

Appendix 3: Existing Controls

A3.1 Introduction

The summary below is a contextual overview of existing controls relevant to the environmental management of UK offshore energy activities, including offshore oil and gas, gas and carbon dioxide storage, and offshore renewables. It is not intended to be a comprehensive guide to the applicable environmental legislation¹.

Legislation transposed from EU Directives, amongst other sources of EU-derived law, forms part of the body of UK “retained EU law” created under the *EU (Withdrawal) Act 2018*, which came into effect on 1st January 2021. Any reference to all or part of a European Directive in the following section is only made to provide context to retained EU law.

A3.2 Offshore renewable developments

Under *The Crown Estate Act 1961*, The Crown Estate is entrusted to manage assets on behalf of the Crown including most of the UK seabed out to 12nm, over half of the foreshore, as well as certain sovereign rights in respect of areas beyond the territorial sea. Such sovereign rights are vested in the Crown by the virtue of the designation of the UK Exclusive Economic Zone (EEZ), formerly covered by areas including the Gas Importation and Storage Zone (GISZ) or Renewable Energy Zone (REZ) under the *Energy Act 2008* and *Energy Act 2004* respectively. 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. Potential offshore wind farm developers also require statutory consents from a number of Government departments before development can take place. When all necessary statutory consents are obtained by the developer, The Crown Estate can grant a site lease for a development. Under the *Planning Act 2008*, the Planning Inspectorate (PINS) assumed responsibility for consent applications for offshore electricity generating stations with a capacity of more than 100MW (or 350MW in Wales²). While PINS deals with the acceptance and examination of the application and provides a recommendation to the relevant Secretary of State (in this case of Business, Energy & Industrial Strategy), the ultimate decision maker in these cases is the Secretary of State.

The *Marine and Coastal Access Act 2009* (as amended) provided for the creation of the Marine Management Organisation (MMO) which then took over the processing of offshore renewable energy generating station applications under section 36 of the *Electricity Act 1989* (i.e. those not considered to be nationally significant, >1MW but below 100MW) in English and Welsh territorial waters and the UK EEZ (excludes the territorial waters of Northern Ireland and Scotland, and the Scottish Renewable Energy Zone). A single Marine Licence is required for activities formerly covered by the *Coast Protection Act 1949* and *Food and Environment*

¹ UK legislation can be accessed via www.legislation.gov.uk/; OSPAR Agreements, Decisions and Recommendations via www.ospar.org, EU legislation via <http://eur-lex.europa.eu>, overview of MARPOL and other IMO Conventions via www.imo.org

² Section 39 of the *Wales Act 2017*. Note that applications for developments of national significance in Wales are made to the Planning Inspectorate Wales, with the planning procedure being similar to that for projects in England.

Protection Act 1985 (FEPA). The Welsh Ministers are the marine licensing authority for Welsh territorial waters; in 2013 the responsibility for operation of marine licensing passed to Natural Resources Wales, however, the MMO is responsible for issuing Section 36 consents. Marine renewables³ in Scotland and Northern Ireland are out-with the scope of this SEA.

The *Energy Act 2008*, The *Planning Act 2008* and the *Marine and Coastal Access Act 2009* provide a framework for the consenting and decommissioning of offshore marine renewables.

A3.2.1 **Environmental Impact Assessment**

Environmental Impact Assessment (EIA) is legislated in the UK through a number of Regulations (e.g. the *Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2000* (as amended) relating to a Section 36 consent and the *Harbour Works (Environmental Impact Assessment) Regulations 1999* (as amended) in relation to the CPA). The latest Regulations reflect the most recent 2014 amendments to the EIA Directive (2011/92/EU), and are part of retained EU law. The Regulations require developers of offshore renewables arrays likely to have a significant effect on the environment to undertake an environmental impact assessment (EIA) of the environmental impact of a development from the construction stage through to decommissioning. 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 also considered.

Of relevance to the consideration of potential impacts on the environment, marine geophysical survey activities used to inform the EIA process for renewables have an unclear consenting route, and may only be subject to environmental scrutiny by association with the DCO application, or as part of a marine licence application (e.g. where it forms part of a wider survey scope that includes marine licensable activities such as geotechnical investigations). The avenue for conservation bodies to understand the potential effects of such activities which are both not specifically licensable nor excluded from the licensing regime, is via voluntary notification. This allows for the consideration of whether an EPS offence could occur, or whether the activity could result in likely significant effects on species protected under Annex II of the Habitats Directive. The route to make such a determination is not clear in the UK regulatory system, however guidance on the management of Natura 2000 (EU 2018) refers to a number of ECJ judgements which clarify that certain activities cannot be exempted from the application of Article 6(3), and also implies that this includes where projects are not subject to authorisation.

A3.2.2 **Habitats & species protection**

The *Conservation of Habitats and Species Regulations 2017* (as amended) (“the Habitats Regulations”) and the *Conservation of Offshore Marine Habitats Species Regulations 2017* (as amended) (“the Offshore Habitats Regulations”) make provision for implementing the Birds Directive (2009/147/EC) and the Habitats Directive (92/43/EEC) in the UK and marine areas relevant to the draft plan/programme, and require Habitat Regulations Assessment to be

³ Marine licensing in Scotland is the remit of the Scottish Ministers (*Marine and Coastal Access Act 2009* and *Marine (Scotland) Act 2010*), while the Department of Agriculture, Environment and Rural Affairs (DAERA) is responsible for marine licensing in Northern Ireland through the *Marine Act (Northern Ireland) 2013* and the *Marine and Coastal Access Act 2009*.

undertaken to determine whether any plan or project alone, or in-combination with other plans or projects, could result in a likely significant effect on a relevant site. Where a likely significant effect is identified for a relevant site, an appropriate assessment must be undertaken to determine whether the plan or project will result in adverse effects. In the event that adverse effects are concluded, the plan or project must not go ahead unless mitigation and/or compensation measures can be employed, and where there are imperative reasons of overriding public interest (IROPI) for the plan or project to proceed. The scope for IROPI assessments is more restricted if a site contains a priority habitat or species.

