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# INNOGY RENEWABLES UK LIMITED

## Liverpool Bay Offshore Wind Farms

### Environmental Management Plan

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#### Revision Index

Rev	Modification	Issue Date	Page	Author
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2	Triennial Review	12.07.2013	4 & 'App B'	
3	Inclusion of Gwynt y Môr and change of company name. Review and major changes of EMSDs following issue of Marine Licences for all Innogy, Liverpool Bay sites	26.01.2018	All	Paul Carter

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## 1 INTRODUCTION

The purpose of this Working Procedure (WP) is to ensure that the operation of all Innogy Renewables UK Limited (Innogy) Offshore Wind Farms operating in Liverpool Bay meets the requirements established by legislation, site specific consents and environmental commitments, and follows environmental best practice.

The WP has two functions:

- To provide guidance to staff and contractors on how to prevent and/or mitigate environmental impacts occurring; and
- To provide a means to monitor, measure and improve environmental performance.

The WP will fulfil these functions by:

- Identifying the specific environmental compliance requirements pertaining to Innogy Offshore Wind Farms under relevant permits, licenses and legislation;
- Identifying the interactions between the operational Offshore Wind Farms, the environment, and other sea users and identifying appropriate control measures;
- Assigning responsibilities for the implementation of these control measures to key personnel;
- Providing a means of monitoring adherence to these measures, thereby ensuring that the environmental interactions are appropriately managed; and
- Providing a signpost to other Working Procedures to cover specific marine contingencies.

## 2 SCOPE


This WP addresses the actual and potential environmental impacts arising from the operation of Innogy Offshore Wind Farms operating in Liverpool Bay. In addition to the environmental impacts which may arise offshore, the associated activities which take place within the operational port facilities are also included within the scope of this procedure.

All other onshore elements of wind farm operation which take place above mean high water are excluded from the scope of this document. These include works associated with underground electricity cables, overhead lines, and the onshore sub stations.

The construction and decommissioning of Offshore Wind Farms are excluded from the scope of this document.

## 3 RESPONSIBILITIES

The Offshore Portfolio Manager Head of Offshore Operations and Maintenance is responsible for the upkeep of this Working Procedure. Responsibilities for implementation are allocated within the procedure.

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If necessary, audit responsibilities and frequencies are allocated at the discretion of the Innogy Management Team (or their delegates). A request will be issued by the Health, Safety & Environment Management System administrator to the appropriate Responsible Person, who will instigate an Audit of the Working Procedure.

## 4 PROCEDURE

### 4.1 Planning

#### 4.1.1 Environmental Aspects and Impacts

Potential environmental impacts relating to the operation of Offshore Wind Farms have been identified through a review of those activities which may interact with the environment with reference to:

- relevant legislation,
- outcomes of the site specific Environment Impact Assessment process,
- site specific Consent conditions and associated monitoring and mitigation plans,
- industry monitoring data,
- industry guidance,
- best practice.


A register of significant environmental aspects associated with the operation of offshore wind farms is contained in Appendix A.

This WP describes the compliance and monitoring requirements to be taken by Innogy during the operation of its offshore assets, to ensure that pollution prevention measures, incident reporting and environmental best practice measures are implemented and that Contractors engaged by Innogy manage their environmental impacts effectively.

The Environmental Management Strategy Documents (EMSD), contained in Appendix B, and listed below, identify the generic environmental aspects associated with each environmental impact. The EMSDs also identify the appropriate operational control measures and monitoring requirements.

Environmental Issue	EMSD
Noise and vibration	1
Ecology	2
Archaeology	3
Other sea users	4
Seabed impacts	5
Pollution discharges	6
Miscellaneous	7

Contractors working on behalf of Innogy are required to identify the environmental impacts associated with their work, and implement appropriate controls.

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#### 4.1.2 Identification of Legal and Other Requirements

It is the responsibility of the Offshore Operations Manager to ensure that the relevant legal and other requirements with which RWE Innogy UK must comply are identified, and appropriate controls are developed and implemented by the Offshore Operations Department. They may engage environmental specialists to assist them in these processes.

