



Copenhagen Offshore Wind International Conference 2005

Post-construction Results from The North Hoyle Offshore Wind Farm
– What is the REAL environmental impact?

**Jamie May –
Environmental Manager
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APPROACHES TO THE RIVER DEE
DEPTHS IN METRES
SCALE 1:25000

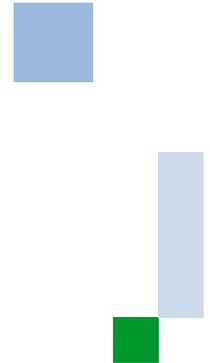
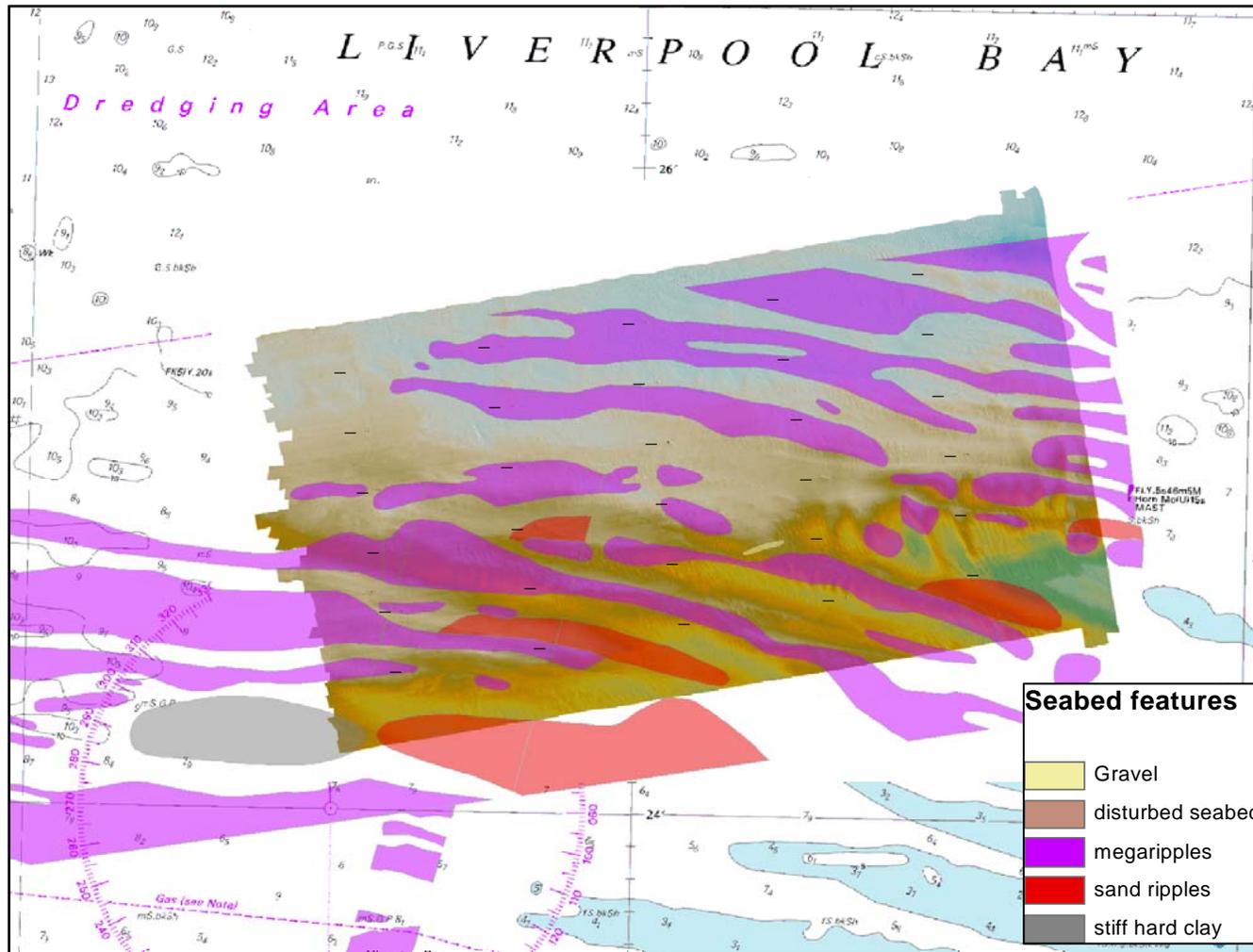