European Protected Species (EPS) are listed on the Annex IV of the Habitats Directive; this Annex continues to be relevant under retained EU law. A licence may be required where activities have a risk of committing an offence.

In 2003, the UK signed the Convention on Biological Diversity and the OSPAR Convention, international agreements to establish an ecologically coherent network of well-managed Marine Protected Areas (MPAs). The sites in the network will work together to provide more benefits than an individual area could on its own. Included in Marine Strategy Framework Directive (MSFD, Directive 2008/56/EC) measures to achieve Good Environmental Status is the establishment of a cohesive network of Marine Protected Areas which, like the above international commitments, is intended to build on the areas already protected as marine conservation sites under the Habitats Regulations and Offshore Habitats Regulations. Similar provisions for the consideration of the effects on MPAs (called Marine Conservation Zones in England and Wales) is contained in the *Marine and Coastal Access Act 2009* and the Acts of devolved administrations, which also provide powers to designate Marine Conservation Zones (MCZs) in England, Wales and Northern Ireland, and Marine Protected Areas (MPAs) in Scotland. The MMO have issued guidance on a Marine Conservation Zone (MCZ) assessment process which is integrated into the marine licence decision making procedure.

A3.2.3 **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.

In accordance with the *Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009*, an applicant for a Development Consent Order for the construction of an offshore generating station, must provide a statement as to whether an application will be made for safety zones. This statement outlines the legislative requirements relating to a safety zone application for offshore wind turbines and associated infrastructure, under the *Energy Act 2004* (as amended). The safety zone application is made once the final number and locations of all the offshore infrastructure have been determined. *The Electricity (Offshore Generating Stations)(Safety Zones) (Application Procedures and Control of Access) Regulations 2007* (as amended) defines “standard safety zones” allowable under the Act as 500m during installation, major maintenance, “extension” and decommissioning, and 50m under operation. In Part 2 regulation 3 (c)(ii), there seems some flexibility, “*in relation to the proposed safety zone... whether the applicant seeks the declaration of a standard safety zone, or if not, what dimensions are sought for that zone.*”, however, a maximum of 500m is permitted in Article 60 of UNCLOS. It is noted that in reference to wave and tidal devices, the Regulations (regulation 3(b)(iii)) indicates applications for safety zones must include “... a

description of the extent and location (or proposed extent and location) of anchors, moorings and cables used (or to be used) in relation to the installation.” Related guidance⁴ for safety zones notes that, for wave and tidal devices, “...*the relevant regulatory authority and MCA will need to consider, in consultation with the developer, whether the standard dimensions for safety zones as set out above are appropriate and, if so, what part of the device’s structure they should be measured from. This is to ensure that the movement of such a device, or part thereof, through the water and any moorings or cables will be adequately covered.*” This should be kept in mind for applications relating to floating offshore wind farms which may have moorings with considerable lateral spread.

A3.2.4 **Decommissioning**

The Energy Act 2004 (sections 105 to 114), as amended by the *Energy Act 2008* and the *Scotland Act 2016*, contains a statutory decommissioning scheme for offshore wind and marine energy installations and their related electric lines (collectively, Offshore Renewable Energy Installations). Under the Act, the Secretary of State may require a person who is responsible for an installation to submit (and eventually carry out) a decommissioning programme. see Guidance: *Decommissioning of offshore renewable energy installations under the Energy Act 2004* (BEIS 2019⁵).

A3.3 Oil and gas, gas storage and carbon dioxide storage

There are a number of different bodies involved in the granting of licenses and consent approvals.

The Offshore Petroleum Regulator for Environment and Decommissioning (OPRED), which is part of BEIS, is responsible for administering and ensuring compliance of the offshore environmental regulations and the decommissioning of offshore oil and gas, gas storage and carbon dioxide storage installations and pipelines.

The Oil and Gas Authority (OGA) was formally established in 2016 and has responsibilities including oil and gas licensing, exploration and production consents, wells and other infrastructure and is the licensing authority for offshore gas storage⁶ and carbon dioxide storage

The *Infrastructure Act 2015* amended the *Petroleum Act 1998* (Part 1A), creating an obligation on the OGA to produce a Strategy for enabling the principal objective of "maximising the economic recovery (MER) of the UK’s offshore oil and gas resources; the first OGA strategy was published in 2016 (The MER UK Strategy) and a revised strategy came into force in February 2021 (The OGA Strategy)⁷. The main changes to the Strategy are:

⁴ <https://www.gov.uk/government/publications/offshore-renewables-energy-installations-applying-for-safety-zones>
⁵ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/916912/decommissioning-offshore-renewable-energy-installations-energy-act-2004-guidance-industry_1_.pdf

⁶ The Energy Act 2008 provides for a licensing regime that governs the offshore storage of carbon dioxide. The regime applies to storage in the offshore area comprising both UK territorial sea and beyond designated as a gas importation and storage zone (GISZ) (now encapsulated and superseded by the Exclusive Economic Zone) under section 1(5) of the Act. The Secretary of State for Energy and Climate Change is the licensing authority for offshore storage (except within the territorial sea adjacent to Scotland, for which Scottish ministers authorise).