Relevant legislation will be identified by the RWE Generation UK, Environmental and Chemistry Department who will maintain an online Environmental Legislation Register. The register can be found at the below location (only accessible to RWE and Innogy staff):

[http://intranet.npower.com/environment/?area=environmental\\_legislation\\_register\\_home.htm](http://intranet.npower.com/environment/?area=environmental_legislation_register_home.htm)

In addition to the register the relevance of new or forthcoming legislation will be communicated to Innogy through email distributions of updates to the Environmental Legislation Register, and where appropriate, briefings and meetings.

The EMSDs reference the appropriate legislation, and where appropriate the consent requirements of specific offshore wind farm sites.

#### 4.1.3 Key Environmental Considerations


Consideration of the environmental impacts associated with the operation of offshore wind farms, legal requirements and site specific consent conditions has identified the following to be the key issues of environmental concern: -

##### 4.1.3(i) Port Facilities Impacts

- Spillage of bulk oil and chemicals stored at the Port facilities;
- Loss of hydraulic oil from plant and equipment;
- Disturbance of seabed;
- Objects dropped from the quayside causing an obstruction to navigation;
- Disturbance of wetland birds due to noise, vibration and light associated with Port activities;
- Generation of waste materials requiring storage, collection, and disposal or recovery.

##### 4.1.3(ii) Offshore Impacts

- Effluent discharges, including oil, which could be released to the marine environment during an emergency event;
- Disturbance to the seabed;
- Disturbance of seabirds, marine mammals and other marine species as a result of noise and vibration caused by vessel activity, and operation of the wind turbines;
- Sea bed impacts causing damage to marine archaeology, and increased mobilisation of sediment.
- Impacts upon other sea users from dropped objects left in-situ.
- Generation of waste materials requiring storage, collection, and disposal or recovery

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#### 4.1.4 Environmental Objectives, Targets and Programmes

Environmental objectives and targets will be set through the HSE Forum and HESAC, in accordance with IRUL\WP\H&S.044 (formerly REN\WP\H&S.044).

## 4.2 Implementation and Operation

### 4.2.1 Roles and Responsibilities

#### 4.2.1(i) Operations and Maintenance Manager / Operations Manager

- Comply with the requirements of this Working Procedure;
- Communicate the environmental policy and actively promote environmental awareness and good practice;
- Ensure that the necessary resources are available to fully implement and maintain this Working Procedure, and associated procedures and plans;
- Monitor compliance with the Working Procedure and ensure it effectively addresses the environmental impacts, consent conditions, and other legal requirements;
- Investigate appropriately and record all reportable environmental incidents and near miss incidents as required on the Madison system;
- Report on environmental performance to the HESAC and Offshore HSE Forum;
- Obtain advice and guidance on environmental matters as appropriate.
- Notifications to NRW of commencement and completion of major maintenance works.
- Notification to NRW of any contractors or vessels utilised to undertake works.
- Notification to NRW of any changes to the wind farm, or operation of the wind farm that may be affected by Marine Licence conditions.

#### 4.2.1(ii) Employees

- Comply with the requirements of this Working Procedure;
- Communicate the environmental policy and actively promote environmental awareness and good practice;
- Be mindful of the environmental impacts associated with their work areas, and the associated control measures;
- Review Contractors risk assessments, method statements and specific plans for their work areas which are critical to the environment;
- Investigate appropriately and record all reportable environmental incidents and near miss incidents as required on the Madison system;
- Obtain advice and guidance on environmental matters as appropriate.

#### 4.2.1(iii) Contractors

- Identify the environmental impacts associated with their work areas;

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- Develop detailed risk assessments, method statements and specific plans in relation to all aspects of their work which are critical to the environment, for approval by Innogy prior to use.

#### 4.2.2 Competence, Training and Awareness

Innogy has a responsibility to ensure that relevant environmental information is disseminated to the personnel under their control, including any direct employees or contractors they have engaged. They will achieve this through the procurement process, induction training and site briefings/tool box talks. Contractor organisations also have a responsibility to further disseminate relevant information to personnel under their control, including their direct employees, and sub-contracts they engage.

All personnel must receive an induction which details as a minimum the environmental measures relevant to the scope of their operations, and the importance of compliance with the environmental policy, consent conditions, legal requirements and good environmental practice.

Records of inductions and briefings/tool box talks will be maintained, including a record of the content and date given. Attendees must complete a sign-off sheet to indicate they have received and understood the induction or briefing.