Overview

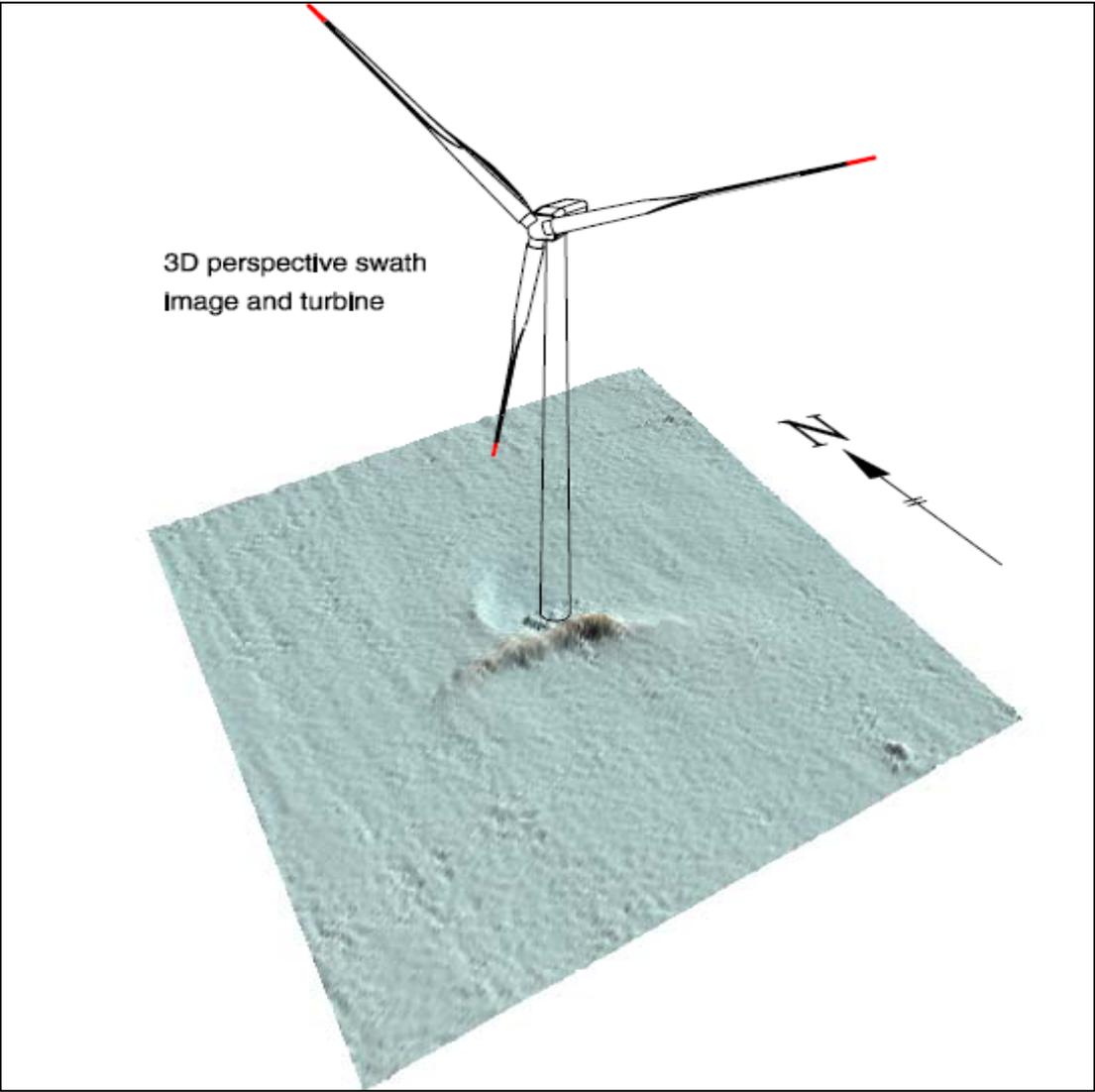
- Overview of the post construction environmental monitoring
- Tentative conclusions on the effects of wind farm construction and operation
- What is the REAL environmental impact ?



