Wave and Tidal Generation and the Marine Environment

Andrew Prior

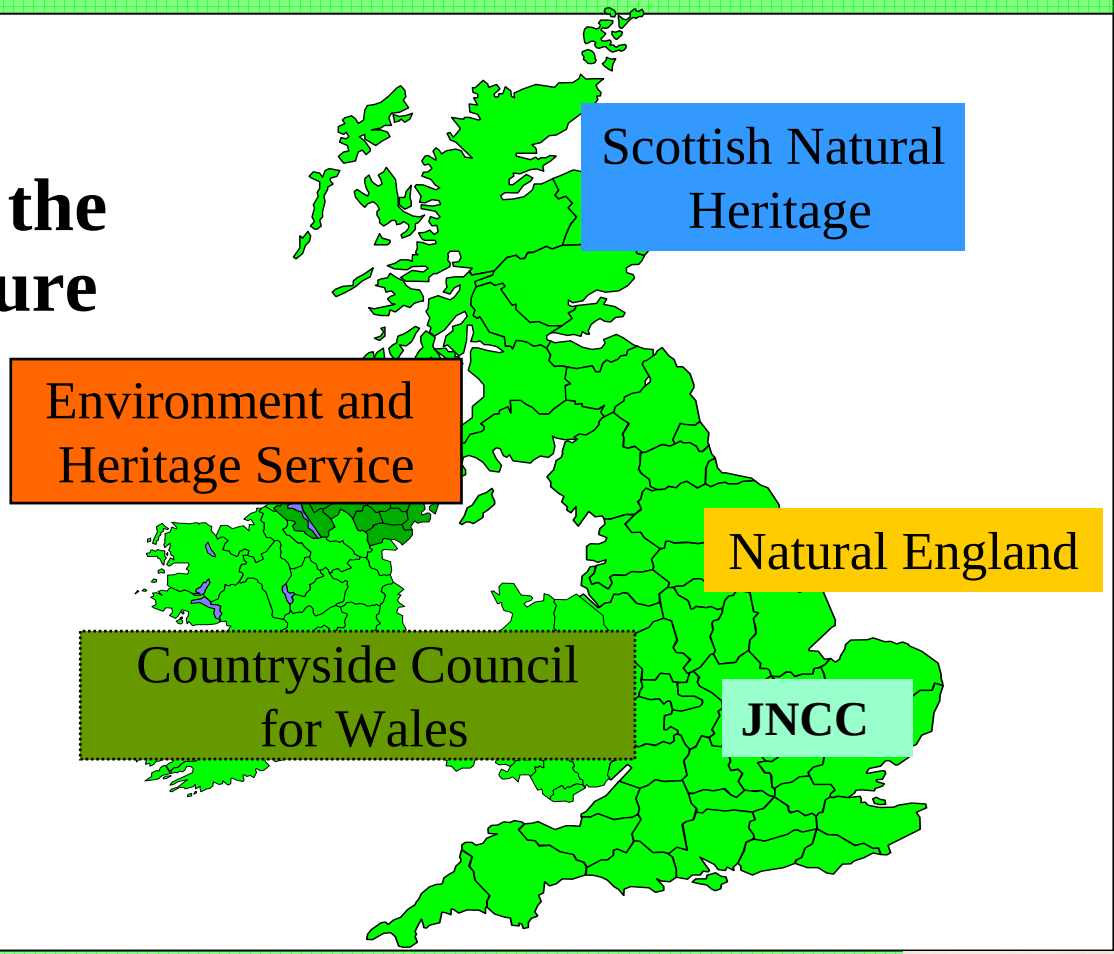
Renewable Energy Advisor

Outline of presentation

- JNCC and offshore industry
- Environmental impact assessment of marine renewables
  - Scoping, SEA and site selection
- Site selection and Natura 2000 sites
- Conclusion / key issues

What is the Joint Nature Conservation Committee ?