Subjects to be included in site briefings will include: -

- Dealing with oil and chemical spills;
- Waste management, recycling and minimisation;
- On-board storage and handling of equipment;
- Storage and handling of fuels and chemicals including bunkering;
- Equipment maintenance;
- Noise Management;
- Archaeological material;
- Ecological protection.

#### 4.2.3 Communication


Internal communication will take many forms including discussion, meetings, email, briefing notes and intranet alerts and announcements. These mechanisms will be used to share environmental information across the business.

Environmental issues will be a standing item on Contract Meetings, Site Operations Meetings, HESAC and Offshore HSE Forum agenda. The Operations Manager is responsible for ensuring that all environmental matters are reported effectively at these fora.

External communication on environmental matters will be at the discretion of the Operations Manager, who may seek advice as appropriate from the PR Team and Environmental specialists. Reporting of legislative or consent breaches will follow the procedure described below.

#### 4.2.4 Incident Reporting

Environmental incidents include:

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- Release of liquids to land or water;
- Disturbance of sediment, or release of sediment into water;
- Uncontrolled emissions to air;
- Excessive noise, vibration, dust or odour which may cause a disturbance to nearby residents. These factors may also cause distress or death to marine mammals, fish and birds.
- Observation of dead or dying marine mammals, fish or birds;
- Discovery of potential archaeological resource;
- Damage to existing archaeological resource;
- Breaches of environmental legislation or consent conditions;
- Objects dropped to the sea bed;
- Near miss incidents.

Significant environmental incidents, including those which have or may have resulted in water pollution or which result in a breach of a Consent condition must be reported to the appropriate regulatory body as soon as possible. The Operations Manager, or his nominated representative will be responsible for communicating with the correct regulatory body, they may seek advice from environmental specialists as required. However in the event of a major spill or incident which threatens human health or safety, the employee or contractor should not hesitate to contact the MCA or Natural Resources Wales (as appropriate) directly.

All incidents and near miss occurrences will be fully investigated by the appropriate manager, and entered onto the Madison Incident Management System. Environmental incidents will be discussed at appropriate meetings, including the HESAC and Offshore HSE Forum.

The Marine Pollution Contingency Plan, IRUL\WP\EAP.020 (formerly REN\WP\EAP.020) describes the detailed procedures for responding to an incident, including measures to prevent, mitigate, investigate and report incidents and near miss events.

#### 4.3 Monitoring and Review of Environmental Performance

##### 4.3.1 Environmental Monitoring Programmes


Programmes of environmental monitoring will be established for each operational wind farm, in accordance with the requirements of the Marine Licence. The Operations and Maintenance Manager/Operations Manager will co-ordinate the monitoring requirements which have been agreed with the regulatory body.

##### 4.3.2 Environmental Inspections and Audits

The Line Manager, or Technical Officer in respect to contracted activities, are responsible for monitoring the implementation and effectiveness of environmental controls when work is undertaken. Regular inspections will be completed and recorded, to identify good practice, non-compliance with prescribed controls, weaknesses in existing controls and previously unidentified environmental risks. Additional or revised controls should be agreed to address any shortcomings.

Environmental specialists will undertake detailed audits against this Environmental Management Plan (and associated documents and procedures), statutory consents, environmental monitoring plans and relevant



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legislation. Contractors shall fully co-operate with this activity and provide any information that may be requested. Where appropriate joint audits and inspections will be completed by Innogy nominated personnel and Contractor representatives.

Inspections and audits will be undertaken at intervals appropriate to the level of environmental risk associated with the areas of work.

All inspections, including those undertaken by Contractor personnel shall be recorded and reported to the Operations Manager.

#### **4.3.3 Non-Conformance, Corrective and Preventive Action**

Notice of any non-conformance will be passed in writing to the relevant Manager or Contractor and corrective action, responsibility and timeframe for completion will be agreed. The appropriate Manager will follow-up the non-conformance and ensure all corrective measures are implemented.

Preventive actions or improvements may be identified during formal audits and inspections or they may be raised by staff or Contractors as a result of observations they have made. Preventive actions will be reviewed by the Operations Manager and adopted if practicable.

Any changes to procedures or other documentation required as a result of corrective or preventive actions, shall be undertaken by the Operations and Maintenance Manager/Operations Manager, and distributed accordingly. Toolbox talks, Briefing Notes, or Meetings will be used as appropriate to disseminate the information throughout the organisation.

