



Immerse Project Summary

North Sea Region (NSR) estuaries are dynamic environments subject to persistent and increasing pressures, such as modified tidal ranges, increased flooding, and sediment dynamics, which impact estuary functioning and services. Implementation of large-scale measures to address these pressures requires large investments, long planning periods and political as well as stakeholder commitment. Moreover, measure development is challenging to estuarine managers while measures need to have the desired multi-purpose impacts while also meeting cost-efficiency criteria.

The IMMERSE project will focus on management measures and aims to improve measures during their development process on: (1) exploration of solutions, (2) testing and (3) fostering implementation. International cooperation in this highly specialised field will lead to more effective measures, due to the sharing of knowledge and insights on technical and governmental issues. Stimulating stakeholder integration, making good use of new communication methods and tools, will lead to better acceptance and thus more efficient implementation of the measures.

On this basis, IMMERSE will improve development and accelerate implementation of large-scale measures at estuaries addressing multiple challenges, while increasing their cost-efficiency and enhancing stakeholder and political commitment. This will eventually lead to better accessible harbours and more sustainable estuaries, in and outside the NSR.

Tees IMMERSE strands

- **Pilot site for replacing section of hard estuary with 'soft' solution**

The Tees Estuary has lost over two thirds of its intertidal habitat to land reclamation and industrial development. Despite its continued and growing strategic importance as an active manufacture and shipping base, there are opportunities to soften the estuary edges at redundant sites, especially those which are due to be refurbished.

Replacing traditional sheet piling methods with alternative materials have the dual benefit of providing necessary flood protection whilst also supporting a greater number of species and improving the ecology of the river. This has sociological as well as ecological benefits and will contribute to increasing the value of area to the community.

This pilot scheme will work at a site (to be determined) and remove a section of hard edging and replace it with a bio-engineered solution. This will be monitored to capture changes in ecological activity in the river and on the bankside

- **Feasibility study looking at co-location of mariculture with windfarm**

Despite great improvements in the Tees, water quality in the tidal reaches of the river and estuary remain poor.

This measure will investigate the feasibility and potential of a recently constructed inshore windfarm to support the infrastructure needed to grow a commercial species.

The study will look specifically at: potential legal barriers; types of culturing infrastructure that might work at the location; potential species that could be cultivated; potential income and employment that could be generated by such an operation.

If this project finds that there is potential but that this is being hindered by poor water quality, in the long term it will act as an ecosystem service driver to stimulate further improvements in waste water treatment.

The project is exploring innovative solutions to stimulate economic and ecological improvement. It has implications for similar sites in the North Sea and beyond and will benefit from international collaboration with partners.

Budget:

Overall Budget: 4.405.684 €

Tees Budget: 452.812 €

INTERREG intervention rate is 50%

Partners:

Mobiliteit en Openbare Werken
Waterwegen en Zeekanaal NV
Havenbedrijf Antwerpen
Rijkswaterstaat Hamburg Port Authority
Bundesanstalt für Wasserbau
University of Hull, Institute of Estuarine & Coastal Studies
Tees River Trust
Chalmers University of Technology
Swedish National Road and Transport Research Institute
Frederikssund Kommune

Project Submission:

Project submitted in Mar 17. Rejected Sep 17 but encouraged to re-submit.

Project call opens in Dec 17, will be submitted Feb 18 for June 18 decision

Project will run for 3 years.

Summary prepared by Ben Lamb, Trust Manager, [Tees Rivers Trust](#)

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