

## APPENDIX 5 – REGULATORY CONTROLS

### A5.1 INTRODUCTION

There are numerous pieces of legislation applicable to UK offshore wind farm developments and offshore oil and gas activities. The summary below is intended to provide an overview of the main environmental controls in place as context, but is not a comprehensive guide. The guidance and legislation can be sourced from the website of the Office of Public Sector Information <http://www.opsi.gov.uk>.

### A5.2 OFFSHORE WIND FARM DEVELOPMENTS

Under *The Crown Estate Act 1961*, The Crown Estate is landowner of the UK seabed and areas of foreshore ([www.thecrownestate.co.uk](http://www.thecrownestate.co.uk)). The Crown Estate's permission, in the form of a site option Agreement and Lease is required for the placement of structures or cables on the seabed, this includes offshore wind farms and their ancillary cables and other marine facilities. During Rounds 1 and 2 of UK offshore wind farm development, successful applicants were awarded an option for a Lease/Licence by The Crown Estate. When all necessary statutory consents are obtained by the developer, The Crown Estate may grant a site lease for a development.

Potential offshore wind farm developers also require statutory consents from a number of Government departments before development can take place e.g. a FEPA<sup>1</sup> consent for the placement of structures in the sea or in the seabed; a Section 36 Consent<sup>2</sup> for the construction and operation of an offshore power station with a nominal capacity in excess of 1MW (within the territorial sea) or 50MW (beyond the territorial sea); a CPA<sup>3</sup> consent for any works which are likely to obstruct or cause a danger to navigation, and which involve a construction or improvement of any works or the deposit of any materials below the level of mean high water spring tide and in some cases planning permission for associated onshore works<sup>4</sup>. A developer may also choose to apply for a section 36A declaration<sup>5</sup> to extinguish the common law public right of navigation and fishing on the site of a renewable energy installation. The key consents typically have strict monitoring requirements attached to them.

*The Energy Act 2004* put in place legal framework for offshore renewable energy projects beyond the UK's territorial waters. The Act established a Renewable Energy Zone (REZ), adjacent to the UK's territorial waters from 12nm (nautical miles) out to 200nm, within which renewable energy installations can be established. The Act enables The Crown Estate to award licenses for wind farm sites in the REZ on much the same basis as it currently leases sites within territorial waters. The Act also gave Government the additional powers it requires to regulate renewable energy projects in the REZ, principally by extending the requirement for consent under section 36 of the *Electricity Act 1989*.

In English and Welsh waters, DECC is responsible for consenting under the *Electricity Act 1989*, through its Offshore Renewables Consents Unit, which acts as a central point for all

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<sup>1</sup> Food and Environment Protection Act 1985

<sup>2</sup> Section 36 of the Electricity Act 1989

<sup>3</sup> Section 34 of the Coast Protection Act 1949

<sup>4</sup> Sections 57 or 90(2) of the Town and Country Planning Act 1990

<sup>5</sup> Section 36A of the Electricity Act 1989 as inserted by the Energy Act 2004 Section 99(1)

offshore wind farm consent applications. DECC works closely with the Marine and Fisheries Agency, which licenses a number of activities in the marine environment on behalf of the Secretary of State for Environment, Food and Rural Affairs and in certain areas for Wales for the Welsh Assembly Government. In the Scottish Renewable Energy Zone, Scottish Ministers are responsible for *Electricity Act 1989* consent decisions (similarly FEPA licences, CPA consents and any required planning permissions are a matter for the equivalent Scottish authorities, where wind farms are concerned).

The Crown Estate has announced the competitive process and commercial basis for a Round 3 of offshore wind farm lease options. For reference, Round 1 full term leases are for 22 years (plus 1 year for removal and decommissioning). For the largest Round 2 projects, the full term lease is for 50 years, including decommissioning. For Round 3, The Crown Estate proposes that development will be undertaken within exclusive Zones. The Crown Estate also proposes to fund up to 50% of Round 3 development costs through co-investment. The Round 3 Zones are indicative and may be refined as a result of this SEA Environmental Report and consultation feedback on it.

The *Energy Act 2008*, the *Planning Act 2008* and when passed the *Marine and Coastal Access Bill* together with the various Marine Bills proposed by the devolved administrations provide a revised framework for the consenting and decommissioning of offshore wind farms.

The *Planning Act 2008* creates a new system of development consent for Nationally Significant Infrastructure projects. The number of applications and permits required for such projects is being reduced, compared with the position under current legislation. Under Part 3 of the Act, offshore<sup>6</sup> wind farms with a capacity of more than 100MW are considered Nationally Significant Infrastructure Projects.