⁷ <https://www.ogaauthority.co.uk/media/7105/the-oga-strategy.pdf>

- Clarifying that net zero is part of MER in the Central Obligation and embedding this change throughout the Strategy in relevant Supporting Obligations and economic definitions
- Including net zero as part of Maximising Economic Recovery (MER) in the Central Obligation and embedding this change throughout the Strategy in relevant supporting Obligations and economic definitions
- Reinforcing behaviours that enable effective supply chain collaboration
- Including a new corporate governance Supporting Obligation
- Including a new carbon storage Supporting Obligation
- Moving the collaboration “Required Action” to the “Supporting Obligations”
- Clarifying how the OGA will include carbon costs in economic calculations

A3.3.1 Oil and gas

The *Petroleum Act 1998* (as amended), provides the basis for granting licences to explore for and produce oil and gas. Offshore licensing for oil and gas exploration and production has progressed through a series of Seaward Licensing Rounds and a Seaward Production Licence may cover the whole or part of a specified Block/group of Blocks and grants exclusive rights to the holders “searching and boring for and getting petroleum”. The prospective licensee must demonstrate to the OGA before award that they have the necessary financial, technical, environmental and safety competency to carry out the agreed work programme – see below for details of changes to the operator regime in 2015. Model clauses and conditions are attached to the Licence⁸. Before Licences are awarded, where relevant, BEIS undertakes Habitat Regulations Assessment (HRA) in relation to the potential for effects on relevant sites⁹. A Production Licence gives that licensee exclusive rights to explore for, drill for and produce oil and gas within a specified area.

Several sub-types of Seaward Production Licence (Traditional, Frontier and Promote) were replaced after the 28th Round by the single “Innovate” licence¹⁰. As per previous licensing structures, the Innovate licence is made up of three terms covering exploration (Initial Term), appraisal and field development planning (Second Term), and development and production (Third Term). The lengths of the first two terms are flexible, but have a maximum duration of 9 and 6 years respectively. The Third Term is granted for 18 years but may be extended if production continues beyond this period.

⁸ The Petroleum Act 1998, Schedule 1: Model clauses incorporated in Licences when Granted <https://www.legislation.gov.uk/ukpga/1998/17/schedule/1>; *The Petroleum and Offshore Gas Storage and Unloading Licensing (Amendment) Regulations 2017* amend the Model Clauses to be incorporated in Seaward Production Licences

⁹ Under regulation 65 of the Conservation of Habitats and Species Regulations 2017, and 33 of the Conservation of Offshore Marine Habitats Species Regulations 2017, the competent authority (in this case the Secretary of State for Business, Energy and Industrial Strategy) is required to review decisions made regarding consents, permissions or other authorisations for all relevant plans or projects which are likely to have a significant effect on Special Protection Areas (SPAs) or Special Areas of Conservation (SACs), either alone or in combination with other plans or projects, which are not directly connected with or necessary to the management of that site.

¹⁰ *The Petroleum and Offshore Gas Storage and Unloading Licensing (Amendment) Regulations 2017* amend the Model Clauses to be incorporated in Seaward Production Licences. <https://www.ogauthority.co.uk/licensing-consents/types-of-licence/>

The Offshore Petroleum Licensing (Offshore Safety Directive) Regulations 2015 implement the Offshore Safety Directive (now as part of retained law), together with, in particular:

- The *Offshore installations (Prevention of Fire and Explosion and Emergency Response) Regulations 1995* (as amended by the *Offshore Installations (Offshore Safety Directive) (Safety Case etc.) Regulations 2015*)
- The *Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998* (as amended by the *Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) (Amendment) Regulations 2015* – see below - and
- *The Offshore Installations (Offshore Safety Directive) (Safety Case etc.) Regulations 2015*

These Regulations also set out the obligations and liability for environmental damage on offshore licensee(s).

Following a successful licence application, the licensee(s) will be required to undertake the exploration or development activities detailed in the agreed work programme set out in the licence and under *The Offshore Petroleum Licensing (Offshore Safety Directive) Regulations 2015*, must appoint an operator (i.e. well and/or installation) for the relevant phases of the offshore operations; the relevant operator can be a licensee, within a licensee's company group, a licence operator or a third party company.

The Seaward Exploration Licence is an additional type of Licence which is non-exclusive and only covers non-intrusive exploration (e.g. geophysical survey) whether carried out for the sake of hydrocarbon production, gas storage or carbon dioxide storage. If the holder of a Seaward Exploration Licence wants to explore acreage covered by an existing Production Licence, permission must be gained from the holder of that Production Licence.

A3.3.2 **Gas storage**

The *Energy Act 2008* (as amended), creates a licensing framework for unloading and storage of combustible gas offshore and the Act prohibits the carrying out of certain activities except in accordance with an *Energy Act Licence*¹¹:

- 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, or in connection with, the carrying on of activities above
- Establishment or maintenance in a controlled place of an installation for the purpose of the above activities

¹¹ <https://www.ogauthority.co.uk/licensing-consents/gas-storage-and-unloading/>

In addition to a licence, a Crown Estate lease relating to the specific part of the seabed and sub-sea formation (i.e. a 3D licence) is required.

