

Overview of post-consenting requirements of MRE deployments across Europe

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Workshop I – 20th April 2015

Marine Renewables and Environmental Risks – Current practices in pre and post consent monitoring



Overview of MRE consenting: definitions

Pre-consenting requirements

Information needed to proceed with the licensing process and decide whether an EIA is required and what information will be needed



Level of environmental baseline information and project description

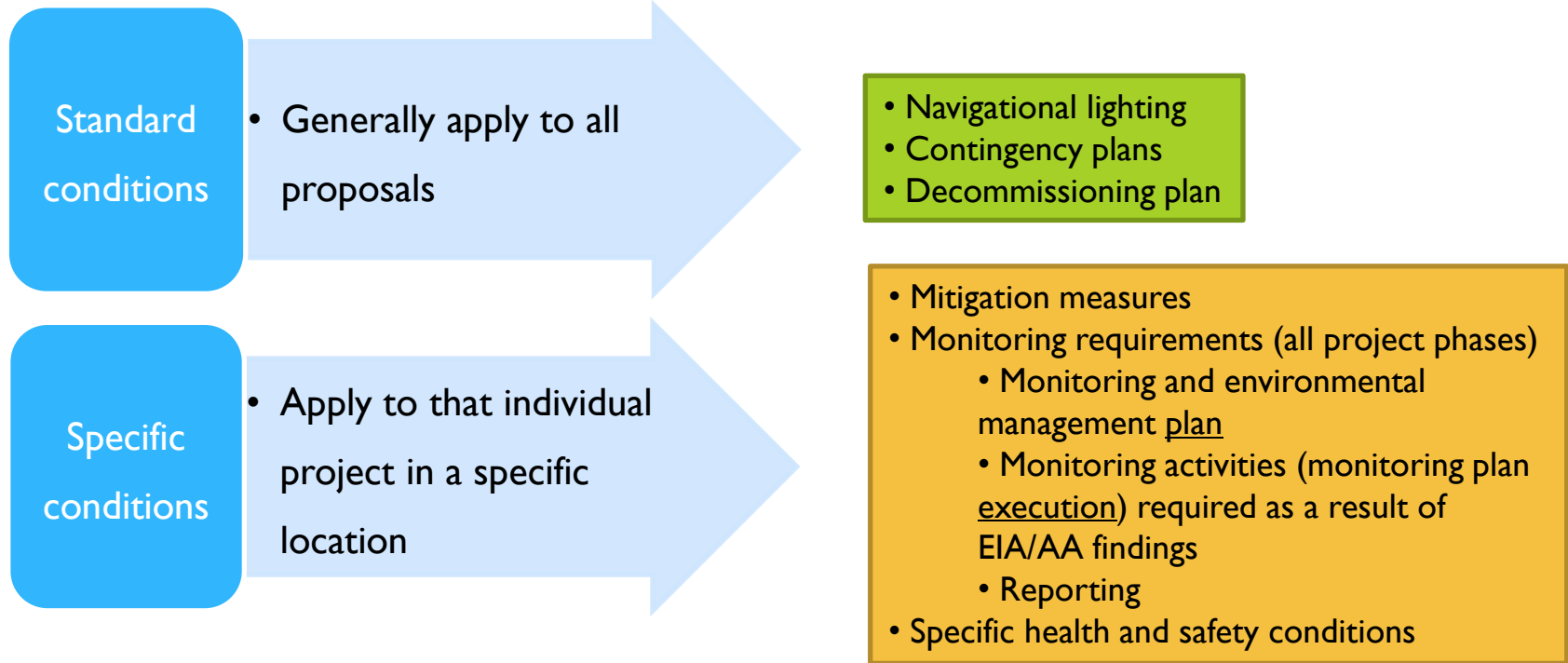
Post-consenting requirements

Conditions that are usually attached to the consent and which must be adhered to following deployment and up to decommissioning



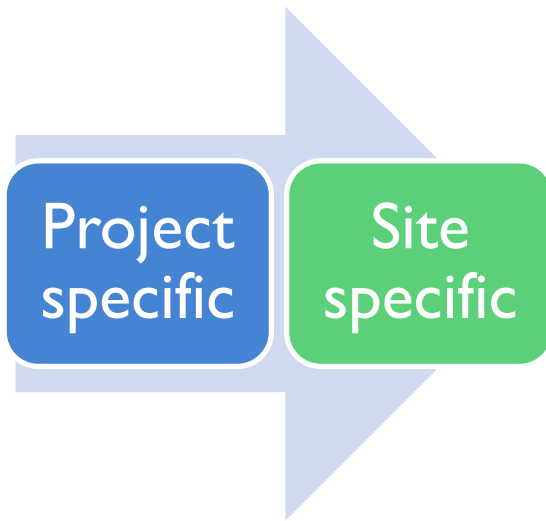
Level and characteristics of environmental monitoring and mitigation measures implementation

Post consent monitoring of MRE deployments



Post consent monitoring: licence specific conditions

Monitoring conditions



Project specific monitoring conditions should be set carefully:

- They should not be used as a way of gathering marine data
- They should not be used as a way of shortcutting the consent process
- They should be set considering:
 - Existence of adverse effect (based on the scientific data available)
 - There is scientific uncertainty

Note: lessons learned and requirements from / for one device in one location may not be wholly scalable to arrays / farms etc.