#### **4.3.4 Management Review**

Offshore wind is a relatively new industry, and understanding of the interactions between the industry and the environment is constantly developing. It is therefore essential that environmental performance is regularly reviewed against changes in legislation, consent requirements, maintenance techniques and equipment, management structures, and best practice.

Environmental performance will be reviewed regularly throughout the year at the Offshore HSE Forum. This WP and associated procedures will be reviewed on three-yearly cycle or more frequently to reflect changes which arise from the monitoring and review process.

## **5 ASSOCIATED DOCUMENTATION**

### Policy Statements

ENVPOL\2017 – Environmental Policy Statement

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#### Local Management Instructions

IRUL\LMI.004 – Environmental Management

#### Working Procedures

IRUL\WP\ENV.002 - Management of Waste (formerly REN\WP\ENV.002)

IRUL\WP\ENV.006 - Oil Storage (formerly REN\WP\ENV.006)


IRUL\WP\ENV.007 - Working On or Near Water (REN\WP\ENV.007)

IRUL\WP\ENV.008 – Consent and Ecology Issues for the Development, Projects and Operation of Sites (formerly REN\WP\ENV.008)

IRUL\WP\ENV.014 – Dropped Object Procedure for Offshore Wind Farms (formerly REN\WP\ENV.014)

IRUL\WP\ENV.015 – Environmental Aspects Evaluation

IRUL\WP\EAP.020 – Marine Pollution Contingency Plan (MPCP) for Liverpool Bay Offshore Wind Farms (formerly REN\WP\EAP.020)

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## APPENDIX A Environmental Aspect Assessment

The following section records the main environmental aspects associated with the operation of the wind farm within the scope of this WP. These include activities at Operational Port Facilities, and those occurring offshore.


Activity	Aspect	Environmental Impact	Control Measure
<b>Storage and use of oil</b>	Failure of containment Spillage during use	Oils entering the marine environment. Land and ground water contamination	All storage facilities provided with secondary containment with minimum 110% capacity. Integrity of storage facilities checked frequently. Integrity and capacity of containment checked frequently. Adequate spill kits maintained close to areas where oils stored, or used. Where possible, operations conducted away from the marine environment. Vessel refuelling procedures to be approved by Operations Manager for suitability at each location Reporting and emergency response in accordance with Marine Pollution Contingency Plan IRUL\WP\EAP.020 (formerly REN\WP.EAP.020)
<b>Vessel movements, and mooring</b>	Increased human activity, noise and light.	Disturbance of breeding, migratory and wintering birds.	Utilise existing moorings where possible. Should additional moorings be required, seek advice from Natural Resources Wales or Natural England, and obtain appropriate consents under the Conservation and Natural Habitats Regulations 2010 or Marine and Coastal Access Act 2009 for designated sites (if required).
<b>Use of plant and machinery on quayside</b>	Increased human activity, noise, vibration and light. Dust from vehicle movements Emissions	Disturbance of breeding, migratory and wintering birds. Deposition on surface water Air pollution	Maintenance of plant and equipment. Locate and operate mobile plant away from sensitive areas. Regular cleaning of roadways
<b>Transfer of plant and equipment between vessels and quayside</b>	Objects dropped to the seabed	Liquids entering the marine environment Obstruction to navigation	Use of transfer bags where possible Ensure all plant and equipment is secure prior to transfer Reporting and recovery in accordance with Dropped Object Plan IRUL\WP\ENV.014 (formerly REN\WP\ENV.014) and/or Marine Pollution Contingency Plan IRUL\WP\EAP.020 (formerly

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			REN\WP\EAP.020) as appropriate
<b>Waste Management</b>	Storage of waste on quayside.  Disposal of wastes off site	Liquids entering the marine environment. Land and ground water contamination. Wastes becoming wind blown potentially entering marine environment. Odour from biodegradable wastes, attracting vermin. Use of landfill resource Generation of methane in landfill conditions Energy use. Loss of resources.	Selection of appropriate primary containers. Provision of adequate secondary containment for liquid wastes. Frequent removal of biodegradable wastes to reduce risk of liquor being released, and minimise odour. Segregation of wastes as required by legislation. Application of waste hierarchy. Compliance with Management of Waste IRUK\WP\ENV.002 (formerly REN\WP\ENV.002).
<b>Works in or close to designated habitats, including SSSIs, RAMSAR, SACs, SPAs</b>	Any activity which will affect the integrity of the designated site.	Disturbance of breeding, migratory or wintering birds. Disturbance of other non-avian species. Damage to habitat.	Impact assessment for all works proposed within or close to a designated area. Liaison with regulator, Natural England, Natural Resources Wales, Scottish Natural Heritage for all works with the potential to impact upon designated sites. Appropriate Assessment under Habitat Regulations and/or Countryside and Rights of Way Act.