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 OGA 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.

The OGA is the licensing authority for offshore gas storage and offshore gas unloading and OPRED the authority for the granting of environmental consents.

A3.3.3 Carbon dioxide storage

The *Energy Act 2008* established a licensing regime for the storage of carbon dioxide in areas within UK territorial waters, and in areas beyond those waters which have been designated as the Exclusive Economic Zone (EEZ), formerly the Gas Importation and Storage Zone (GISZ). The Act prohibits the storage of carbon dioxide (with a view to its permanent disposal) except in accordance with a licence granted under the Act.

The OGA regulates offshore carbon dioxide storage and are the licensing authority responsible for issuing licence and granting storage permits. OPRED has an environmental function, undertaken via habitats and environmental impact assessment regulations.

In order to explore for, drill for or use a geological feature for the long term storage of carbon dioxide in the UK offshore area, an operator must hold:

- A Licence issued by the OGA under Section 18 of the *Energy Act 2008*, except in respect of activities in the UK territorial sea (12 miles from the baseline) adjacent to Scotland, for which Scottish Ministers are the Licensing Authority.
- A Lease from The Crown Estate for storage activities for all offshore areas, as the right to store gas (including carbon dioxide) in the offshore area is vested in the Crown by virtue of Section 1 of the *Energy Act 2008*.

The Storage of Carbon Dioxide (Licensing etc.) Regulations 2010 and *The Storage of Carbon Dioxide (Licensing etc.) (Scotland) Regulations 2011* provide more detail of the licensing regime for which the Scottish Minister is the licensing authority for the territorial sea adjacent to Scotland and the OGA is the licensing authority for all other areas of the sea.

A3.3.4 Requirement for Environmental Management Systems

All Well and Installation Operators controlling the operation of offshore wells and installations on the UKCS are required to have in place an independently verified Safety and Environmental Management System (SEMS) 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; and, more generally, to

achieve the objectives of the OSPAR Strategy¹² and the requirements of the Offshore Safety Directive.

A3.3.5 Environmental Impact Assessment

An array of oil and gas, gas unloading and storage and carbon dioxide storage projects for which consents are issued by the OGA are contingent on complying with the requirements of the *Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Assessment) Regulations 2020* (the EIA Regulations). Where a project falls within those listed in Schedule 1 of the Regulations, there is a mandatory requirement for an Environmental Impact Assessment (EIA), and the application for consent for the project cannot be granted unless the project has been subject to an EIA. Schedule 1 projects are:

- Extraction of oil and natural gas for commercial purposes where the amount extracted exceed 500 tonnes/day for oil and 500,000 cubic metres/day for natural gas
- Installation for storage of oil with a capacity of 200,000 tonnes or more
- Activities captured by section 17(2)(a) or (b) of the Energy Act 2008 (activities related to the geological storage of carbon dioxide)
- Installation for the capture of carbon dioxide streams for the purposes of geological storage of carbon dioxide where:
 - The carbon dioxide is captured from an installation forming part of a project that falls under paragraph 1 (i.e. the first bullet above)
 - The total yearly capture of carbon dioxide is 1.5 megatonnes or more
- Pipelines with a diameter of more than 800mm and a length of more than 40km for the transport of oil, combustible gas or chemicals and for the transport of carbon dioxide streams for the purposes of geological storage of carbon dioxide
- A change to a project that falls under Schedule 1 where such as change in itself meets the threshold, if any, listed in the Schedule

A number of projects (those which fall under Schedule 2 of the EIA Regulations, including the drilling of some wells) may not need an EIA if a preliminary assessment demonstrates to the satisfaction of the Secretary of State that the project is unlikely to cause a significant adverse environmental effects. In such circumstances a screening direction from the Secretary of State may be sought that an EIA is not required. The application must, as far as possible, be a standalone 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.

A developer can also choose to undertake an EIA and submit an Environmental Statement for projects that fall within Schedule 2.

¹² The OSPAR Recommendation 2003/5 to promote the use and implementation of environmental management systems by the offshore industry can be found here: <https://www.ospar.org/convention/agreements?q=OSPAR+Recommendation+2003%2F5&t=32283&a=&s=#agreements-search>

A3.3.6 **Habitats & species protection**

The *Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001* (as amended) implement the requirements of Articles 6(3) and 6(4) of the Habitats Directive with respect to oil and gas activities in UK territorial waters and on the UK Continental Shelf. The Secretary of State, will, if considered that an activity may have a likely significant effect on a SAC or SPA, conduct a Habitat Regulations Assessment prior to agreeing to the granting the consent by the OGA.

European Protected Species (EPS), protected under retained law in the UK, are listed on the Annex IV of the Habitats Directive. Where offshore activities may result in impacts on relevant species an assessment has to be carried out, by the developer or person carrying out the activity, to determine the likelihood of killing/causing injury to or committing a disturbance offence to the EPS. In order to assess the risk, the characteristics of the proposed activity and the associated potential disturbance factors need to be taken into account, in addition to species related information. An EPS injury or disturbance licence for activities may then be required. At present EPS injury or disturbance licences are only required for acoustic surveys where the Joint Nature Conservation Committee (JNCC) or another Statutory Nature Conservation Body (SNCB) has advised that the application for a consent for a geological survey must also obtain an EPS injury or disturbance licence.