## Environmental Impact Assessment

The EIA Directive (85/337/EEC as amended by 97/11/EC) has been transposed into UK law through a number of regulations (e.g. the *Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2000* relating to a Section 36 consent and the *Harbour Works (Environmental Impact Assessment) Regulations 1999* in relation to the CPA).

The regulations require developers of offshore wind farms likely to have a significant effect on the environment to undertake an environmental impact assessment to consider both the positive and negative environmental impact of a development from the construction stage through to decommissioning. The process should cover direct and indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects. The results of these assessments are brought together in an Environmental Statement and submitted with the various licence/consent applications.

The consenting authorities are normally content for a developer to provide a single document covering each of the consents applied for, provided that its scope is sufficient to embrace the range of environmental issues which each can be expected to consider. As part of the EIA process impacts on other users and landscape and seascape issues are considered.

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<sup>6</sup> That is wind farms in the territorial waters of England and Wales or in a Renewable Energy Zone, except any part of a Renewable Energy Zone in relation to which the Scottish Ministers have functions

## Habitats & species protection

Various regulations make provision for implementing the Birds Directive (79/409/EEC) and the Habitats Directive (92/43/EEC) in the UK and marine areas where the UK has jurisdiction. The *Conservation (Natural Habitats) Regulations 2004* (as amended) implement article 6(3) and (4) of the Habitats Directive and require an Appropriate Assessment to be undertaken before any determination of a consent application can be made dependent on the potential of the activity to have a significant effect on a Natura 2000 site. DEFRA have produced a guidance note on the implications of the EC Wild Birds and Habitats Directives for developers undertaking offshore wind farm developments “Nature Conservation Guidance on Offshore Windfarm Development”.

In addition, it is an offence to deliberately disturb wild animals of a European Protected Species, particularly during the period of breeding, rearing, hibernation and migration or to cause the deterioration or destruction of their breeding sites or resting places. EPS are those species listed in Annex IV of the Habitats Directive, which includes all cetacean species. JNCC have consulted on guidance.

## Safety zones

Section 95 of and Schedule 16 to the *Energy Act 2004* set out the basic requirements for applying to the Secretary of State for a safety zone to be placed around or adjacent to an offshore renewable energy installation. Following public consultation the *Electricity (Offshore Generating Stations) (Safety Zones) (Applications Procedures and Control of Access) Regulations 2007*, which set out the process to be followed in more detail, were introduced in August 2007.

## Decommissioning

The *Energy Act 2004*, introduced a statutory decommissioning scheme for offshore wind and marine energy installations, see *Guidance: Decommissioning of offshore renewable energy installations under the Energy Act 2004*. The *Energy Act 2008* further strengthens provisions relating to the decommissioning of offshore renewable installations.

## A5.3 OIL AND GAS

The *Petroleum Act, 1998* provides the basis for granting licences to explore for and produce oil and gas. Exploration Licences are non-exclusive & permit the holder to conduct non-intrusive surveys, such as seismic or gravity and magnetic data acquisition, over any part of the UKCS not held under a Production Licence. Traditional Production licences grant exclusive rights to the holders to “search and bore for, and get, petroleum” in specific blocks. Under the terms of a Production Licence, licence holders require the consent of the Secretary of State before installing facilities, producing hydrocarbons and other activities. The prospective Operator must demonstrate before award that they have the necessary finances, operating, technical and environmental competency to carry out the agreed work programme. Model clauses and conditions are attached to the Licence. Before licences are awarded, DECC undertakes screening or full Appropriate Assessment in relation to the potential for effects on European sites.

## Requirement for Environmental Management Systems

All Operators controlling the operation of offshore installations on the UKCS are required to have in place an independently verified Environmental Management System designed to achieve: the environmental goals of the prevention and elimination of pollution from offshore sources and of the protection and conservation of the maritime area against other adverse effects of offshore activities; continual improvement in environmental performance; and, to achieve the objectives of the OSPAR Recommendation 2003/5. OSPAR recognises the ISO 14001: 2004 & EMAS international standards as containing the necessary elements.