Geophysical Surveys



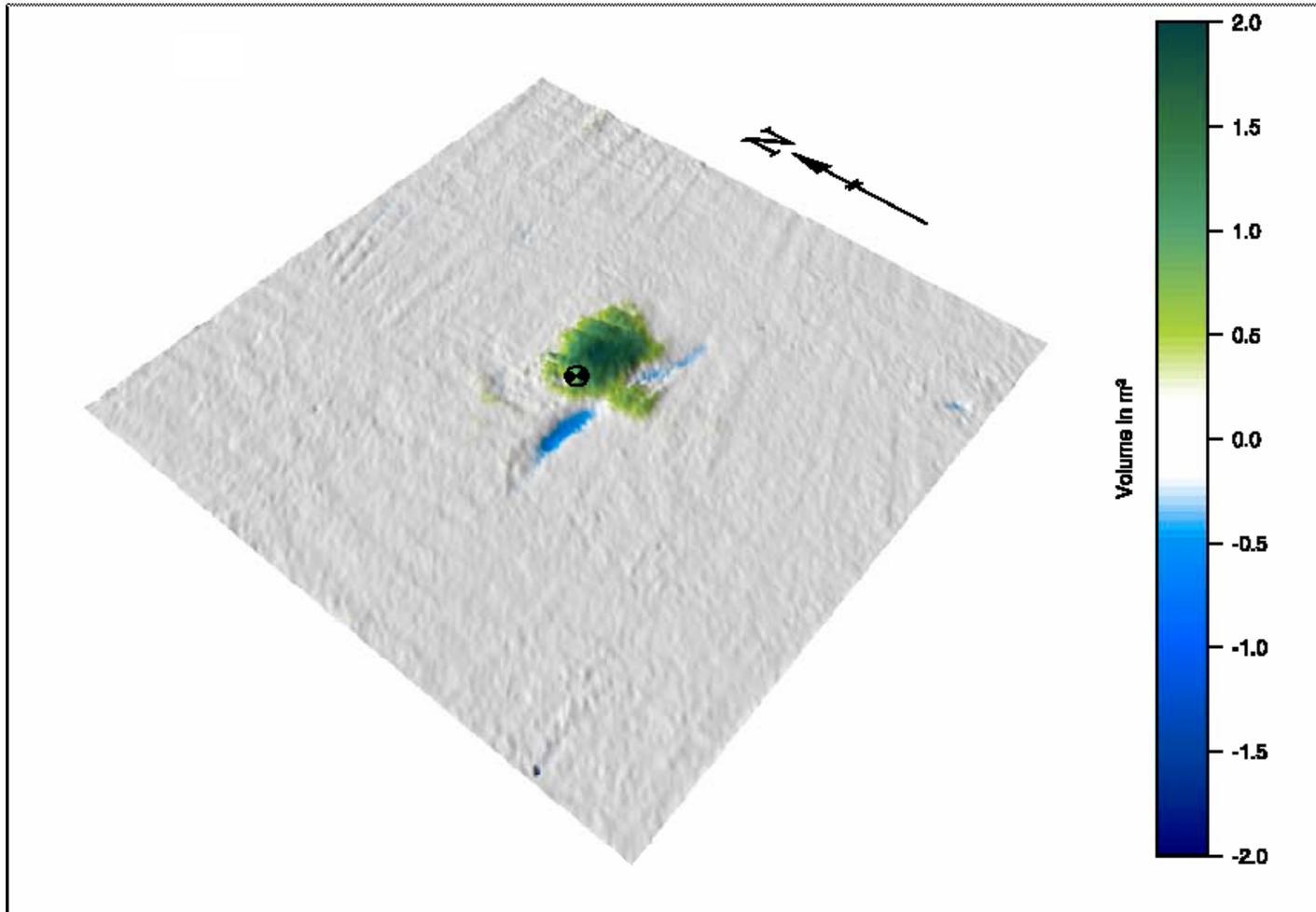
2004 Swath Bathymetry Survey