In 2003, the UK signed the Convention on Biological Diversity and the OSPAR Convention, international agreements to establish an ecologically coherent network of well-managed Marine Protected Areas – see description earlier in this Appendix. Environmental Statements, and other assessments supporting applications for consent via the Portal, must include a consideration of the potential impact of the activity on relevant MPAs/MCZs.

A3.3.7 **Consent to conduct a survey**

Geophysical surveys, pipeline route, site, 2D, 3D, 4D shallow seismic, vertical seismic profiling (VSP) check shots, sub-bottom profiling, shallow borehole, all require consent under the *Offshore Petroleum Activities (Conservation of Habitats) Regulations, 2001* (as amended). Applications for consent in acoustically sensitive areas must be accompanied by narrative environmental assessment with modelling of sound propagation and consideration of impact on sensitive receptors. Consideration is given to the requirement for an Appropriate Assessment under the Habitats Regulations and Offshore Habitats Regulations in relation to the potential for effects on SACs. The application 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 above). A report of the survey and marine mammal observations is submitted to the JNCC, detailing how the JNCC guidelines were implemented, the marine mammals sighted, the methods used to detect them and any problems encountered. 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.

A3.3.8 **Consent to locate facilities**

The issue of a Consent to Locate to an individual or organisation by the Secretary of State is granted under Part 4A of the *Energy Act 2008* and allows installation of the proposed offshore structure or operations providing they are undertaken in accordance with the consent conditions. It allows BEIS to insist upon the provision of navigational markings that are considered appropriate for the proposed offshore structure or operations. Categories where a Consent to Locate is required are: permanent/fixed structures (e.g. offshore installation, well

template, wellhead and Xmas tree); pipelines or cables (e.g. infield or export pipelines, water injection lines and control umbilicals) and other operations (e.g. the installation of surface moorings or buoys). The application process includes risk assessment and consultation. A consent is not required for mobile vessels, where operations do not constitute a potential navigational hazard, as there is no physical connection to subsea infrastructure/seabed and/or the vessels can move off location quickly in an emergency.

A3.3.9 **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 can be made to the Secretary of State requesting that a safety zone be established by Statutory Instrument¹³.

A3.3.10 **Authorisation to install and operate a pipeline**

A Pipeline¹⁴ Works Authorisation, issued by the OGA is required under Part 3 of the *Petroleum Act 1998* for the construction and/or use of a submarine pipeline in territorial waters and on the continental shelf. Where a pipeline is to be laid within 12 nautical miles of the coast a Crown Estate Lease is also required. Environmental consents for the installation of a pipeline are granted by OPRED and a PWA cannot be issued until the environmental applications have been determined by OPRED and OPRED's agreement to the grant of consent has been confirmed.

A3.3.11 **Deposits**

Deposit of materials associated with pipelines is consented via the Pipeline Works Authorisation (PWA) application process. A Screening Direction under the *Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Assessment) Regulations 2020* is also required. A marine licence under the Marine and Coastal Access Act (MCAA) 2009 is required in cases where deposits are proposed that are not part of a petroleum licence activity or related to construction or maintenance of a pipeline for which a PWA is in force.

The deposits related to drilling, pipeline, production and intervention operations, e.g. stabilisation or protection materials, such as jack-up rig stabilisation/anti-scour deposits, or pipeline protection/free-span correction must be subject of a Screening Direction under the *Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Assessment) Regulations 2020*.

Deposits relating to decommissioning or abandonment operations require a MCAA marine licence.

¹³ The Secretary of State can, under the Petroleum Act 1987, establish a 500 m safety zone around a sub-sea installation within designated waters, see https://www.hse.gov.uk/offshore/notices/on_54.htm

¹⁴ Pipeline defined in the *Petroleum Act 1998*, and modified in the *Energy Act 2008* as, "a pipe or system of pipes (excluding a drain or sewer) for the conveyance of anything, together with all apparatus, works and services associated with the operation of such a pipe or system".

A3.3.12 **Use and discharge of chemicals**

The *Offshore Chemicals Regulations 2002* (as amended) (the Chemical Regulations) implement *OSPAR Decision 2000/2 on a Harmonised Mandatory Control System for the Use and Reduction of the Discharge of Offshore Chemicals* (as amended) in the UK.

Under the Chemical Regulations (as amended) the use or discharge of offshore chemicals (e.g. for drilling, production etc.) is prohibited except in accordance with the terms of, and conditions attached to, a permit issued under the Regulations. CEFAS pre-screen and rank the chemicals in accordance with the OSPAR Decision and only chemicals that have been notified to and assessed by CEFAS, and included in the current list of notified chemicals may be used. Chemicals are ranked by hazard, based on a PEC:PNEC (Predicted Effect Concentration: Predicted No Effect Concentration) approach. Each permit application must include a risk assessment of the potential environmental impact on the marine environment of the relevant chemical in the specific mode of use and/or discharge. Any proposed change in use or discharge from that described in the permit must have prior approval by variation of the permit. Chemical use and discharge must be reported.

The Chemical Regulations (as amended) also prohibit releases of chemicals (or any of its degradation or transformation products) other than by way of a permitted discharge. Operators are required to report all chemical spills, regardless of size to the Coastguard, BEIS and other relevant authorities (Petroleum Operations Notice No.1, PON1).