Examples of post-consent monitoring

Tidal energy: the SeaGen project

Site selection and criteria

- Significant tidal resource
- Easy access
- Good grid connection
- However, site within an European Marine site hosting protected species

Strangford Lough Narrows,
Northern Ireland



Examples of post-consent monitoring

Tidal energy: the SeaGen project, Northern Ireland

EIA results

Uncertainty regarding impacts on key marine species and features within the Strangford Lough Special Area of Conservation (SAC)

Common seals
Phoca vitulina



- Are the patterns of usage by seals of the Narrows altered by the turbine installation and operation?
- Are seals being struck by the turbine rotors?

Reefs (rocky and biogenic)



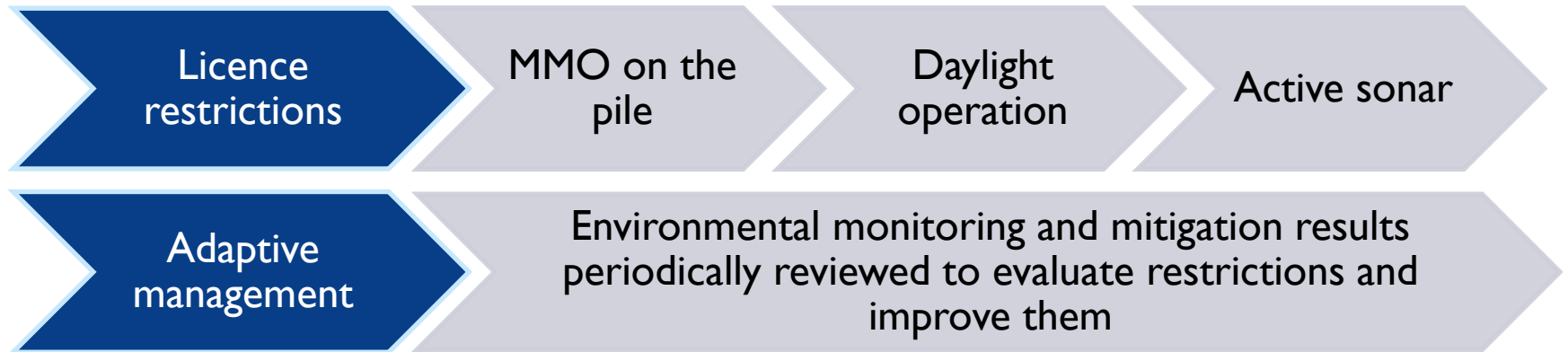
- Does the project significantly affect the extent, quality or composition of seabed communities?



Examples of post-consent monitoring

Tidal energy: the SeaGen project

FEPA licence conditions

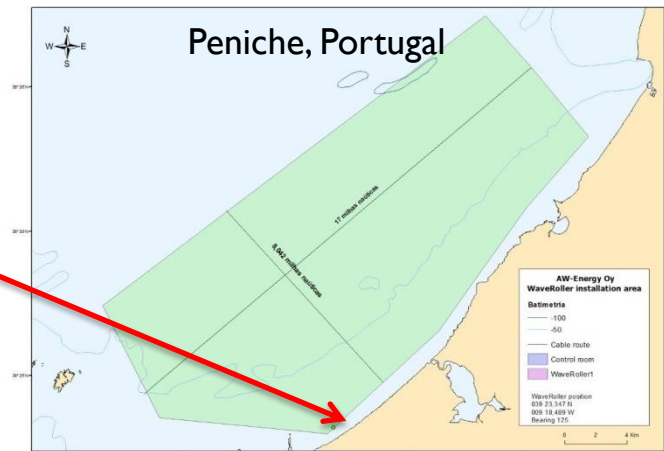


Examples of post-consent monitoring

Wave energy: the WaveRoller project, Portugal

Site selection and criteria

- Significant resource
- Easy access
- Good grid connection
- However, site nearby an European Marine site hosting protected species



Examples of post-consent monitoring

Wave energy: the WaveRoller project

EIA results

Uncertainty regarding impacts on seabed communities and marine mammals

Biogenic reefs of
Sabellaria alveolata



- Does the project affect the extent, quality or composition of seabed communities?

Marine mammal
distribution



- Are marine mammals distribution affected by the presence of the device?

