetic stacks up [for barge transport], it's a lot more environmentally friendly on here... why shouldn't you do more of it? It just makes sense to me."



John Branford on *Farndale H* (ITV)

## *Farndale H* in *The Times*

Branford Barge Owners' *Farndale H* also featured in *The Times* on the 18<sup>th</sup> October, photographed at Woodlesford lock near Leeds, with the caption that 'Barge owners say the government should invest in canals if it is serious about climate change'



*Farndale H* at Woodlesford lock (*The Times*)

## The Times focusses on freight on waterways in London and elsewhere

With the eye-catching title of “Cargo to send? Let’s off-road”, *The Times* focussed on “London’s newest vehicle”, the *Bravo Lima GB*, that CBOA featured in the Autumn/Winter 2021 issue of CBOA News.

Providing roll on/off delivery for crates and medical supplies as a first cargo, Ed Livett of Livett’s the operators is excited about the introduction of this service, *The Times* reported. With a creaking logistics sector – driver shortages, clogged roads, the need to reduce emissions is inspiring companies to innovate with freight transport the article said; it is necessary to both harness the historic infrastructure as well as develop new technologies.

With both rail and waterways losing freight to roads over 60 years, 79% of freight is now carried by road, 13% by water and 8% by rail, but these figures or their calculation methods were not substantiated. CBOA member Tim West of Wynns, the heavy freight transport company was quoted as saying “Water can be a forgotten transport mode... water borne freight hasn’t had the attention it might deserve”. But there are signs that traffic is bouncing back the article said. The Thames has the best chance of boosting water borne freight, traffic increased by 5% between 2018 and 2019 with mainly construction traffic and rubbish carriage.

The London sewer project has used the river to shift five million tonnes – 600,000 HGV journeys it reported. The PLA wants to increase freight. DHL as reported previously by CBOAN has started a parcel delivery service and passenger piers are now being examined for light goods delivery. James Trimmer, the PLA’s director of planning was reported as saying that “...the Thames can offer sustainability and reliability, vital to the logistics industry and is a congestion-free highway right into the centre of the city”.

The north of the country was also covered with Peel Ports building the £139m Port Salford which could connect ships, road and rail. Traffic had increased 10% this year, said Stephen Carr, the group commercial director. Interestingly, he said that companies were stocking more now – ‘just in case’ rather than ‘just in time’. CBOA also got a mention, stating that the Trent and the port of Goole are capable of handling more freight. Wood, Hall and Heward were also mentioned, carrying freight on London’s smaller waterways, with there being no reason why ‘white van man’ deliveries cannot go by water where appropriate. The protected wharves on the Thames – from developer’s ambitions – can assist also.

Other delivery methods were also covered; Rail with freight increases reported also, a magnetic levitation system in a tunnel network being developed by Magway of Wembley, using van or bike for ‘last mile’; Magway’s co-founder Rupert Cruise saying that we all have the same issue of the need to tackle the dominance of road freight transport.

## Overseas News

### Zeetug 30 electric tug



Navtek Naval Technologies of Istanbul have reported on the operation of their claimed world first electric harbour tug *ZEETUG 30*, over 552 operational days’ operation. The motor run time was 1930 hours, the total charging was 380,000kWh. The operational time was 95%, 0.83t of NOx and 317.7t CO<sub>2</sub> saved, together with various other statistics given comparing electric to fossil fuel motor power.

[www.navtek.net](http://www.navtek.net)

## Vessel platooning (or vessel train) study

The aim is to reduce the crew cost by automating the navigation tasks and moving the navigational responsibility to the leading vessel of the platoon in the vessel train (VT), which is fully manned. A developed model was used, which allows the assessment of the concept's viability by comparing the annual cost per transported tonne of a reference vessel that sails individually to a single vessel that sails on the same route.

The results showed more promising for the Rhine than the Danube which was also considered. The Danube has lower traffic density and uses large push tows (compared to self-propelled barges on the Rhine) and as stated, the lower wages would hamper successful implementation! But with the Rhine, lowering the transport cost would potentially make water transport more attractive against other forms. Another challenge facing the IWT sector is the lack of skilled crew members. The labour shortage in the (western) European IWT sector is growing and crews tend to be ageing.

Applying the VT concept in the Danube case requires more potential cargo flows, which can be obtained by adding push convoys into the vessel train.

An innovative transport system is being developed by the NOVIMAR project [38] that aims to enhance waterborne transportation in different areas in Europe through crew cost minimization. With VT potential lower operating speed increases voyage times for the VT user. This lower operating speed is caused by the fact that the speed of VT is determined by the vessel with the lowest operational speed, causing other vessels to slow down while operating in the VT. The VT concept can only work if the cost of the VT control system and the cost created by these increased voyage times do not outweigh the savings that are achieved by the crew reduction.

