

Marine habitat restoration and enhancement within offshore wind farms

AN OPPORTUNITY FOR CONSERVATION

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Restoration opportunities

- By 2030 over a **third** of British electricity will be produced by offshore wind power
- Existing pilot projects in Europe
- Why **native oysters**?
 - Ecosystem engineers
 - 95% decline of native oysters in UK in 25 years
 - Oyster beds once covered 20% of the North Sea
- 2018 – 2020 BLUE project with **Ørsted** and Essex Native Oyster Restoration Initiative (**ENORI**)
 - Contribution to native oyster population recovery in area of conservation interest
 - Restoring ecological functioning/ecosystem services

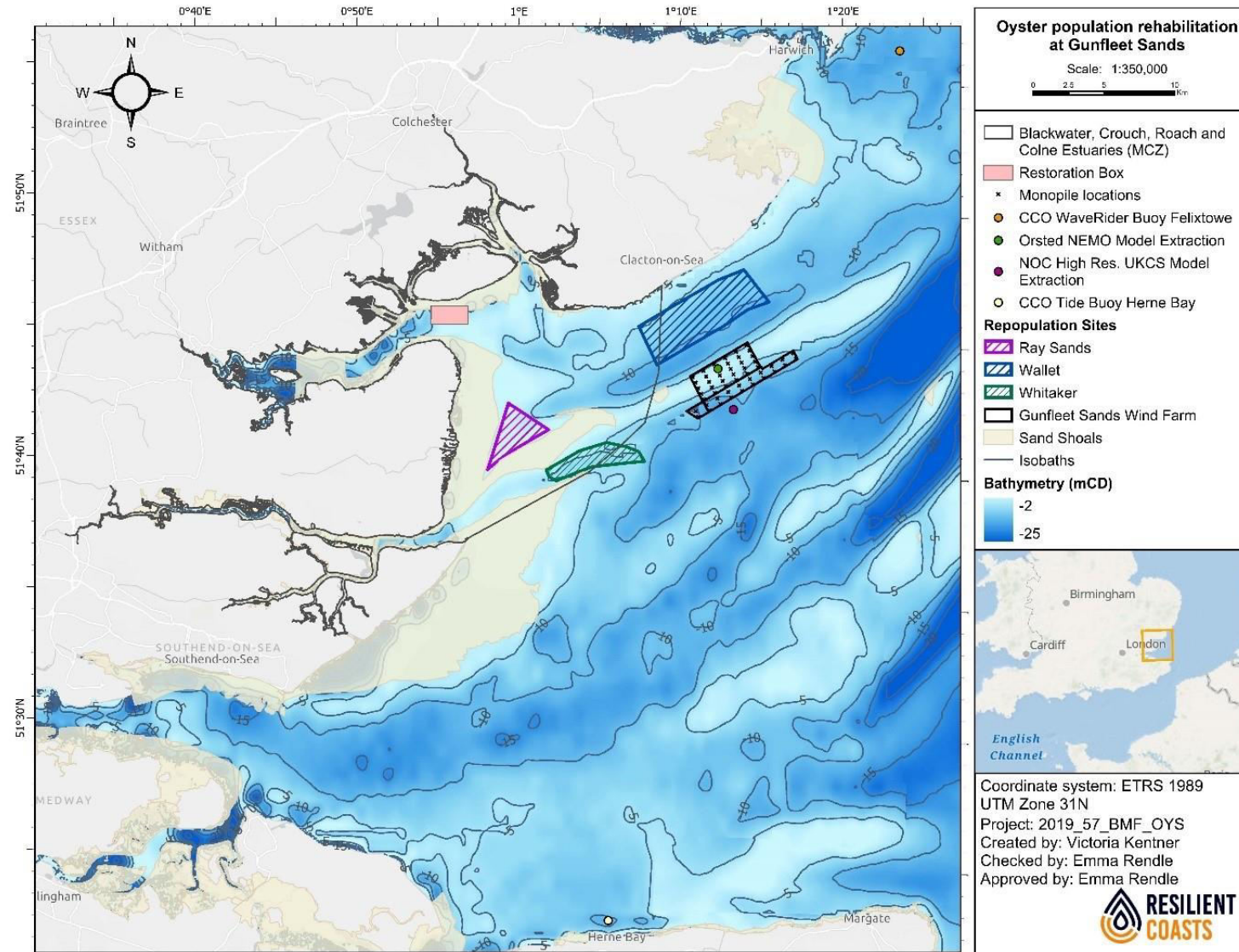


Ørsted case study: Gunfleet Sands Wind Farm

- Depth, substrate and infrastructure constraints reduces available area
- Small window of opportunity for larva transport into the MCZ and unlikely to coincide with larval release
- Significant wave energy making it difficult to repopulate the area.



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Current research

- Site selection matrix: **+50 wind farms** and **22 UK marine species**. **Data from:**