No organic phase drilling fluids (OPF) may be used without prior authorisation, and discharge of cuttings to sea with a concentration >1% by weight of oil on dry cuttings is prohibited. Such OPF cuttings are reinjected to deep rock strata or shipped to shore for treatment/oil recovery and disposal at licensed sites. OPF cuttings thermally treated offshore whereby their oil content is reduced to <1% by weight can be discharged offshore, under an approved permit.

UK REACH¹⁵ (Registration, Evaluation, Authorisation and Restriction of Chemicals), is a registration requirement covering all substances supplied above 1 tonne per year, with an authorization requirement covering substances of high concern. It gives the responsibility for gathering data and carrying out initial risk assessments to the industry. Although most of the provisions of REACH cover manufacturers and importers of chemicals, downstream users (e.g. oil and gas operators) are obliged to implement risk reduction measures recommended by their chemical suppliers and under certain circumstances they may be obliged to conduct a risk assessment covering their particular use(s) of a chemical.

A3.3.13 **Consent for produced water discharges containing reservoir fluids**

The *Offshore Petroleum Activities (Oil Pollution Prevention and Control) Regulations 2005* (as amended) regulates a system of permits for oil discharges.. The Regulations were amended to extend them to the offshore storage of combustible gas, the offshore unloading of combustible gas to an installation and the offshore storage of carbon dioxide. A Permit is required for any discharge of reservoir oil and Operators are required to make regular reports of oil discharged. The applications must be supported by an assessment of Best Available

¹⁵ There are post EU withdrawal arrangements associated with REACH and detailed information can be found here: <https://commonslibrary.parliament.uk/research-briefings/cbp-8403/> and on the Health and Safety Executive (as the competent authority for UK REACH) website: <https://www.hse.gov.uk/reach/index.htm>

Techniques (BAT) and Best Environmental Practices (BEP) and provide an assessment to justify the measures proposed to minimise pollution and limit discharges.

The Regulations are a mechanism to continue the implementation of OSPAR Recommendation 2001/1 for the management of produced water from offshore installations (as amended).

A3.3.14 Machinery space drainage

Oily discharge from machinery space drainage on vessels and installations are regulated under the *Merchant Shipping (Prevention of Oil Pollution) Regulations 2019*; these regulations take account of the guidelines for the applications of the revised MARPOL Annex I¹⁶ Requirements to floating production, storage and offloading facilities and floating storage units.

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. They address oily drainage from machinery spaces on vessels and installations. The North Sea is designated a "Special Area"¹⁷, (North West European Waters), within which the limit for oil in discharged water from these sources is 15ppm. For mobile drilling units, discharges of processed bilge water from machinery spaces should only be undertaken when there is a positive water movement past the rig, i.e. at times of the day when the tidal flow is at its greatest, and provided there is no visible sheen. Vessels and installations are required to hold a valid UKOPP (UK Oil Pollution Prevention) or IOPP (International Oil Pollution Prevention) Certificate. Vessels and drilling rigs are also required to hold a current, approved Shipboard Oil Pollution Emergency Plan (SOPEP) which is in accordance with guidelines issued by the Marine Environment Protection Committee of the International Maritime Organisation.

The Merchant Shipping (Implementation of Ship-Source Pollution Directive) Regulations 2009 introduced penalties for infringements and make various amendments to the above Regulations with respect to defences.

A3.3.15 Sewage

The Merchant Shipping (Prevention of Pollution by Sewage from Ships) Regulations 2020 implement the revised Annex IV of MARPOL 73/78 (Regulations for the Prevention of Pollution by Sewage from Ships)). Sewage equipment is required by vessels of >400 GRT or <400 GRT if certified to carry more than 15 persons including mobile drilling units or other vessels (e.g. FPSO) on international voyage. Sewage discharge (from applicable ships) is prohibited within 3 nautical miles of land; if appropriate sewage treatment plant is on board, discharge may occur if > 3 nautical miles from land; if there are no treatment facilities, sewage may only be discharged if > 12 nautical miles from land.

A3.3.16 Waste

The Merchant Shipping (Prevention of Pollution by Garbage from Ships) Regulations 2020 implement Annex V of MARPOL 73/78 (Regulations for the Prevention of Pollution by Garbage

¹⁶ MARPOL Annex I – Prevention of Pollution by Oil:

<https://www.imo.org/en/OurWork/Environment/Pages/OilPollution-Default.aspx>

¹⁷ MARPOL defines certain sea areas as "special areas" in which, for technical reasons relating to their oceanographical and ecological condition and to their sea traffic, the adoption of special mandatory methods for the prevention of sea pollution is required. Under the Convention, these special areas are provided with a higher level of protection than other areas of the sea. See <https://www.imo.org/en/OurWork/Environment/Pages/Special-Areas-Marpol.aspx>

from Ships – revised Annex V entered into force in 2013). Annex V, which applies to fixed and floating offshore installations (including rigs) and their support vessels operating on the UKCS, prohibits the discharge of all garbage into the sea (except ground food wastes where the installation is more than 12 nautical miles from the nearest land), requires facilities/ships to have a waste (garbage) management plan and display placards to notify all persons on board that the over-board disposal of waste is prohibited, and to maintain waste records. Because the offshore disposal of garbage is prohibited, then all such waste must be transferred to shore for disposal and must therefore be managed in accordance with the Duty of Care for waste and the requirements of all relevant UK waste legislation. There are strict controls on the trans-frontier shipment of waste and the export of waste for disposal is prohibited.