3D Perspective Swath Image and Turbine
Osiris Projects Ltd



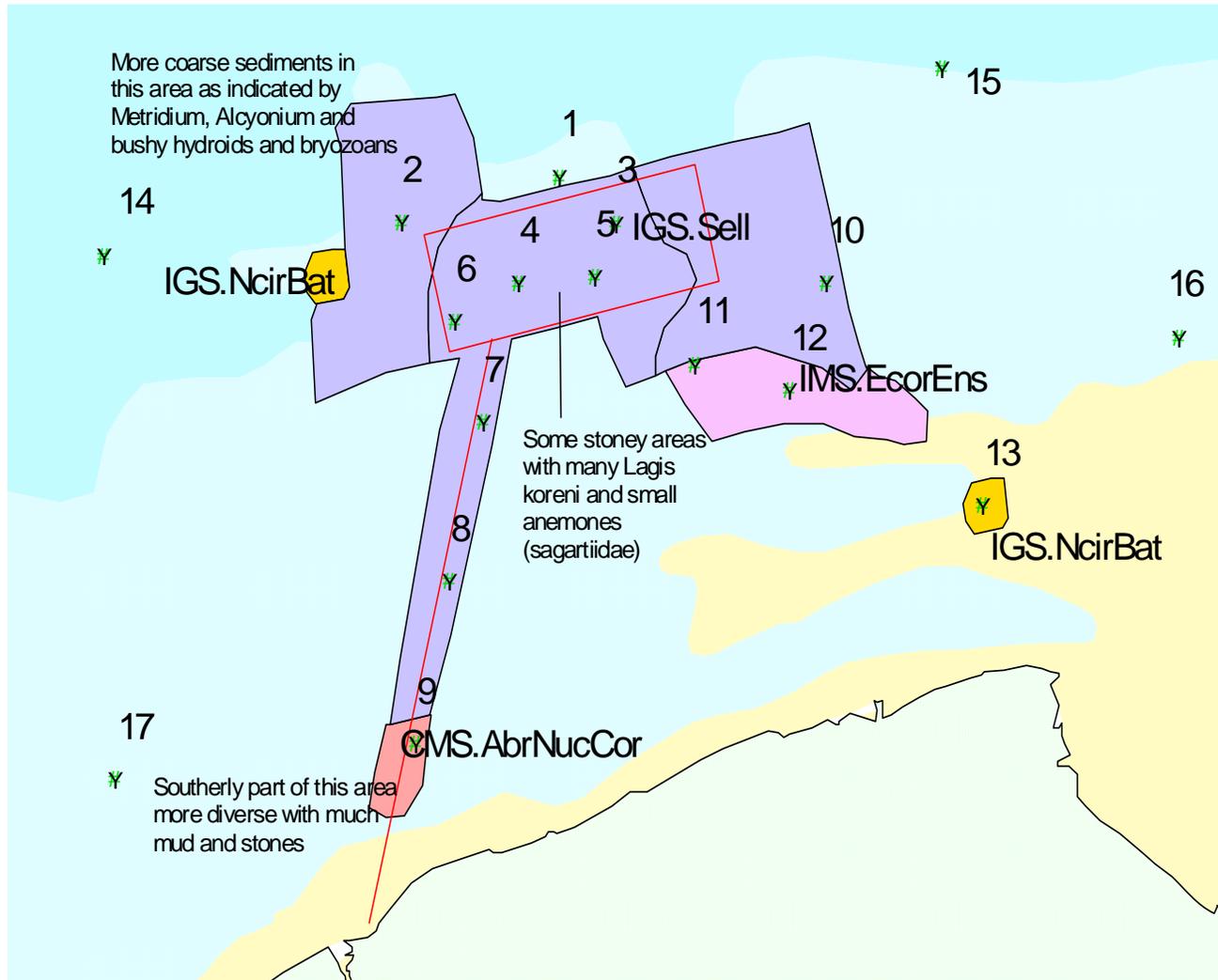
Bathymetry Comparison: 2004-2005