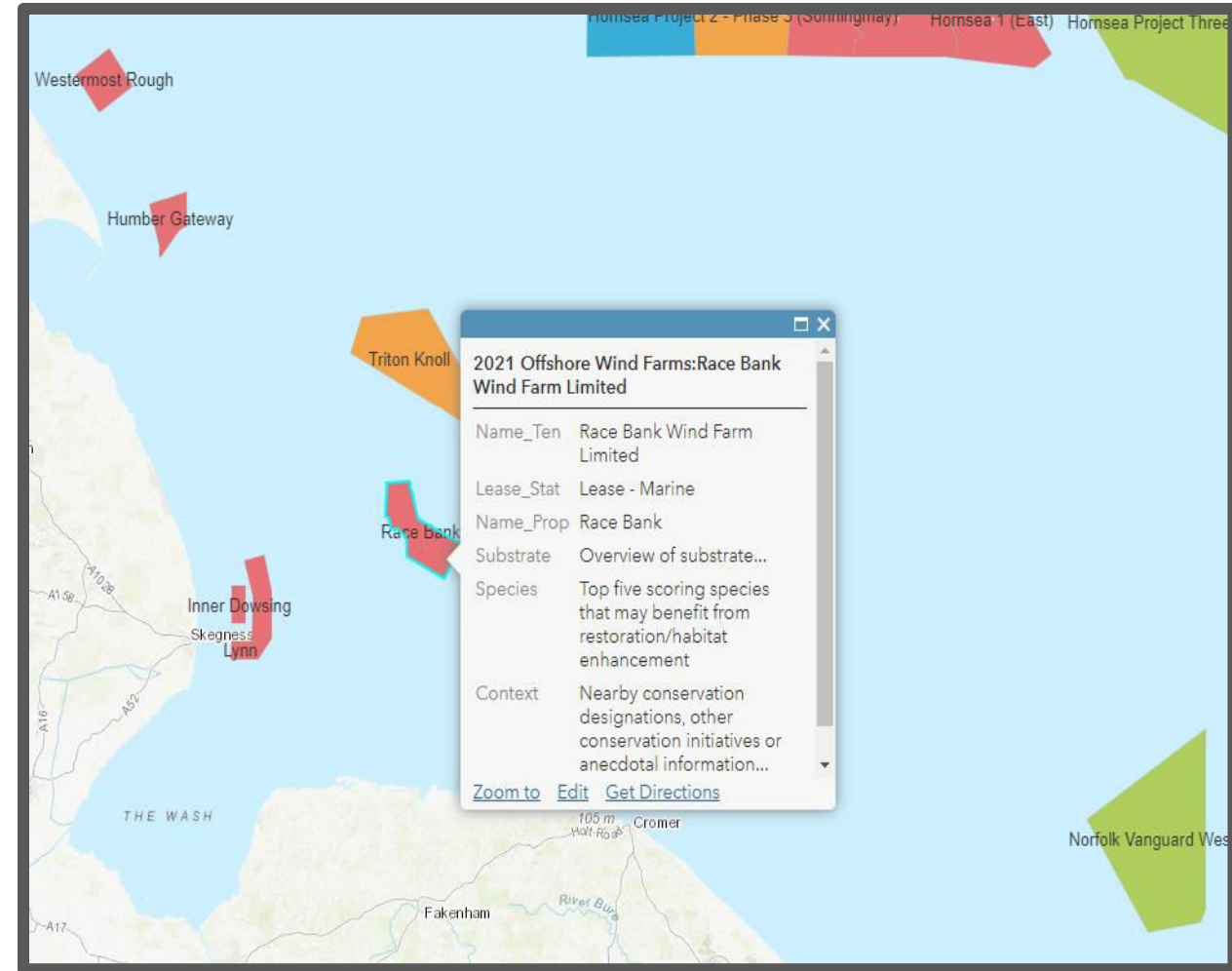
The Marine Data Exchange
www.marinedataexchange.co.uk



- **ArcGIS interactive map** as a supporting stakeholder discussion tool
- **Research:** Multidisciplinary decision tool



- **Feasibility** studies for 2021/22



Operational and regulatory challenges

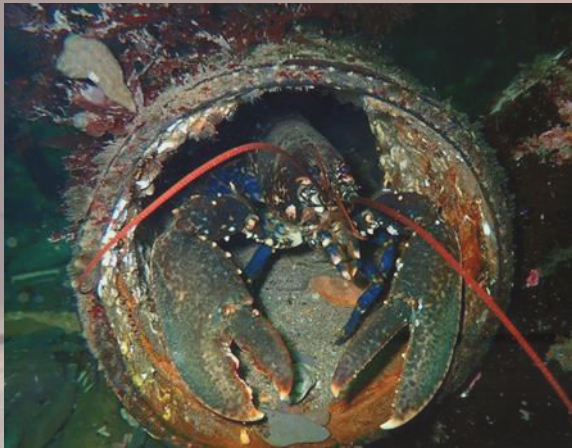
Regulatory

- Lack of supportive net-gain policy. **Opportunity** to consider contribution to MSFD and CBD targets
- Marine licensing is focused on **impact** vs. **enhancement**
- Permission for **restorative** activities sought via Crown Estate (land-owner) + statutory system
- **Decommissioning**: what is the **permanence** of restoration activities?
- Overlapping **designations** have regulatory requirements (e.g. SACs - Habitats Regulatory assessment)

Operational

- Additional **H&S**
- **Logistical** elements (depth, distance from shore...)
- **Engineering** conservation solutions appropriate for site conditions

Synergies between the two industries



Ørsted x Holderness Fishing Industry Group research



Norther Wind Farm (Belgium): Wier and Wind



Oyster reef restoration: Eneco's Luchterduinen (closed to **bottom trawling**)

Blauwwind consortium: oyster research project in Borssele III and IV wind farm

Role of marine spatial planning



Effective planning → supported by clear policy → drives net gain

- **Few examples** of 'no net loss' of biodiversity policies in the marine space
- UK policy likely to extend 'no net loss' to 'net gain' but still a **novel concept**
- Net gain policy must be **ecologically appropriate** for the region



Thousands of km of UK waters covered by offshore wind developments

- Consider how these *existing* structures can be **enhanced** to have a conservation benefits
- *New developments*: consider opportunities for enhancement **alongside site selection**
- Explore relationships with **MPAs**, use **ecological monitoring** to inform management



Research partnership with Oxford University

- Aims to identify ways that developments can **demonstrate positive impacts** on marine life as **UK policy** moves towards 'biodiversity net gain'

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