## Consent to conduct a geophysical survey

Offshore seismic and other geophysical surveys related to offshore oil and gas activities require a consent from the Secretary of State (*Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 (as amended)*) - applied for by submission of a Petroleum Operations Notice No 14A (PON14A). An environmental assessment is appended to consent applications for areas important for marine mammals. The PON14A application is reviewed by DECC and its statutory advisers who may recommend consent conditions. Consideration is given to the requirement for an Appropriate Assessment under the Habitats Directive in relation to the potential for effects on SACs. The PON14A is subject to a wider notification process involving fishermen and others who may have interests in the area. Application of JNCC guidelines for minimising acoustic disturbance to marine mammals from seismic surveys is mandatory (see also section on habitats and species protection below). A report of the survey and marine mammal observations is submitted to the JNCC. Shallow gas (rig site) surveys are also subject to the consenting requirements for geophysical surveys, as is the testing of equipment to be used in offshore seismic and geophysical such surveys.

## Environmental Impact Assessment

Approval for development programmes and consent for wells, extended well tests, incremental projects and production consents are contingent on complying with the requirements of the *Offshore Petroleum Production and Pipe-lines (Assessment of Environmental Effects) Regulations 1999 (as amended)*. An Environmental Statement (ES) is mandatory for certain projects including new and incremental developments with expected production >500 tonnes of oil/day or 500,000 cubic metres of gas/day and new pipelines with expected production >40km in length and 800mm in diameter. A number of projects (including the drilling of wells) may not need an ES to be prepared if a preliminary assessment demonstrates to the satisfaction of the Secretary of State that the project is unlikely to cause a significant adverse environmental impact. In such circumstances a direction from the Secretary of State may be sought that an ES is not required using the appropriate Petroleum Operations Notice (PON15). The PON15 must, as far as possible, be a stand alone document and contain sufficient information about the proposed project, its expected location and an environmental assessment to provide a basis for a determination to be made. (See also section on habitats and species protection below.)

## Habitats & species protection

The *Offshore Petroleum Activities (Conservation of Habitats) Regulations, 2001 (as amended)* implement Article 6(3) and (4) of the Habitats Directive for the protection of habitats and species in relation to offshore oil and gas activities. A screening/Appropriate Assessment may be required prior to issue of consent dependent on the potential of the activity to have a significant effect on a Natura 2000 site.

Various regulations make provision for implementing the other provisions of the Birds Directive and the Habitats Directive in the UK and marine areas where the UK has jurisdiction. It is an offence to deliberately disturb wild animals of a European Protected Species, particularly during the period of breeding, rearing, hibernation and migration or to cause the deterioration or destruction of their breeding sites or resting places. EPS are those species listed in Annex IV of the Habitats Directive, which includes all cetacean species. JNCC have consulted on guidance.

## Consent to locate facilities

The *Coast Protection Act (CPA) 1949 (as amended)*, provides that where obstruction or danger to navigation is caused or is likely to result as a result of certain operations, the prior written consent of the Secretary of State for DECC is required.

Offshore oil and gas installations, whether temporary or permanent, may be located only with prior written consent from the Secretary of State. The Act is the statutory means of controlling the location and marking of such works to avoid danger or obstruction to navigation. In practice, this means that a “consent to locate” must be obtained from DECC for siting mobile drilling rigs and for offshore production facilities. The application process includes risk assessment and consultation. The consent, however, does not give exclusive rights to the area applied for, or prevent other individuals or organisations from applying for consent in the same location. Nor does it relinquish rights of navigation in a given area.

## Safety zones

When surface structures (fixed and floating installations) become operational, safety zones with a radius of 500m are automatically created under the *Petroleum Act 1987*. In the case of subsea facilities, application must be made to the Secretary of State requesting that a safety zone be established

## Use and discharge of chemicals

A permit is required in advance for the use of chemicals offshore including drilling, well workover, production and pipeline chemicals (*Offshore Chemicals Regulations 2002*). Permit application (PON15) includes mandatory risk assessment. Variation in use from the permit must have prior approval. Chemical use and discharge must be reported at the end of the activity. Chemicals are ranked by hazard, based on a PEC:PNEC (Predicted Effect Concentration : Predicted No Effect Concentration) approach.

No organic phase drilling fluids may be used without prior authorisation (normally through the PON 15/Environmental Statement process), and discharge of cuttings to sea with a concentration >1% by weight of oil on dry cuttings is prohibited. (OSPAR Decision 2000/3 on the Use of Organic-Phase Drilling Fluids (OPF) and the Discharge of OPF-Contaminated Cuttings). Such OPF cuttings are reinjected to deep rock strata or shipped to shore for treatment/oil recovery and disposal at licensed sites.

## Consent for produced water discharges containing reservoir fluids

OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations provides for a reduction in the discharge of oil in produced water by 15% over a five year period and a lowering of the discharge concentration from each installation to 30mg/l over the same period. The recommendation also includes a presumption against the discharge to sea of produced water from new developments.