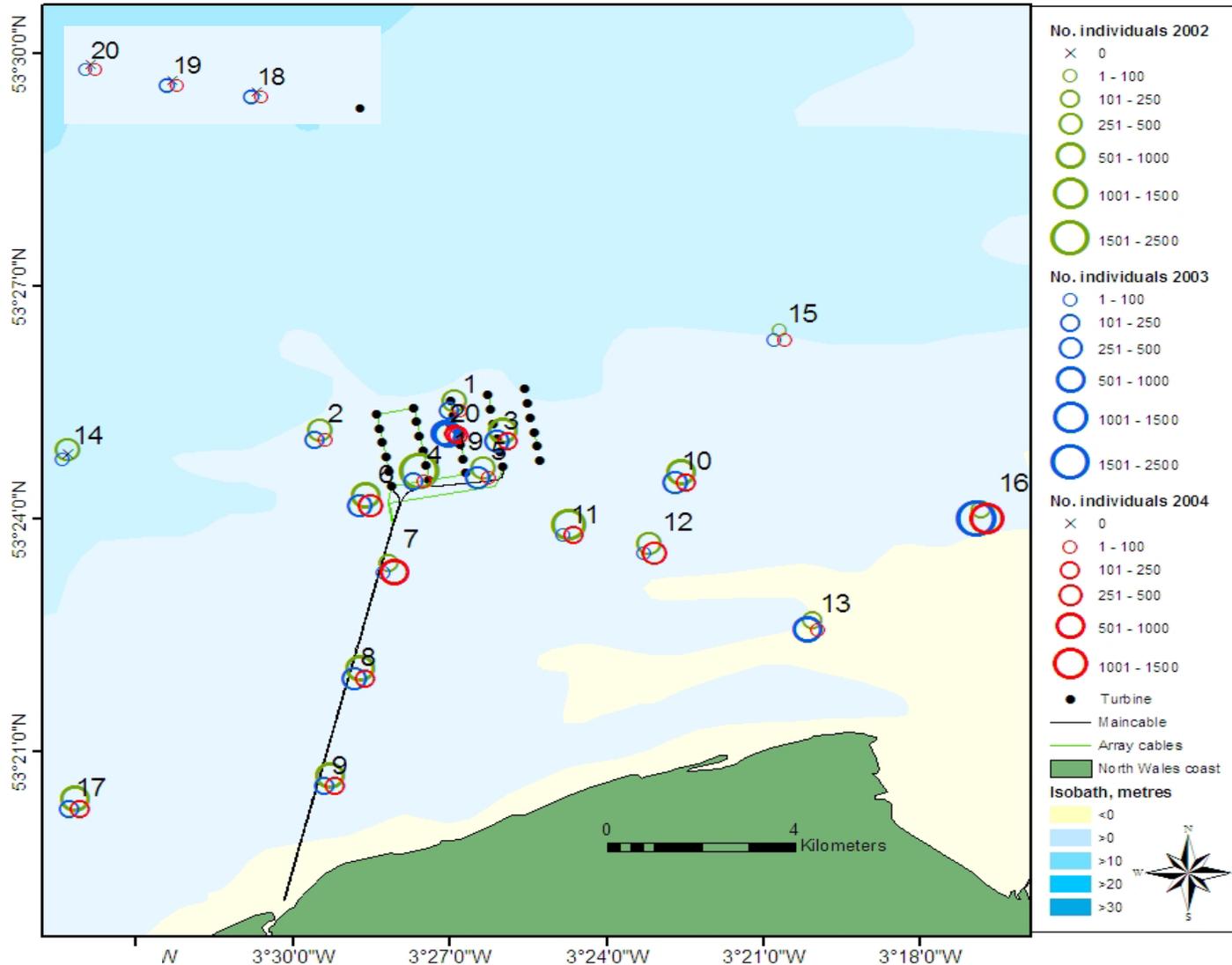
3D Representation – Volume Comparison 2004 against 2005