Petroleum Operations Notice No. 2 (PON2) covers the loss or dumping of materials at sea from offshore oil and gas installations. No material should be intentionally discarded at sea, except material that is legally deposited in accordance with the requirements of relevant legislation or deposited under conditions of force majeure. The latter is only relevant if the dumping is necessary to secure the safety of the vessel, installation or crew. Every reasonable attempt should be made to recover items lost overboard. All loss or unregulated dumping of solid materials at sea from offshore oil and gas installations must be reported through a PON2 form.

A3.3.17 **Consent to flare or vent any gas**

The Oil and Gas Authority is the regulator for flaring and venting and consent is given under the *Energy Act 1976* (as amended by the *Energy Act 2016*) and the *Petroleum Act 1998*¹⁸. The OGA Strategy, which came into force in February 2021, revises the OGA's Maximising Economic Recovery Strategy for the UK (the MER-UK Strategy), and incorporates a range of net zero obligations for the UK oil and gas industry, including reducing greenhouse gas emissions from sources such as flaring and venting. The industry is therefore expected to adhere to the following principles in relation to flaring and venting across all UKCS areas and oil and gas lifecycle stages:

- Flaring and venting and associated emissions should be at the lowest possible levels in the circumstances
- Zero routine flaring and venting for all by 2030
- All new developments should be planned and developed on the basis of zero routine flaring and venting

The operator should consider carefully all operational activities in accordance with these principles taking into consideration plant uptime, efficient processing, handling, uses and transportation of gas.

At cessation of production and for abandonment and decommissioning operations, a flare and/or vent consents may also be required from OPRED under the *Energy Act 1976*.

¹⁸ For flaring and venting, there are slightly different definitions of the gases emitted. For vent consents under the *Energy Act 1976*, both the inert gas and hydrocarbon fraction obtained from the licensed area should be given, and the combined rate for both will be the basis for the consent. For flaring under the applicable licence, only the hydrocarbon fraction flared from the licensed area requires consent, but the OGA will require the inert gas content of the flare to be provided. See https://www.ogauthority.co.uk/media/7647/flaring-and-venting-guidance_june-2021-final.pdf

A3.3.18 **Combustion emissions from power generation etc.**

The Offshore Combustion Installations (Pollution, Prevention & Control) Regulations 2013 (PPC) (as amended) transposes the relevant provisions of the Industrial Emissions Directive in respect to specific atmospheric pollutants from combustion installations (with a thermal capacity rating $\geq 50\text{MW}$) on offshore platforms undertaking activities involving oil and gas production and gas and carbon dioxide unloading and storage. The 2018 amendment to the Regulations included provisions to implement the Medium Combustion Plant Directive (MCPD), which came into force from 20 December 2018. PPC Permit conditions include provisions based on best available techniques, emission limits, and monitoring requirements.

A3.3.19 **Emissions trading**

The *Greenhouse Gas Emissions Trading Scheme Regulations 2012* (as amended), came into force in January 2013 and consolidated, with amendments, and replaced previous sets of implementing regulations (S.I. 2005/925 and S.I. 2010/1996). They transposed and implemented within the UK, Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading. Combustion installations $>20\text{ MW(th)}$ input required a permit to discharge CO_2 and the permit holder to surrender purchased allowances to cover the emissions. The 3rd Phase of the trading scheme ran from 2013 to 2020. In January 2021, the UK Emissions Trading Scheme (UK ETS) commenced, with the UK, Scottish and Welsh Governments and Northern Ireland Department of Agriculture, Environment and Rural Affairs, collectively making up the UK ETS Authority. The UK ETS is established through the *Greenhouse Gas Emissions Trading Scheme Order 2020* and the UK ETS regulators are responsible for enforcing compliance with the regulations, including issuing and ensuring compliance with permits (for installations) and emissions plans (for aviation); guidance has been published for the aviation industry, with detailed guidance for installation operators expected to be published in Spring 2022¹⁹.

A3.3.20 **Ozone depleting substances**

The *Ozone-Depleting Substances Regulations 2015* (as amended²⁰) covers offshore installations involved in oil/gas, Carbon Capture and Storage (CCS) and gas unloading/storage activities) and prohibits and controls the production/use of ozone depleting substances thereby reducing atmospheric emissions of these substances; in particular, they concerns the control of emissions from refrigeration systems, air-conditioning units, fire-protection systems and heat pumps.

A3.3.21 **Fluorinated Greenhouse Gases**

The *Fluorinated Greenhouse Gases Regulations 2015* (as amended) are in place in order to reduce emissions of fluorinated greenhouse gases (F Gases), used predominantly in the refrigeration and air conditioning sectors and which make a significant contribution to climate change. These Regulations cover certification of equipment such as refrigeration and fire protection and fluorinated gas (f-gas) based solvent as well as creating offences and penalties for not complying with recovery of f-gases legislation, labelling, qualifications and certificates required to work with products or equipment containing them. These also include criteria for

¹⁹ <https://www.gov.uk/government/publications/participating-in-the-uk-ets/participating-in-the-uk-ets>

²⁰ The *Ozone-Depleting Substance Regulations 2015* and the *Fluorinated Greenhouse Gases Regulations 2015*, were amended by the *Ozone-Depleting Substances and Fluorinated Greenhouse Gases (Amendment) etc.) (EU Exit) Regulations 2019* (as amended)

leak checking F Gas containing equipment (based on global warming potential rather than weight).