The *Offshore Petroleum Activities (Oil Pollution Prevention and Control) Regulations* came into force during 2005 and have updated and largely superseded the *Prevention of Oil Pollution Act, 1971* (POPA). A system of permits for oil discharges has been introduced to replace the POPA exemptions and more wide-ranging powers have been given to inspectors. Operators are required to regularly make reports of actual oil discharge. A Permit is required for any discharge of reservoir oil. The regulations are a mechanism to continue implementation on the UKCS of OSPAR Recommendation 2001/1 and make provision for the introduction of the dispersed oil in produced water trading scheme.

## Waste

*The Merchant Shipping (Prevention of Pollution by Sewage and Garbage from Ships) Regulations 2008*<sup>7</sup> prohibit the disposal of any garbage other than food wastes into the sea from a platform or from a ship alongside or within 500 metres of a platform. Food waste ground to particles 25mm or less may be discharged overboard but only if the installation is sited 12 nautical miles or more offshore. Each installation is required to have a garbage management plan and maintain accurate waste records. Waste is stored and taken to shore for reuse, recycle, treatment or disposal. Wastes must be identified, described and labelled accurately, kept securely and safely during storage and transferred only to authorised persons. Under the *Environmental Protection Act 1990*, operators must ensure that offshore waste is managed onshore in accordance with the Duty of Care introduced by the Act and other onshore legislation such as Regulations applying to Special (Hazardous Waste in England and Wales) Waste and that relating to the management and licensing of waste sites.

## Authorisation to install and operate a pipeline

A Pipeline Works Authorisation is required from DECC for the use of, or works for, the construction of a submarine pipeline. The authorisation may include conditions for the design, route, construction and subsequent operation of the pipeline and requires a full consultation process.

A licence is required under *Food and Environment Protection Act 1985* (FEPA) for all deposits in the marine environment (on or under the seabed), unless specifically exempt from the requirement (see for example section 7A of FEPA and the *Deposits in the Sea (Exemptions) Order 1985*). Some exempted deposits in the sea require consents or permits under other legislation. For example, licences are required for injection of produced water or drill cuttings away from the site of production, and the deposit of rock on the seabed following pipeline installation.

## Machinery space drainage

The *Merchant Shipping (Prevention of Oil Pollution) Regulations, 1996* (as amended) give effect to Annex I of MARPOL 73/78 (prevention of oil pollution) in UK waters and address oily drainage from machinery spaces on vessels and installations.

## Consent to flare or vent any gas

A consent from the Secretary of State is required to flare gas or vent gas (*Energy Act 1976*, petroleum licences granted under the *Petroleum (Production) Act 1934* and the *Petroleum Act 1998*). DECC is committed to eliminating all unnecessary or wasteful flaring and

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<sup>7</sup> These regulations enter into force 1st February 2009 and will revoke *The Merchant Shipping (Prevention of Pollution by Sewage and Garbage) Regulations, 2006*.

venting of gas. Guidance to operators states that they should seek to minimise flaring and venting “by implementing best practice at an early stage in the design of the development and by continuing to improve on this during the subsequent operational phase. The operator should consider carefully all operational activities in accordance with good oil field practices taking into consideration plant uptime, efficient processing, handling, uses and transportation of gas.”

## Combustion emissions from power generation etc

The *Offshore Combustion Installations (Prevention and Control of Pollution) Regulations, 2001 (as amended 2007)* introduced Integrated Pollution Prevention and Control (IPPC) to offshore oil and gas combustion installations (power generation, turbines, fired heaters etc) with a combined total rated thermal input exceeding 50 MW. IPPC Permit conditions include provisions based on best available techniques, emission limits, and monitoring requirements.

## Emissions trading

Under the *Greenhouse Gas Emissions Trading Scheme Regulations 2005 (as amended)*, combustion installations >20 MW(th) input require a permit to discharge CO<sub>2</sub>. The National Allocation Plan sets out caps for all UK installations in the Scheme based on CO<sub>2</sub> from turbines, diesels and fired heaters and flaring.

## Ozone depleting substances

Ozone depleting substances are regulated under the UK *Environmental Protection (Controls on Ozone Depleting Substances) Regulation 2007* (implementing EU Regulation 2037/2000), and the UK *Persistent Organic Pollutants (POPs) Regulations 2007* (implementing *EU Regulation 850/2004 on ozone depleting substances*). Both regulations limit the use of ozone depleting substances and coordinate their phase-out offshore.

