



Cynghor Cefn Gwlad Cymru
Countryside Council for Wales

Environmental considerations in developing the MRE sector in Pembrokeshire

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Today



- Introduction to CCW



Today

- Introduction to CCW
- Introduction to environmental legislation



Today



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- Introduction to CCW
- Introduction to environmental legislation
- Pembrokeshire's marine natural heritage



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- CCW and marine renewables



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- Environmental considerations for MRE



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- CCW and marine renewables
- Environmental considerations for MRE
- The way forward and working together



Countryside Council for Wales



CCW is the Government's statutory advisor on sustaining natural beauty, wildlife and the opportunity for outdoor enjoyment in Wales and its inshore waters



Environmental legislation



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European legislation

- EIA Directive (1997)
- Habitats Directive (1992)
- Birds Directive (1979)



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Environmental legislation



European legislation

- EIA Directive (1997)
- Habitats Directive (1992)
- Birds Directive (1979)

UK legislation

- Wildlife and Countryside Act (1981)
- Countryside and Rights of Way Act (2000)
- Natural Environment and Rural Communities Act (2006)
- Habitats Regulations (1994)



European environmental legislation



Environmental Impact Assessment Directive

- Implemented in the UK by the EIA Regulations
- DTI guidance states that demonstration scale W&T projects will be subject to the requirements of Environmental Impact Assessment (EIA) Regulations and will be required to produce an adequate EIA to accompany any consent application



European environmental legislation



EC Habitats Directive and Birds Directive

- Implemented in the UK by the Habitats Regulations and the Wildlife & Countryside Act
- Provide measures for the protection of habitats and species of European importance



UK environmental legislation



Wildlife & Countryside Act

- Provides national protection for Sites of Special Scientific Interest and protected species
- Landowners, occupiers and third parties all subject to legislative requirements of this Act



UK environmental legislation



Countryside & Rights of Way Act

- Increases the protection for Sites of Special Scientific Interest and strengthens wildlife enforcement legislation
- Places a duty on government departments to have regard for the conservation of biodiversity



UK environmental legislation



Natural Environment & Rural Communities Act

- Places a duty on all public authorities to conserve biodiversity in general, in addition to the statutory protection given to certain sites and species



UK environmental legislation



Habitats Regulations

- Requires that every competent authority, in the exercise of any of its functions, has regard to the requirements of the Habitats Directive
- Provides particular measures for the protection of European Sites (SAC & SPA) and European Protected Species



UK environmental legislation



Habitats Regulations – European Sites

- Requires that any *'plan or project'* not directly connected with the conservation management of the site, but likely to have a significant effect thereon, has to be subject to *'appropriate assessment'*. In light of the results of this **assessment, plans and projects are only to be authorised if they will not adversely affect the integrity of the site**



UK environmental legislation

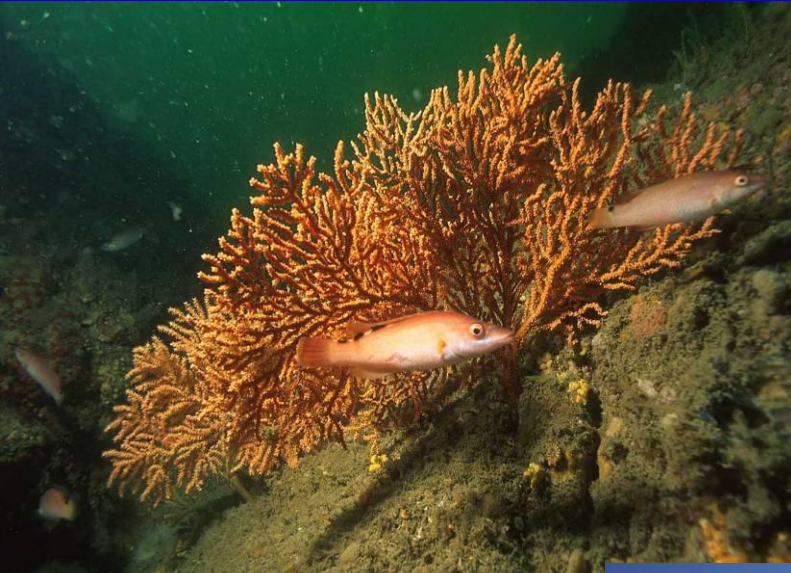


Habitats Regulations – European Species

- Prohibit the deliberate capture, injury, killing or disturbance of any wild animal of a European Protected Species (includes all cetaceans)
- If there is a risk of injury or disturbance of EPS that cannot be removed or sufficiently reduced the activity may still go ahead under licence, provided that the Favourable Conservation Status of the species will not be affected



Pembrokeshire's marine natural heritage



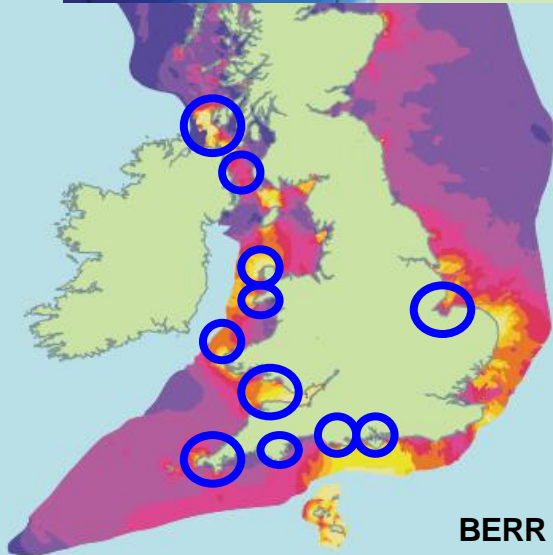
Pembrokeshire's protected sites and landscapes