CCDR-LVT licence conditions

- Monitoring seabed communities and bio-fouling of device
- Monitoring of marine mammals



Examples of post consenting requirements of MRE

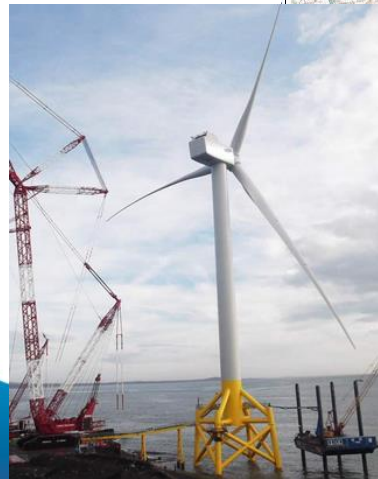
Offshore wind: Fife Energy Park Offshore Wind Turbine Offshore Demonstrator, Scotland

Site selection and criteria

- Existing infrastructure
- Easy access to the turbine
- Required marine conditions to test the turbine
- Site not in a particularly sensitive location



Construct, deploy and test a 7 MW turbine during 5 years



Examples of post-consent monitoring

Offshore wind: Fife Energy Park Offshore Wind Turbine Offshore Demonstrator

MS licence conditions

To ensure that appropriate and effective monitoring of the impacts is undertaken

- A monitoring plan should be submitted to and approved by the Scottish Ministers annually
- The monitoring plan must be a living document to be reviewed and updated by the Company



- Monitoring details not prescribed but a monitoring program required
- Low level of monitoring since the site:
 - Is representative of the offshore wind environment (more turbines to be installed)
 - Not considered sensitive (difficult to detect any impact)
- Shore-based observations of seabirds have been undertaken

Source: <http://www.gov.scot/Topics/marine/Licensing/marine/scoping>

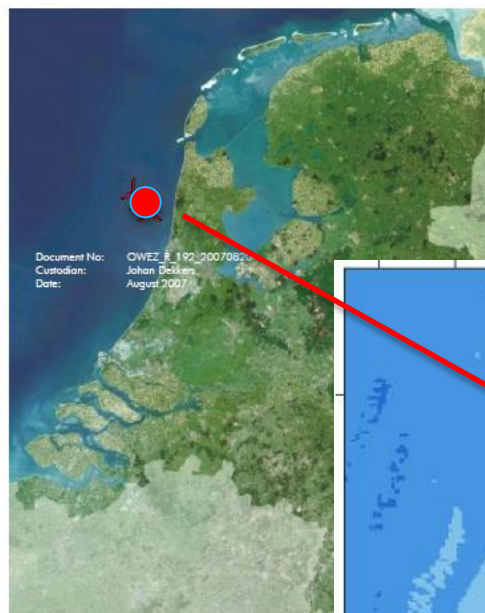


Examples of post consenting requirements of MRE

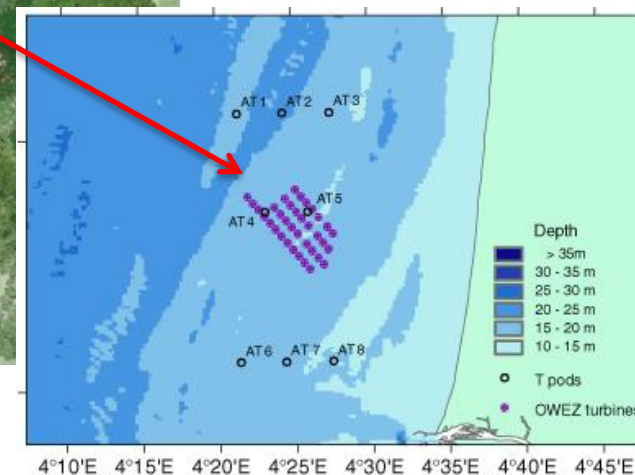
Offshore wind: Offshore Wind Farm Egmond aan Zee, The Netherlands

Site selection and criteria

- Site identified through SEA and selected in a spatial planning decision
- Park development supported by the Dutch Government to gain knowledge and experience on the construction and exploitation of big wind farms as regards:
 - Technology and economy
 - Effects on the marine environment and on other users (public opinion; socio-economic effects)



- 36 turbines with an installed capacity of 108 MW; 17-21 m depth 10-18 km from coast
- Commissioning: 1st January 2007



Source: <http://www.noordzeewind.nl/en/knowledge/reportsdata/>

Examples of post consenting requirements of MRE

Offshore wind: Offshore Wind Farm Egmond aan Zee, The Netherlands

Monitoring requirements

- The developer (NoordzeeWind) needs to carry out an environmental monitoring and evaluation program
- The Government designated an entity (SenterNovem) to follow the monitoring program
- Main topics addressed in the monitoring plan:
 - The effects on birds
 - The effects of noise (during construction and operation) on marine life
 - The effects on marine life and the refuge function
 - Visual impact, risks to shipping and morphological effects (interference with coastline morphology)



Source: <http://www.noordzeewind.nl/en/knowledge/reportsdata/>

Post consenting requirements for MRE

Questions for breakout groups discussion:

- What are the current post-consent monitoring requirements for different receptors?
- What post-consent methods are likely to be more/less appropriate for the purpose of profiling risk under environmental risk assessment approaches such as the SDM?