Osiris Projects Ltd

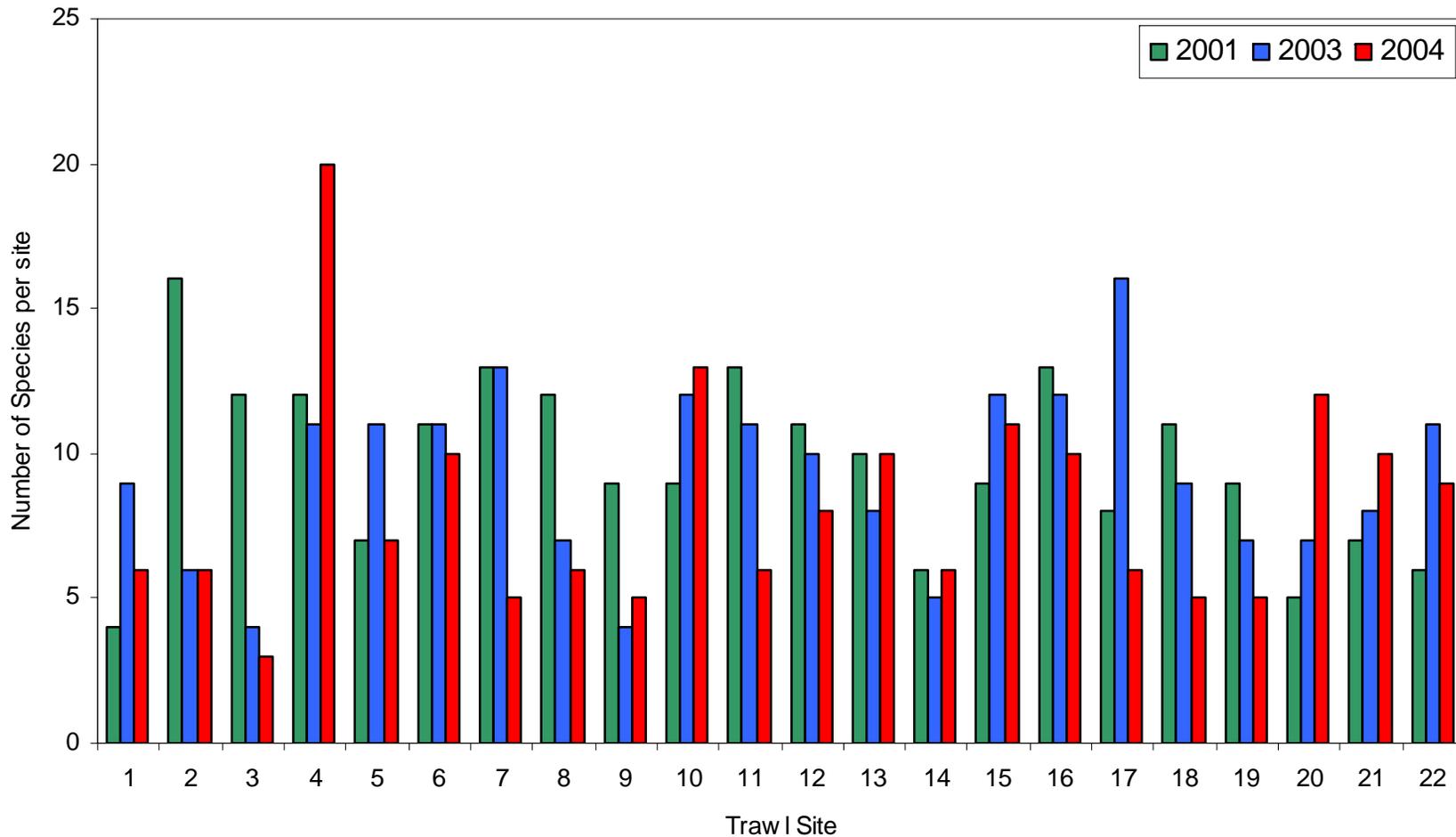
Benthic Biotopes



Changes in Benthos

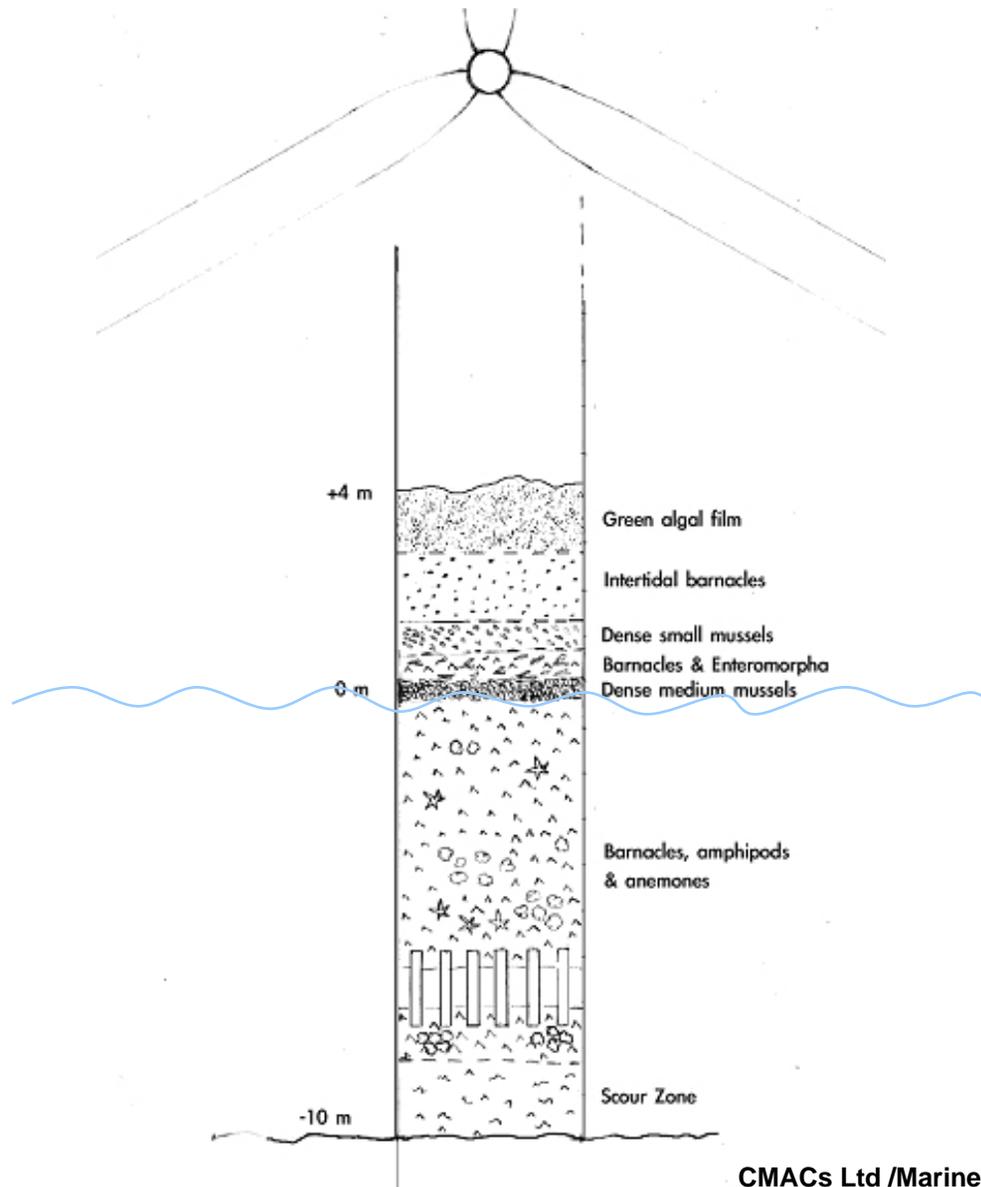


Epifauna: Distribution and Change

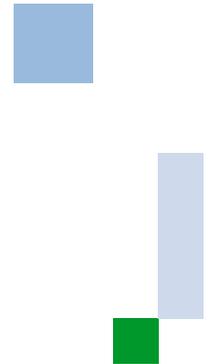


Number of epifauna species found at each site for the three surveys (2001, 2003 and 2004)

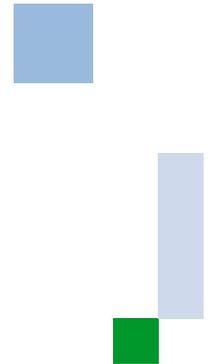
Biota Zones on Monopile (Year 1)