JNCC is a committee of the statutory nature conservation agencies



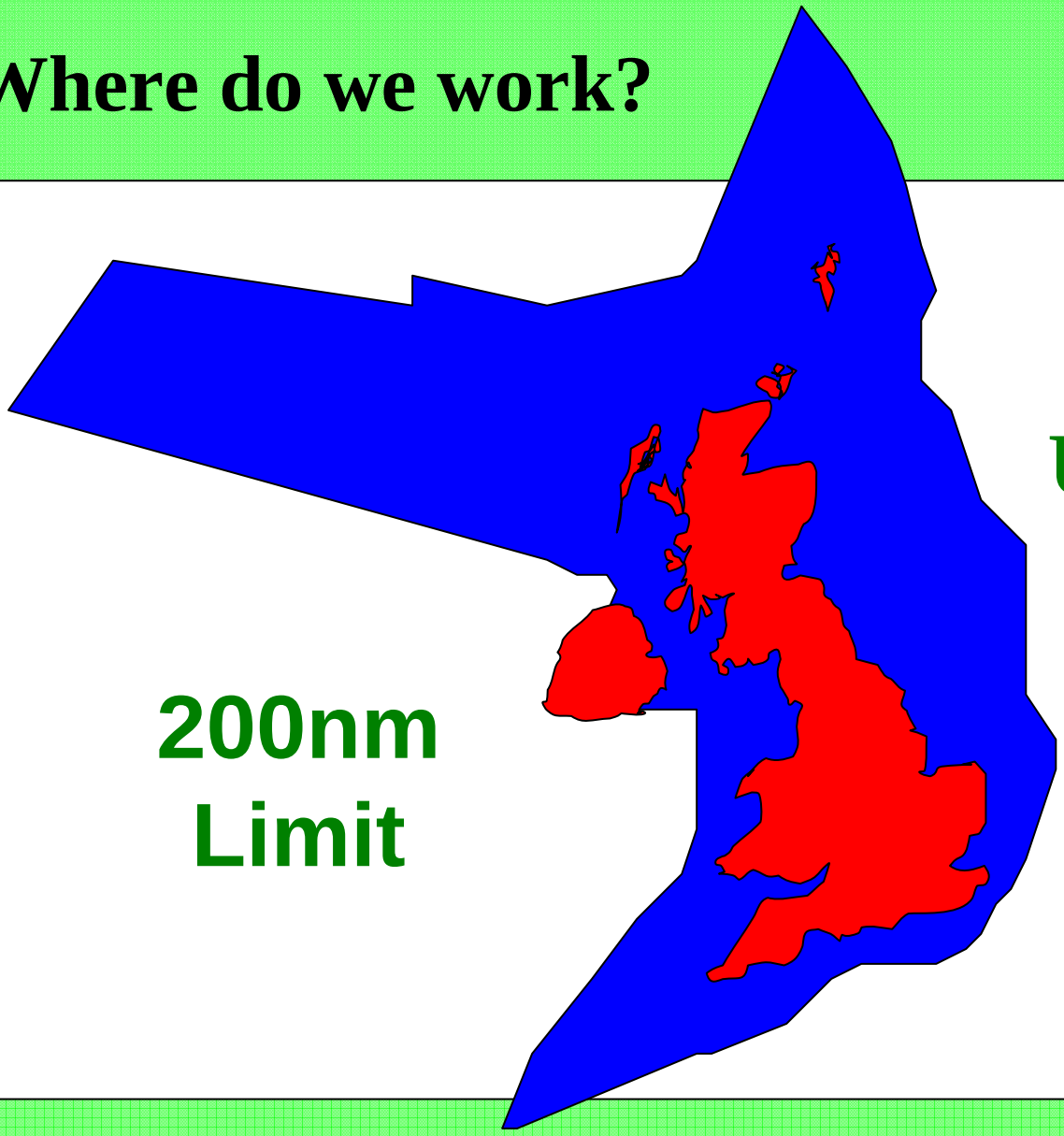
What does JNCC do ?

The Government's advisors on nature conservation for UK and international issues

Joint Nature Conservation Committee

JOINT NATURE CONSERVATION COMMITTEE

Where do we work?



The UKCS

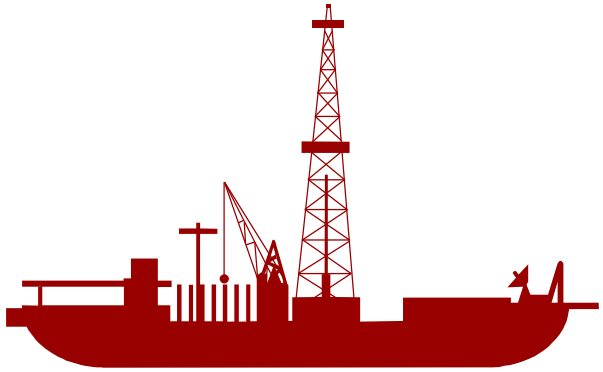
200nm Limit

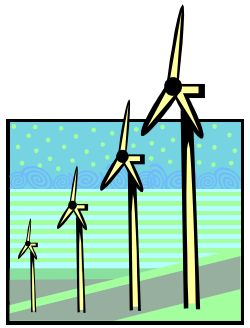
JOINT NATURE CONSERVATION COMMITTEE

Marine Advice

Offshore Industry Advice to

- **Aggregate Extraction**
- **Oil and Gas**
- **Renewable Energy**
- **Shipping**
- **Oil/Chemical Spills**
- **Fishing**