#### Offshore Activities


Activity	Aspect	Environmental Impact	Control Measure
<b>Vessel movements</b>	Increased activity, airborne and sub-sea noise and vibration Collision between vessels, or between vessels and wind farm structure	Disturbance of breeding, migratory and wintering birds. Release of oil affecting water quality. Loss of biodiversity Smothering of marine and avian species.	Agreement and observation of vessel routing plans where required by Consent conditions. Use of established navigational channels where possible. Co-ordination of wind farm traffic by O&M Contractor. Marine Pollution Contingency Plan implemented.
<b>Vessel mooring</b>	Damage to known archaeological resource from anchors and anchor chains. Penetration of Jack-up legs into sea bed	Loss of archaeological resource.	Mooring and Jacking-up in vicinity of known archaeological or wreck sites prohibited.
<b>Maintenance and use of hydraulic equipment shipboard</b>	Failure of hose. Spills.	Release of oil to marine environment	Inspection and maintenance of equipment. Save-alls around areas of

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			exposed hydraulic pipe work. Spill kits available.
<b>Sewage Disposal</b>	Failure of sewage system	Accidental discharge to the marine environment	Inspection, maintenance and certification of vessel sewage systems (for qualifying vessels) and inspection, maintenance and registration of waste management systems.
<b>Deck wash-down</b>	Contamination of wash down by oils and chemicals present on deck	Oil or chemical discharge to the marine environment	All deck spills cleaned immediately. Volumes of oil and chemical stored on deck kept at a minimum.
<b>Transfer of equipment between the vessels and WTGs</b>	Objects dropped to the seabed	Liquids entering the marine environment Obstruction to navigation	Use of transfer bags where possible Ensure all plant and equipment is secure prior to transfer Reporting and recovery in accordance with <b>Dropped Object Plan</b> IRUL\WP\ENV.014 (formerly REN\WP\ENV.014)
<b>General servicing/maintenance activities of WTGs</b>	Increased activity, use of plant and equipment causing increased airborne noise, and light pollution.	Disturbance to near-by residents Disturbance of breeding, migratory and wintering birds. Disturbance of fish and marine mammals	Scheduling of routine maintenance activities to avoid night time working. Notification to local residents of activities predicted to cause a noise or light nuisance.
<b>Removal of paint, guano, or marine growth from structures</b>	Release of solid residues, and contaminants to sea bed	Smothering of seabed Bio-accumulation of contaminants in the food chain	Liaise with NRW regarding detailed methodology. Minimise use of chemical agents. Select chemicals, if necessary, with reference to the List of Notified Chemicals (this list can be viewed/downloaded at <a href="http://www.cefas.co.uk">www.cefas.co.uk</a> ). Provide containment for collection of residue wherever possible.
<b>Installation and refuelling of emergency generators.</b>	Damage to generator. Dropped to sea bed	Release of oil to marine environment. Object on sea bed	Use of transfer bags where possible Ensure all plant and

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		presenting obstacle to navigation	equipment is secure prior to transfer Reporting and recovery in accordance with Dropped Object Plan IRUL\WP\ENV.014 (formerly REN\WP\ENV.014). Regular inspection of integrity of generators. Use of drip trays. Maintenance of fuel inventory.
<b>Cable maintenance</b>	Damage to known archaeological resource due to disturbance of sea bed. Damage or removal of material with potential archaeological value due to disturbance of sea bed.	Loss of archaeological resource.	Cable routes avoid location of known archaeological remains and wreck sites. Location and nature of potential finds to be reported to marine archaeological specialist. Articles of potential archaeological importance retrieved to the deck will be preserved for inspection by a marine archaeological specialist.
<b>Malfunction of WTGs</b>	Increased airborne and sub-sea noise due to malfunction of WTGs	Disturbance to near-by residents Disturbance of breeding, migratory and wintering birds. Disturbance of fish and marine mammals	Swift identification and response to faulty equipment.
<b>Waste Management</b>	Storage of waste on board vessels Transfer of waste between vessels, or from vessels to the shore.	Liquids entering the marine environment. Wastes becoming wind blown potentially entering marine environment. Odour from biodegradable wastes, attracting vermin.	Selection of appropriate primary container. Frequent removal of wastes from vessel to shore. Use of transfer bags where possible Ensure all plant and equipment is secure prior to transfer