## Radioactive substances

Onshore and offshore storage and disposal of naturally occurring radioactive materials (NORM) is regulated under the *Radioactive Substances Act 1993* and operators are required to hold, for each relevant installation, an authorisation to store and dispose of radioactive waste such as low specific activity (LSA) material deposited in vessels and pipework or discharged in produced water. The Authorisation specifies the route and method of disposal. Records of disposals are required. The use, storage and disposal of radioactive sources are regulated under the same legislation. A registration certificate is required to keep and use sources and records must be kept.

## Spill contingency planning

Operators are required to report all oil and chemical spills, regardless of size to the Coastguard, DECC and other relevant authorities PON1. Every reasonable attempt should be made to recover other items lost overboard (PON2).

An Approved Oil Pollution Emergency Plan is required to cover all offshore installations and oil handling facilities (e.g. pipelines). The plan must be submitted for approval at least two months in advance of operations. It must include an assessment of spill risk, response arrangements, and details of actions, interfaces, training and exercises as required by the *Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations, 1998*, and the *Offshore Installations (Emergency Pollution Control) Regulations 2002*.

Vessels and drilling rigs are required to hold a current, approved Shipboard Oil Pollution Emergency Plan (SOPEP) in accordance with guidelines issued by the Marine Environment Protection Committee of the International Maritime Organisation.

## Decommissioning

Under the *Petroleum Act 1998*, operators proposing to decommission an installation must submit a Decommissioning Programme including an Environmental Impact Statement to DECC for approval prior to any works being commenced. Consultation and monitoring is also required. DECC guidance indicates a presumption that offshore installations will be re-used, recycled or disposed of on land and that any exceptions to that general rule will be assessed individually in accordance with the provisions of OSPAR Decision 98/3.

## A5.4 GAS STORAGE

### Licensing and consenting

The *Energy Act 2008* makes provision for the designation of Gas Importation and Storage Zones and creates a licensing framework for the underground storage of combustible gas offshore. The Act makes it an offence to carry any of the activities below except in accordance with a licence and with prior consent:

- use of a controlled place for the unloading of gas to an installation or pipeline
- use of a controlled place for the storage of gas
- conversion of any natural feature in a controlled place for the purpose of storing gas
- recovery of gas stored in a controlled place
- exploration of a controlled place with a view to gas storage
- establishment or maintenance in a controlled place of an installation for the purposes of activities within this subsection

The Competent Authority for the issuance and regulation of licences is DECC, and the Act makes provision for the future making of more detailed regulations in respect of this.

Under the *Energy Act 2008* underground storage of gas offshore is exempted from the licensing requirements of *Food and Environment Protection Act 1985*, but not in the territorial sea adjacent to Scotland, Wales or Northern Ireland or in the that part of the Gas Importation and Storage Zone which is adjacent to Scotland.

### Environmental regulation

Subject to appropriate to thresholds, gas storage activities are likely to be subject to similar regulatory requirements as those for offshore oil and gas e.g. EIA, Habitats Directive, Integrated Pollution Prevention and Control, Emissions Trading, waste management, consent to locate etc.

### Crown lease

Developers will also need to apply for a Crown lease covering the relevant area.

### Safety zones

Sections 21, 23 and 24 of the *Petroleum Act 1987* provide for the automatic establishment of safety zones around oil and gas installations and set out offences and the applicable



penalties in connection with such safety zones. The *Energy Act 2008* extends those provisions to installations used for offshore gas storage projects and offloading.

### Potential requirement for licence

This Act also makes provision with respect to the interaction between activities regulated under the Petroleum Act and gas storage activities. In some cases the storage of gas will also require a petroleum licence, under section 3 of the *Petroleum Act 1998*, as well as a licence under section 4 of the *Energy Act 2008*. This is because the geological feature in which the gas is stored (for instance, a depleted hydrocarbon field) may itself contain indigenous hydrocarbons. As a result, indigenous hydrocarbons will be “produced” when it mixes with stored gas. In the case of other geological features, the amounts of hydrocarbons present may be negligible. If the Secretary of State is satisfied that the amount of hydrocarbons present is insignificant a direction may be given which makes it clear that there is no requirement for a petroleum licence.

### Decommissioning

The *Energy Act 2008* amends the *Petroleum Act 1998* to ensure that the provisions of which relate to the decommissioning of offshore installations including for example, obligations to remove the facilities completely after the permanent cessation of operations apply to all installations used for the offshore storage and offloading of combustible gas.