

Sustainable ferry landings: optimising infrastructure



Ferry pontoon in Gravesend

In order to develop efficient and sustainable ferry connections it is necessary to have suitable infrastructure in place. However, today's ferry landing equipment does not always meet current standards for disabled use, sustainability and operational use nor connectivity with other public transport modes.

By developing innovative designs to address technically challenging landings, iTransfer partners are identifying opportunities for improved ferry crossings and attracting new operators to the sector.

Connecting Kent with Essex across the Thames Estuary, the Gravesend-Tilbury crossing provides a sustainable means of travel. The 10 minute delay free crossing offers an alternative to a 40 minute, 33km congested road journey. It also allows connection with the 23 minute High Speed 1 train service from Gravesend town centre to central London.

Growing passenger demand required an enhanced ferry service. The previous landing at Gravesend could not accommodate larger, modern vessels and did not comply with accessibility requirements. As a privately-owned facility it was not possible to competitively tender for the ferry service.

Developing a new pontoon connected to the riverward end of the town pier addressed those issues. The pontoon can now accommodate passenger ferries and other craft at all states of a large tidal range (the difference in height between high and low water which, in this area, is between five and seven metres) and is suitable for use by travellers with impaired mobility.

iTransfer partners contributed their knowledge and experience at a design workshop and helped to improve the original design for the new ferry pontoon, including:

- the pontoon location was moved to deeper water to allow berthing on both sides
- the pontoon length was halved, freeboard increased to 1.5m and end berthing was removed
- a simpler connection provided better access for passengers and wheelchairs.

These improvements combined to reduce material costs and assist delivery and successful construction.

Sustainable ferry landings: optimising infrastructure



View of Gravesend from pontoon



Pontoon ramp

The pontoon is now suitable for a fully accessible passenger ferry service across the Thames. Visiting leisure craft of varying sizes are also able to use the new facility making the town more accessible as a visitor destination and reinforcing its historic links with the river. The pontoon provides a quick and easy travel option for local people and visitors. It will also help to reduce carbon emissions by providing an alternative to roads.

An inauguration event was held in October 2012 for the opening of the new pontoon by Councillor Lyn Milner, the Mayor of Gravesham and Matt Nichols representing the North Sea Region (NSR) programme secretariat.

Located at the heart of the Thames Gateway, Gravesham has been involved in focused regeneration activity for more than 25 years. The council's commitment to working in partnership has linked environmental improvements with economic enhancements and led to the council receiving accolades for its town centre regeneration.

Sharing lessons learned

Kent County Council has been developing a tender for the provision of the Gravesend-Tilbury ferry service. Once the new service operator is appointed, it is hoped the pontoon will see an increase in passenger numbers, reducing congestion on roads and rail, and ultimately create a more sustainable method of transport for increasing numbers of commuter and leisure journeys.

This experience has been shared and the approach will be replicated. Ostend and East Lothian Council will apply the lessons learned when assessing the different tidal challenges of their own landings. Approaches to optimise infrastructure have been directly applied by East Lothian to increase accessibility of North Berwick Harbour. A report will be produced to demonstrate the opportunities available to replicate on other NSR ferry crossings and attract new operators to the sector.

iTransfer

iTransfer (Innovative Transport Solutions for Fjords, Estuaries and Rivers) aims to make ferry transport more freely accessible and sustainable, and encourage more people to travel by water. In areas in the North Sea Region (NSR) there are opportunities to replace existing vehicle routes with passenger ferries as a viable alternative. Travelling by ferry is more sustainable, easier and quicker. It can also provide lifeline services to remote communities.



Lead partner

1. Institute for Sustainability (UK)

Partners

2. AG Port of Oostende (Belgium)
3. Erlebnis Bremerhaven GmbH, Bremerhaven Touristik (Germany)
4. Damen Shipyards (Netherlands)
5. Gravesham Borough Council (UK)
6. Kent County Council (UK)
7. Magistrat Bremerhaven (Germany)
8. Rederij Doeksen (Netherlands)
9. SEStran (UK)
10. Weserfähre GmbH (Germany)
11. TESO (Netherlands)

Sub partners to Erlebnis Bremerhaven GmbH, Bremerhaven Touristik

12. Helgoland (Germany)
13. Hal-Över (Germany)

Sub partners to SEStran

14. Maid of the Forth (UK)
15. East Lothian Council (UK)

Sub partner to the Institute for Sustainability

16. UCL Energy Institute (UK)