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## APPENDIX B Environmental Strategy Documents

Each EMSD provides an overview for each of the key environmental impacts identified as part of the Environmental Aspect Assessment (Appendix A). For each impact the relevant legislation, the potential environmental interactions have been identified.

For the sites currently in operation, the specific consent conditions have also been identified.

Marine Licence monitoring requirements are excluded from this procedure as they do not affect the day to day operation of the Wind Farms. The Environment and Consents Manager is responsible for managing monitoring requirements and submittal of environmental reports to the regulatory authority.

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## EMDS 1 – Noise and Vibration

### Overview

This EMSD covers all issues relating to noise and vibration both on and offshore which may arise during the operation and maintenance of the wind farm.

The potential for the normal operation of the WTGs to cause sub-sea noise and vibration above background levels, and therefore to affect marine species, is considered very low. Neither is there considered any risk of airborne noise from the operation or maintenance of the WTGs which would be considered a nuisance to local residents.

Normal operation and maintenance of the on-shore elements of the wind farm will not cause a nuisance to local residents, however there is a low potential that some exceptional maintenance activities may present a short term nuisance to nearby residents.

### Compliance Requirements

- ✦ Electricity Act 1989, Section 36 Consent.
- ✦ Town and Country Planning Act 1990
- ✦ Noise and Statutory Nuisance Act 1993
- ✦ BS 5228: 2009 Parts 1 and 2. Noise and Vibration Control on Construction and Open Sites (as amended 2014)
- ✦ Conservation and Natural Habitats Regulations 1994
- ✦ Offshore Marine Conservation (Natural Habitats &c.) 2007
- ✦ Wildlife and Countryside Act 1981
- ✦ Marine and Coastal Access Act 2009


### Objectives

- ✦ To minimise the impacts of airborne and sub-sea noise and vibration as far as reasonably practical.
- ✦ To periodically monitor noise and vibration levels to ensure compliance with the Consent conditions.

### Best Practice Requirements

Best Practice Technique	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
The Warwick International Headland is an important winter roost for wading birds.	Operations Manager	To minimise impact upon roosting birds, use of those moorings closest to the Warwick International Headland will be minimised during the



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		winter period.
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## Site Specific Consent Requirements

### Gwynt y Môr Offshore Wind Farm

(Marine and Coastal Access Act – Marine Licence 11/52/ML/4)

Consent Condition Ref.	Consent Requirement	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Condition 8.24	The Licence Holder must make provision during the construction phase of the wind farm to enable subsea noise and vibration from the turbines to be assessed and monitored during the operational phase of the wind farm. Before completion of the construction phase of the Licence Holder must supply specification to NRW acting on behalf of the Licensing Authority of how it proposes to measure subsea noise and vibration. This date must be included in the schedule referred to in condition 8.1. These measurements must be taken at various frequencies across the sound spectrum at a selection of locations immediately adjacent to, and between turbines, within the array and outside the array at varying distances. Collaborative studies, e.g. research funded by COWRIE in this respect, would be an acceptable means of fulfilling this condition.	Operations and Maintenance Manager (Gwynt y Môr)	Measure subsea noise in accordance with the agreed procedure.

There are no specific requirements under the Marine and Coastal Access Act 2009, Marine Licenses for North Hoyle, Rhyl Flats Offshore Wind Farms and the Gwynt y Môr Pontoon.

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## EMDS 2 – Ecology

### Overview

This EMSD includes an assessment of the impacts upon marine, terrestrial and avian ecology during the operation and maintenance of offshore wind farms

Operation and maintenance of offshore wind farms have the potential to affect marine and avian species, through temporary disturbance due to vessel movements.

Pollution incidents could have a direct effect on marine ecology in the immediate and wider area, including the inter-tidal zone.

