

Working with Nature

Opportunities in the UK

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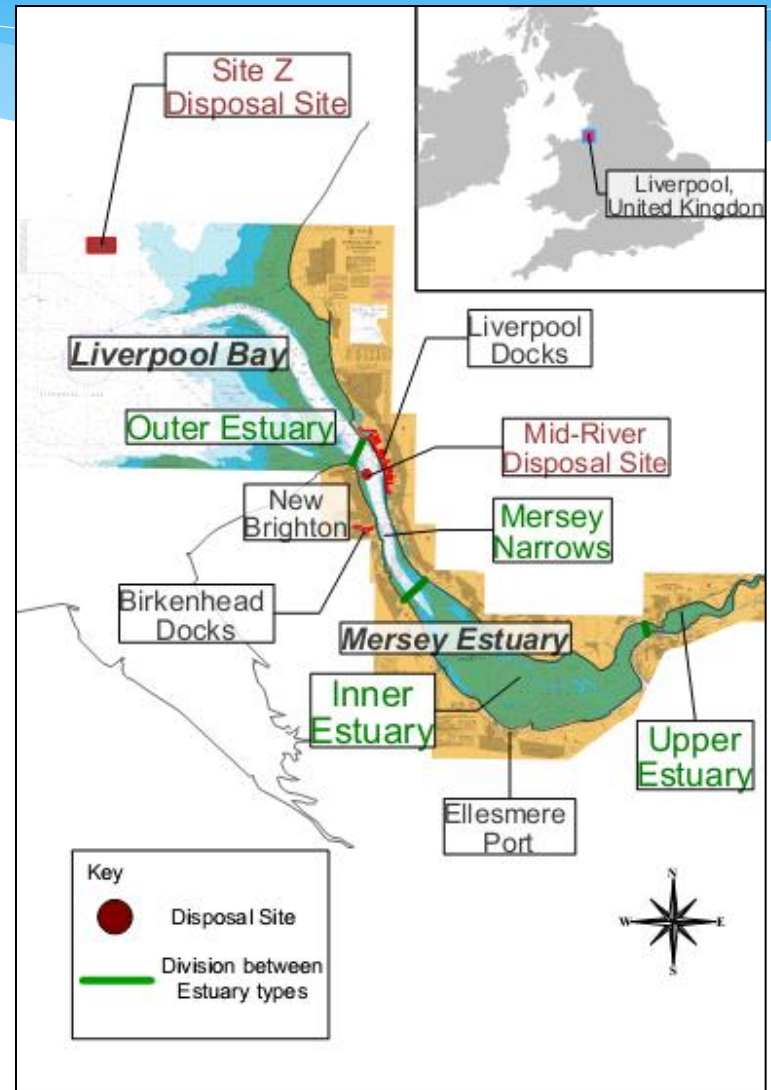


Two case studies



Mersey estuary case study

- * 1.5 million tonnes of sand and 0.8 million tonnes of silt dredged annually (suitable for sea disposal)
- * Majority of disposal to site 'Z' in the Liverpool Bay ~20km from the dredging sites.
- * Minor volumes disposed to Mid-River ~1km from Liverpool Docks.



Steps to achieve win-win options

1. Establish project need and objectives through Working with Nature philosophy
2. Understand the environment: several national and international designations; historically accreting system; modest sea level rise
3. Meaningful use of stakeholder engagement: challenge to manage expectations for maintenance dredging
4. Project proposal: sediment management study; work with stakeholders to prepare long list and short list of potential win-win solutions



Option appraisal and outcomes

- * Increase quantity disposed at Mid River site. Aim: retain fine sediment in the estuary as a supply to intertidal habitats in the face of sea level rise.
- * Fine sediments support fish nurseries and internationally important salt marshes and seagrass beds. The habitats increase amenity value and improve recreation
- * Preferred option could lead to significant cost and carbon savings
- * Working with Nature proved a useful philosophy once all had adjusted to a different way of thinking



Salhouse Broad Spit Restoration

Maintenance dredging 50,000m³ annually forms a challenge for the Broads Authority because of the limited disposal options.

By following the philosophy of Working with Nature new opportunities can be identified to beneficially reuse this sediment.



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Multiple benefits



12,000m³ sediment reused

Unstable spit of land strengthened

Eroded land was re-established into internationally important reedbed habitat.



Success



Multiple benefits achieved by working together with stakeholders, and supporting biodiversity strategic objectives.



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Conclusion

- * Based on the case studies the philosophy of Working with Nature contributes in the process to achieve multiple benefits.
- * In our wider experience in the UK, however, there are a few challenges to overcome to enable the Working with Nature philosophy to be more widely implemented.

Challenges and potential route to success

Fear of change

• Guidance and patience

Lack of awareness

• Perseverance and time

Lack of incentive

• Publications and awards

Lack of understanding

• Guidance and database

Thank you



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