Approach to Advice

- Advice to industry on national issues and on projects outside 12nm
- Consistency across UK
  - Co-ordination between country agencies
- Consistency across industries
  - Mindful of differential legislation
  - Mindful of differential consenting bodies

UK Approach

- Government – DTI & Defra / Scottish Executive consult on the content and conclusions of environmental impact assessment
- Nature conservation agencies **advise** consenting authority on conclusions of EIA and potential impacts of the proposed marine renewable project
- The **consenting bodies** weigh up the social and environmental benefits and impacts to reach conclusion as to whether the project should be consented

JNCC approach to renewables

- Recognise the environmental benefits that marine renewables can deliver
- **Believe that marine renewables (wave and tide as well as wind) can be appropriately sited**
- Learning process – DTI guidance (2005)
- Strategic Environmental Assessment required but problems with gaps in knowledge

Potential key impacts

- Collision risk – marine mammals and diving birds
- Construction and operational noise – marine mammals
- Displacement of seabirds
- Extraction of energy – benthic communities
- Extraction of energy – mixing and tidal fronts
- Cumulative impacts

Site selection

- Incremental / iterative approach
- Prototype → Demonstrator → Array → Farm
- Knowledge gained informs the next stage
- Surveying and monitoring central to process
- Time to consent may relate to site choice
- BUT also on quality of EIA and information
- Key to site selection – scoping & SEA

Site selection - Scoping

- Environmental Impact Assessment Regulations - Request to Secretary of State (DTI) or Scottish Minister for a “scoping opinion”
- DTI / Scottish Exec will consult with nature conservation agencies
- Also power for nature conservation agencies to consult and exchange information with applicants for EIA purposes
- Early consultation and discussion welcome, particularly if aids site selection

Approach to scoping consultation

- While all developments will have an effect not all effects will be significant
- Some effects may be positive
- Need to know scale of effect in relation to natural variability and change – establishing a baseline
- Consider projects in context of other activities in the marine environment
- EIA should be proportionate to scale of development

BUT……

This incremental approach may not be appropriate for development sites with the potential to impact upon European Protected Areas – Natura 2000 sites

Precautionary principle applies here

Marine Natura 2000 in UK

- Special Areas of Conservation (SACs)
- Annex I marine habitats
  - Reefs
- Annex II species
  - Common and Grey Seals
  - Harbour Porpoise, Bottlenose Dolphin

Marine Natura 2000 in UK

Special Protection Areas (SPAs) for Annex I bird species

– marine and migratory species in UK waters

Scoping for SACs / SPAs

- Consider that there may be a need for a parallel 'APPROPRIATE ASSESSMENT'
- DEMONSTRATE that your activity is

  'unlikely to have a significant effect upon the structure and function of a site'
- Legal requirement – *Waddenzee* judgement
- Very strong evidential burden - "reasonable scientific doubt" - a high hurdle for industry

Site selection - SEA

- Strategic Environmental Assessment
- Assessment of plans / projects – not necessarily a tool for site selection
- Scottish Executive SEA provides useful information for developers but doesn't identify sites
- Large gaps in data – birds, marine mammals
- Is there sufficient information to inform "full" SEA ?

SEA – a wish list

- Gap analysis
- Addressing data needs – surveys
- Comprehensive monitoring of demonstrators
- Full stakeholder engagement
- Acknowledgement of limitations
- Co-ordination between UK and devolved administrations essential

Moving forward

- Apply learning/evidence of impacts from other industries
- For initial applications, install in areas where there is a sufficient knowledge of the local environment and where environmental sensitivities are minimal so that potential risks are minimised
- Use the demonstrator projects to provide evidence
  - MONITORING
  - RESEARCH
  - **FUNDING ?**

Summary

W&T technology can deliver environmental benefits

Endorse DTI incremental approach

Most of our knowledge will come from monitoring

SEA essential but unlikely to resolve all issues

Cumulative impacts & scaling up problematic

Proportionate approach cannot be applied in respect of potential impacts on Natura 2000 sites

Site selection can be aided by early contact and a request for a scoping opinion

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andrew.prior@jncc.gov.uk