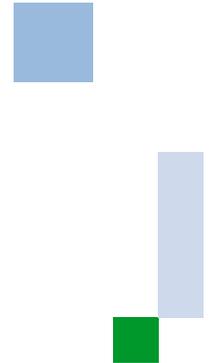
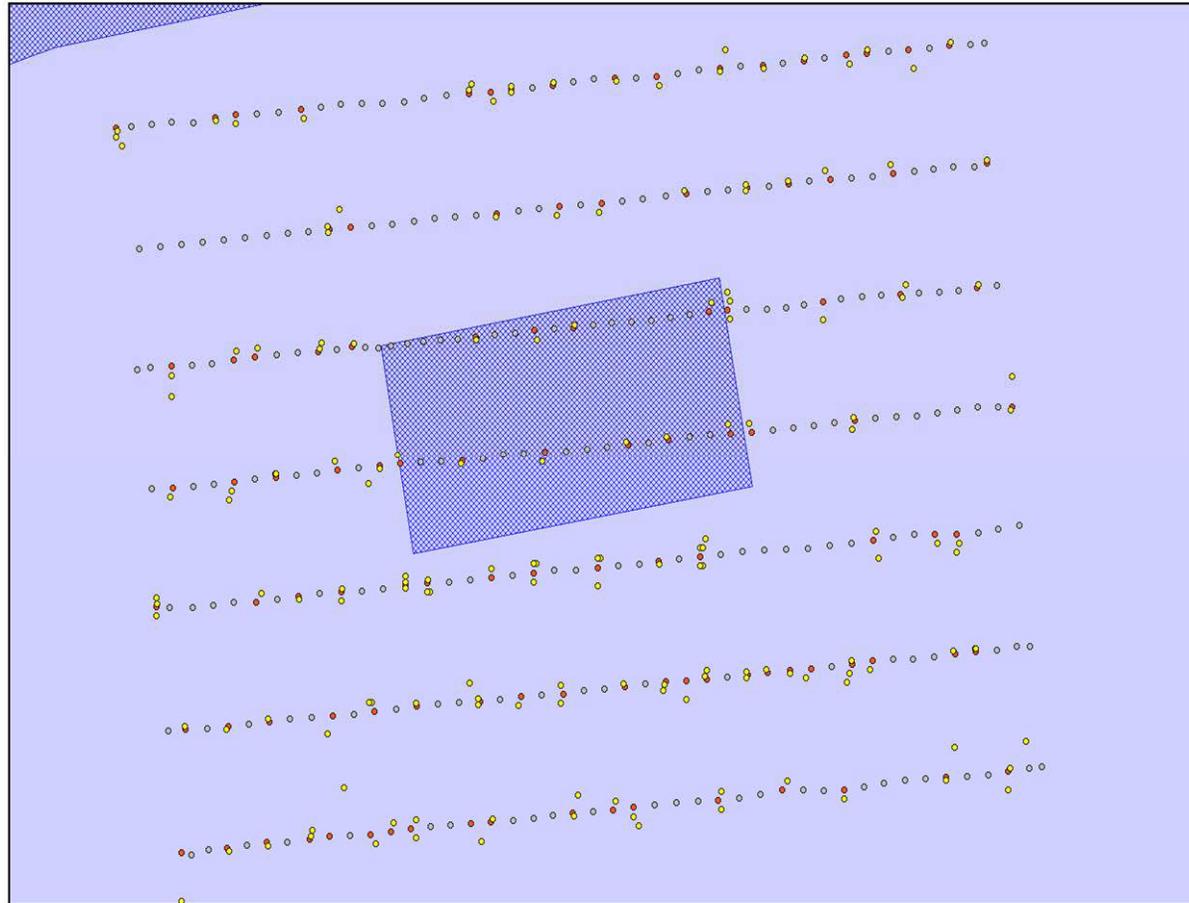
Foundation Colonisation



Harbour Porpoise (*Phocoena phocoena*) Distribution (2001-2005)



Boat Survey Transects



Ornithology Summary

- Scoter showing strong avoidance during construction, moving closer during operation but not as close as pre-construction; mainly to the south
- Red-throated Diver showing little difference, but numbers are very low
- Gannet coming closer during construction and slightly further away during operation, but again low numbers
- Guillemot showing little difference, majority seen located in groups on the water
- Cormorant and Gulls active within the wind farm

So, To The Question

What is the REAL environmental impact of offshore wind farms on the environment?

The continental shelf marine environment is a resilient place; wind turbines and their foundations are relatively benign.

For a wind farm sited away from sensitive species and habitats:

- NO significant negative environmental impacts
- VERY positive impacts to reduce both CO₂ emissions and the resultant ecological and human effects from climate change

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