MRE in Pembrokeshire

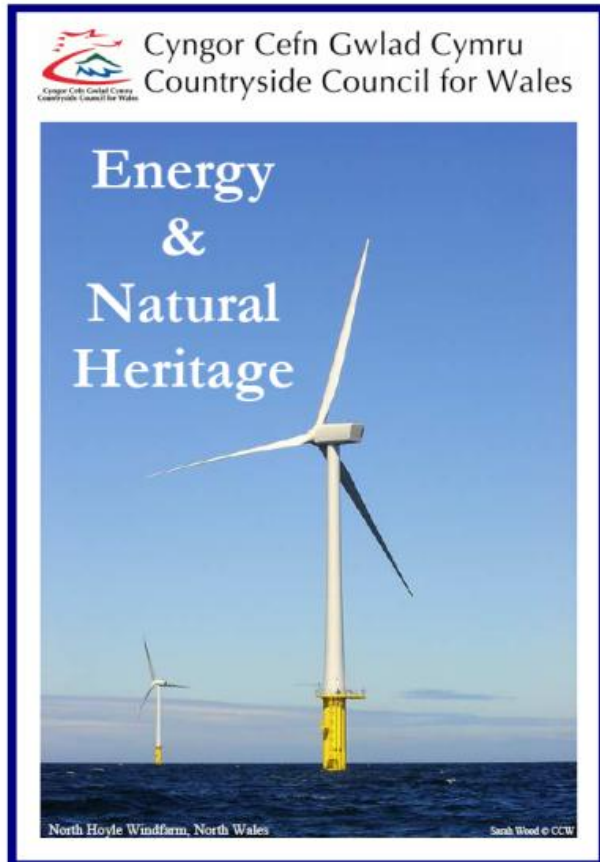
Wave and Tidal Energy

- Significant resource
- Wide range of devices
- Impacts uncertain, particularly tidal devices



BERR (2008)

CCW and marine renewables



CCW Energy Policy

*‘Expanding renewable energy:
the right technology in the right
place’*

*While recognising the need to
safeguard protected species
and designated areas, CCW
needs to accept small scale
local, environmental impacts
from renewable energy
developments to secure global
environmental benefits*



Marine renewables – environmental considerations



Birds

- Physical disturbance during installation
- Construction/operation noise
- Collision risk
- Contamination from device failure
- Habitat exclusion/species displacement

Mammals

- Physical disturbance during installation
- Construction/operation noise
- Collision risk
- Contamination from device failure
- Habitat exclusion/species displacement

Onshore effects

- Visual Intrusion from substation/overhead lines
- Physical disturbance during installation/cable trenching/access
- Disturbance of archaeological features
- Cultural landscape effects

Benthos

- Smothering - installation & cabling
- Contamination from device failure
- Changes to tidal/wave regime
- Substratum loss

Fish/Shellfish

- Smothering
- Construction/operation noise
- Collision risk
- Contamination from device failure
- Habitat exclusion/species displacement
- Electro Magnetic Field effects



MRE & seabirds - uncertainties



- Physical disturbance during installation
- Construction/operation noise
- **Collision risk during operation**
- Contamination from device failure
- **Habitat exclusion/species displacement during operation**

MRE & mammals - uncertainties



- Physical disturbance during installation
- Disturbance due to construction / operation noise
- Collision risk during operation
- Contamination from device failure
- Habitat exclusion/species displacement during operation

Marine renewables – environmental considerations



Birds

Physical disturbance during installation
Construction/operation noise
Collision risk
Contamination from device failure
Habitat exclusion/species displacement

Mammals

Physical disturbance during installation
Construction/operation noise
Collision risk
Contamination from device failure
Habitat exclusion/species displacement

Onshore effects

Visual Intrusion from substation/overhead lines
Physical disturbance during installation/cable trenching/access
Disturbance of archaeological features
Cultural landscape effects

Benthos

Smothering - installation & cabling
Contamination from device failure
Changes to tidal/wave regime
Substratum loss

Fish/Shellfish

Smothering
Construction/operation noise
Collision risk
Contamination from device failure
Habitat exclusion/species displacement
Electro Magnetic Field effects



Uncertainty and the law

2004 European Court of Justice ruling

“...a plan or project may be authorised only if a competent authority has made certain that it will not adversely affect the integrity of the site” and
“...where no reasonable scientific doubt remains as to the absence of such effects”.

EJC Case C-127/02 7 September 2004



The way forward – addressing uncertainty?



Policy and strategic measures

- Welsh Assembly Government Marine Renewable Energy Strategic Framework
- UK Marine Renewable Energy Action Plan
- Strategic Environmental Assessment
- Pembrokeshire MRE Strategy
- Other UK processes – Scotland and Northern Ireland



The way forward – addressing uncertainty?

Practical measures

- Location & micro-siting (birds, mammals, visual, benthos)
- Timing of operations/maintenance (birds, mammals)
- Vessel routing (birds, mammals)
- Construction noise protocols (mammals)
- Use of acoustic deterrents (mammals)
- Device design, array layout, lighting (visual)
- Cable burial (EMF)

Provide as much detail as possible in ES

The way forward – addressing uncertainty?



Trial devices & compliance with legislation

- Deploy with ‘Early warning monitoring’?
- Set clear thresholds for damage / environmental change
- Rigorous monitoring to detect changes
- Device switch off or removal, if necessary



Conclusions

- Significant potential for MRE in Pembrokeshire
- Important area for marine natural heritage
- Adherence to environmental legislation is not optional
- Many potential effects of W&T well understood (from Offshore Wind Farm experience)
- Some uncertainty over potential environmental effects – e.g. mammals and birds
- Need to work together to ensure that deployment of devices is compliant with environmental legislation
- Early consultation with CCW





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Diolch yn fawr

Thank you!

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