

Water-borne freight services have begun on the River Severn after a 10-year hiatus

Partners: British Waterways
 CEMEX UK Construction Services Ltd
 Thompson River Transport

Sea and Water members' British Waterways and Thompson River Transport have facilitated an environmentally-friendlier means of transporting CEMEX construction materials for the local market; via water rather than by road.

In March 2005 the River Severn was used for the first time in ten years to transport CEMEX's quarried products on specialist (180-tonne) barges (*Perch* and *Chub*) operated by Thompson River Transport. This freight activity is culminating in the transportation by water of 200,000 tonnes (a year) of sand and gravel.

The aggregate is extracted from a quarry near Ripple and transported by barge, two miles north to CEMEX's Ryall Plant near Upton-upon-Severn, Worcestershire on average four-to-seven-times a day. There the aggregates are washed and separated into various grades. It is intended that there will be a twice-weekly service whereby some 65,000 tonnes (a year) of newly-processed material will be loaded back onto the barge and transported down the River Severn via the Sharpness Canal and Gloucester Docks to CEMEX's Ready Mixed Concrete plant two miles south of Gloucester.

The concrete is then used for locally based, construction projects within a 10-mile radius of CEMEX Ready mixed plant.

CEMEX chose modal shift from road onto water because it was a commercially sound and an environmentally-sustainable solution. The development of quarrying activity at Ripple would have had the adverse effect of increasing the number of lorries traveling on local country lanes. The solution was to maximize the nearby river as the principal mode of transport. In the future there may be an opportunity to extend the river-transportation service upstream to incorporate our plant at Worcester.

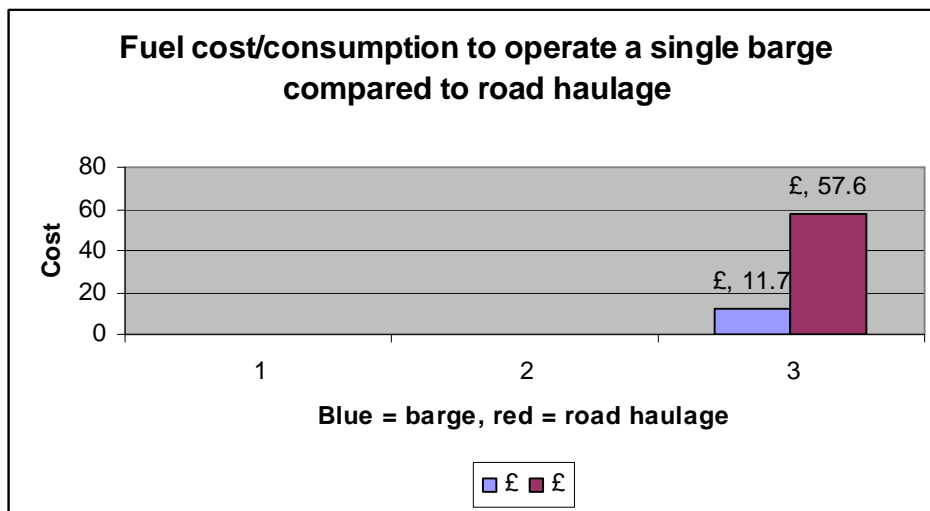
Environmental benefits

The new water-borne service has ensured that:

- *When Perch and Chub* carry out four-sailings-a day it is the equivalent of taking 116 (25-tonne) round-trip lorry journeys off the roads. (Barges 180-

tonnes x two x four = 1440 tonnes a day) (Road haulage 1440 tonnes / 25 tonnes x two trips per delivery = 116 journeys)

- The elimination of the lorry journeys means that issues such as road accidents, noise, congestion, vibration and the use of the aggregates in the road are reduced as a result of this new freight service.
- Barge transport reduces emissions of carbon dioxide and other toxins.
- Each barge requires 90-litres of gas oil @ .13 of a litre per tonne to operate. For a lorry it requires the equivalent of [9 miles to the gallon] [needs to be in litres] of diesel that is equal to 36 litres x 1.6 litres per tonne.
- Barges consume 50 times less fuel than the road fuel required by a single lorry.



Investment

To facilitate the new river-borne freight service several million pounds have been invested in the infrastructure to ensure the sustainability of the service.

Freight Facilities Grant

CEMEX applied for, and secured, a £1 million Freight Facilities Grant from the Department for Transport and used it to establish the handling equipment at its wharves at Ripple and Ryall.

Individual investment

The partners investment contribution was equal to:

- CEMEX funded over £2 million to match the government's grant and develop the infrastructure.
- British Waterways invested £300K by dredging the Gloucester docks and improving the lock gates.

- Thompson River Transport invested £300K in two motor barges: *Perch*; a former mud hopper; and *Transient* which has the capacity to carry 558-tonnes of cargo.

Thompson River Transport

Graham Thompson the owner and operator of Thompson River Transport says together the partners have broken new ground. "The partnership between CEMEX and Thompson is a success. In addition the new service has created new jobs for local people and we have invested in their training which benefits the whole community. We are looking forward to the extension of the service."

Sea and Water

Dr Heather Leggate, Director of Sea and Water, says the new service is an excellent example of modal shift.

"This partnership surrounding the Severn River is an excellent example of what can be achieved through co-operation and collaboration. I am hopeful that other organizations both in the private and public sector will follow suit and take up the opportunity to enable sustainable modal shift from road to water."

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Picture captions:

1. CEMEX construction materials comprising locally quarried sand/gravel is transported by *Perch* on the River Severn and will ultimately be used in local construction projects.
2. The *Perch* (owned by Thompson River Transport) sails from CEMEX's Readymix concrete plant in Gloucestershire. It is the first time in a decade that the River Severn has carried water-borne freight.

Editor's notes:

Sea and Water is the thought-leader that encourages logistics managers to take freight off the highly-congested road network and onto the environmentally friendly and sustainable modes of short sea, coastal and inland shipping. Intermodal shift to water will reduce carbon emissions that will contribute to HM Government's Kyoto Climate Change targets. Water-borne freight is environmentally sustainable and it has economic benefits for the port and wharf communities around the UK.

The organisation was set up in 2003 as a result of the Water Freight Forum's recommendation in its report Freight on Water (2002).

British Waterways cares for more than 2,000 miles of canals and rivers nationwide and works with a broad range of public and private sector partners to unlock the potential of the inland waterways to bring tangible environmental, economic and social benefits to millions of people across Great Britain. British Waterways is responsible for the navigation on the River Severn.