A3.3.22 **Energy Savings Opportunity Scheme Regulations (ESOS) 2014**

The Energy Savings Opportunity and Scheme is an energy assessment and energy saving scheme, established by the Energy Savings Opportunity Scheme Regulations 2014 (ESOS Regulations). ESOS²¹ is a mandatory energy assessment and energy saving identification scheme and is applicable to the offshore oil and gas industry sector. The scheme requires an audit to be undertaken once every four years to identify cost-effective energy efficiency measures.

A new streamlined energy and carbon reporting (SECR) framework came into force in April 2019, through the Companies (Directors' Report) and Limited Liability Partnership (Energy and Carbon Report) Regulations 2018, this different to ESOS. Many of the organisations in scope of ESOS will also have SECR obligations which apply to all quoted companies, large unquoted companies and large limited liability partnerships and require disclosure in annual reports of energy, emissions and energy efficiency action taken. Systems in place to collect and audit energy use to meet ESOS obligations and progress with implementation of ESOS recommendations can help organisations to meet their SECR requirements.

A3.3.23 **Air pollution from ships**

The Merchant Shipping (Prevention of Air Pollution from Ships) Regulations 2008 (as amended) implemented the 1997 Protocol for the establishment of International Regulations for the Prevention of Air Pollution from Ships which resulted in the addition of Annex VI (with revisions adopted in October 2008) to MARPOL 73/78. Annex VI comprises 19 Regulations and includes a Technical Code on the Control of Emissions of Nitrogen Oxides from Marine Diesel Engines (NO_x Technical Code). The North Sea was designated a SO_x Emission Control Area in 2005 where the sulphur content of fuel oil used onboard ships must not exceed 1.5% m/m; or ships must fit an exhaust gas cleaning system or use other technological methods to limit SO_x emissions.

The Merchant Shipping (Prevention of Air Pollution from Ships) and Motor Fuel (Composition and Content) (Amendment) Regulations 2014 amended the 2008 Regulations to take into account of changes to the sulphur content of marine fuels.

The Regulations are applicable to relevant ships (over 400 gross tonnage) and fixed and floating platforms and drilling rigs.

The Merchant Shipping (Prevention of Air Pollution from Ships) (Amendment) Regulations 2021, amend certain provisions of the 2008 Regulations and amendments inserted by the *Merchant Shipping (Prevention of Air Pollution from Ships) (Amendment) Regulations 2010* and the *Merchant Shipping (Prevention of Air Pollution from Ships) and Motor Fuel (Composition and Content) (Amendment) Regulations 2014*²² Regulations.

The 2021 Regulations implement several air quality measures to control sulphur and nitrogen oxide emissions from ships, in particular they limit the maximum sulphur content of marine

²¹ <https://www.gov.uk/government/publications/comply-with-the-energy-savings-opportunity-scheme-esos/complying-with-the-energy-savings-opportunity-scheme-esos>

²² <https://www.gov.uk/government/publications/regulations-to-control-air-pollution-from-ships>

fuels used by ships to 0.5% (by mass) or less. They also require that new ships and new engines (built from 2021) be certified to meet the latest nitrogen oxide standard – both globally and when ships operate inside waters which have been designated as an “emission control area” (ECA) by the International Maritime Organization, which includes the North Sea and English Channel.

A3.3.24 **Radioactive substances**

Onshore and offshore storage and disposal of naturally occurring radioactive materials (NORM) and the use, storage and disposal of radioactive sources is regulated under the *Radioactive Substances Act 1993* (as amended) or the *Environmental Authorisation (Scotland) Regulations 2018* in Scotland. In England and Wales radioactive substance regulation is included in the Environmental Permitting regime under the *Environmental Permitting (England and Wales) Regulations 2016*

A3.3.25 **Decommissioning**

Under Part IV of the *Petroleum Act 1998 (as amended)*, operators proposing to decommission an installation must submit a Decommissioning Programme to BEIS for approval prior to any works being commenced. The decommissioning programme is supported by an environmental appraisal (EA). Consultation and monitoring is also required. There is 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. 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 and those used for carbon dioxide storage.

A3.3.26 **Spill contingency planning**

In June 2013 the *EU Directive 2013/30/EU on the safety of offshore oil and gas operations (The Offshore Safety Directive)* (OSD) was published and this requires that certain specified information regarding emergency response measures is provided in an Internal Emergency Response Plan (IERP) which itself forms part of the Report on Major Hazards (Safety Case). In order to deliver the requirements of the OPRC Convention and elements of the IERP required by OSD, the *Merchant Shipping (Oil Pollution Preparedness, Response and Cooperation Convention) Regulations, 1998 (the OPRC Regulations)* were amended such that the new requirements introduced by the OSD apply UK offshore oil and gas operations.

Operators of offshore oil and gas operations must have a formally approved Oil Pollution Emergency Plan (OPEP) in place for each offshore installation and oil handling facility (e.g. pipelines) (or by agreement group of facilities/installations). The OPEP is submitted and managed by the Installation Operator (for installations), Well Operator (for wells) and Owner of the Non Production Installation (e.g. drilling rigs). The plan must include an assessment of spill risk, response arrangements, and details of actions, interfaces, training and exercises as required by the Regulations.

Operators are required to report all oil and chemical spills, regardless of size to the Coastguard, BEIS and other relevant authorities (Petroleum Operations Notice No.1, PON1).