## Kotug electric tug

The web site <https://www.portstrategy.com/greenport> announced that a zero-emission tug is being used for shipping coca. The web site <https://www.kotug.com/> says a *KOTUG E-Pusher type M* and four barges will be used for shipping cocoa beans between the Port of Amsterdam, the largest cocoa import port in the world, and their cocoa facilities in Zaandam. The vessel is equipped with swappable battery energy containers from Shift Clean Energy (Shift), which is part of the revolutionary design of the vessel and will utilize Shift's unique battery swapping and charging stations. The operator Cargill claims to have the first fully electrified industrial setup for inland shipping.



'Kotug' electric pusher tug (Kotug)

Supporting the worldwide energy transition and the modal shift from road transport to waterways, the *Kotug E-Pusher type M* can push barges with up to 4,000 tons of cargo. The *E-Pusher Series* consists of three types: *Small*, *Medium* and *Large*, respectively for transportation in inner cities, over short distances and the larger inland waterways. The company KOTUG says they have reduced the construction time by more than half compared to traditional pusher boats, by using a modular approach and lean assembly method.

## Flanders investigates a qualitative assessment tool for innovative waste logistics

With new, innovative logistics tools and frameworks coming to the market, it is now seen as desirable to develop a decision support framework to assess the value of a proposal before carrying out extensive, quantitative economic assessment studies and possibly also large-scale implementation. The 'derived parameter impact model' so called, assesses the importance of the different parameters, allowing opportunities to be found without the need for extensive information and/or investment, reports the *Journal of Shipping and Trade*.

Summarising this rather wordy, already paraphrased description suggests that complex analysis techniques might be used to provide an indication of usefulness of a future pilot study, before investing in a costly/lengthy exercise.

Three areas of waste logistics were examined:

- the use of telemetry (i.e., using remote sensors with communications to a monitoring station, to identify the filling rate of waste collection points)
- small waste compactors on the business side
- inland waterways to transport waste to treatment centres – a modal shift.

It was recognised that the vast majority of waste transport is done by road, the waterways being seen as a more sustainable transport mode, but that there are barriers to using water transport, mainly inconvenience. Various types of waste were examined, each with its different pattern of creation and disposal. Recycling has to be convenient, or it won't happen. Eliminating the emptying of largely unfilled bins is a waste of transport. All these and other factors should be considered in the model to assess different waste scenarios giving the first insight into the feasibility of a waste logistics proposition.

## CBOA for Members

### CBOA News format and web site

The CBOA news is available to all members and is also provided to interested parties with a view of promoting water transport. The production process involves producing a PDF type file for the printer which is of course also available to anyone who would like it. So, if any member would prefer the PDF file instead of the hard copy printed version (or indeed as well as), please contact Becky Clutton [info@cboa.org.uk](mailto:info@cboa.org.uk)

Access to the CBOA members' section is password controlled and if any member does not have the password, please contact Becky.

### New rope for old

CBOA member Bengt Sandinge of DFS, the marine supplier in Stockholm and Gothenburg, have developed a recycled plastic material for making rope. Their most recent project is with ropes, it seemed completely unnecessary to always use virgin plastics to produce them and they consider that ways should be found to recycle them.

During the spring of 2021 they made great progress when they produced their new ReLine(32mm) made by Plastix A/S. It is made completely from recycled plastic waste from the maritime industry (discarded ropes and fishing nets). By recycling it into ReLine they are confident in creating a true circular economy for ropes in several different industries. Several sizes are now produced, with the product also being stronger.

Savings are obtained in the carbon footprint with about 1,69kg CO<sub>2</sub> for every kilo of ReLine produced. Plastic waste is reduced and it therefore achieves a considerable improvement for the environment.

During 2021 the manufacturer Plastix A/S decided to enter the Plastics Recycling Awards Europe 2021, their submission was the "Circular Green Rope". Their entry was based on the first generation (Alpha) of ReLine, ordered by DFS and they won the first prize. For enquiries about their products see <https://www.dfs-ab.se/Contact>

### Skippers Guide

This has been written principally for pleasure boat skippers unaccustomed to rivers, tides and waterways carrying freight. Professional skippers may perhaps find it interesting also, if only to consider what a pleasure boat skipper will encounter and needs to know; the skipper may be lacking experience of a large waterway and not knowledgeable about barge navigation.

The original content for the guide is courtesy of First Mate Guides, NABO and the barge operators, it was updated by Stuart Sampson in 2021 with information kindly supplied by IWA and CRT, with CBOA input.

See <http://www.cboa.org.uk/links.html> then choose 'Other' to download the PDF file; if needed, hard copy can be obtained from the CBOA Membership office – see overleaf for contact details.

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## CBOA NEWS

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