### Compliance Requirements


- ✦ Marine and Coastal Access Act 2009
- ✦ Offshore Marine Conservation (Natural Habitats &c.) 2007
- ✦ Conservation of Seals Act 1970
- ✦ Habitats Directive (92/43/EEC)
- ✦ Birds Directive (2009/147/EC)
- ✦ Countryside and Rights of Way Act 2000
- ✦ Wildlife and Countryside Act 1981
- ✦ Merchant Shipping (Prevention of Oil Pollution) Regulations 1996
- ✦ The Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998
- ✦ Merchant Shipping (Reporting of Pollution Incidents) Regulations 1987 (POLREP)
- ✦ Merchant Shipping (Dangerous or Noxious Liquid Substances in Bulk) Regulations 1996
- ✦ The Offshore Chemical Regulations 2002 (as amended)
- ✦ The Prevention of Oil Pollution Act 1971
- ✦ Town and Country Planning Act 1990

### Project Objectives

- ✦ To minimise disturbance to marine and avian species during construction.
- ✦ To minimise net loss of habitat as a result of construction impacts.
- ✦ Avoiding pollution incidents.

### Best Practice Requirements

Best Practice Technique	Responsibility	Mitigation Measure/
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		<b>Frequency/Timing of Actions</b>
The Warwick International Headland is an important winter roost for wading birds.	Operations Manager	To minimise impact upon roosting birds, use of those moorings closest to the Warwick International Headland will be minimised during the winter period.

### Site Specific Consent Requirements

#### North Hoyle Offshore Wind Farm

#### (Marine and Coastal Access Act – Marine Licence CML1465v1)

<b>Consent Condition Ref.</b>	<b>Consent Requirement</b>	<b>Responsibility</b>	<b>Mitigation Measure/ Frequency/Timing of Actions</b>
Condition 8.1	The Licence Holder must submit a scheme of reasonable avoidance measures for otter to NRW acting on behalf of the Licensing Authority for written approval at least 4 weeks prior to the commencement of any works within the Clwyd Estuary and Adjacent Fields Local Wildlife Site.	Operations Manager	The export cable runs outside the Clwyd Estuary and Adjacent Fields Local Wildlife Site boundary. Therefore, it is unlikely that any work will be affected by this condition.
Condition 8.2	The Licence Holder must ensure that the scheme of reasonable avoidance measure for otter detailed in condition 8.1 is implemented as agreed.	Operations Manager	
Condition 8.3	The Licence Holder must ensure that planned maintenance in the Clwyd Estuary and Adjacent Fields Local Wildlife Site does not take place between 01 October and 30 April inclusive without prior written approval from NRW acting on behalf of the Licensing Authority.	Operations Manager	This condition relates to birds.
Condition 8.8	The Licence Holder must ensure all equipment, plant and machinery are cleaned and dry prior to their deployment to minimise the risk of introducing invasive non-native species into the marine environment.	Operations Manager	

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### Rhyl Flats Offshore Wind Farm

#### (Marine and Coastal Access Act – Marine Licence CML1466v1)

Consent Condition Ref.	Consent Requirement	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Condition 8.6	The Licence Holder must ensure all equipment, plant and machinery are cleaned and dry prior to their deployment to minimise the risk of introducing invasive non-native species into the marine environment.	Operations Manager	

### Gwynt y Môr Offshore Wind Farm


#### (Marine and Coastal Access Act – Marine Licence 11/52/ML/4)

Consent Condition Ref.	Consent Requirement	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Condition 8.26	The Licence Holder must adhere to the approved vessel routing plan when undertaking works.	Operations Manager	

### Gwynt y Môr Pontoon

#### (Marine and Coastal Access Act – Marine Licence 11/76/ML/4)


Consent Condition Ref.	Consent Requirement	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Condition 8.1	<p>The Licence Holder must undertake a bio-security risk assessment prior to works commencing. The risk assessment must:</p> <ul style="list-style-type: none"> <li>Contain an investigation of the pathways that may carry non-native organisms to the works area e.g. contaminated machinery, contaminated vessels/barges.</li> <li>Detail the effective measures which can be put in place to ensure all machinery/vessels are decontaminated and clean prior to works commencing. If non-native species are found</li> </ul>	Operations and Maintenance Manager	

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	<p>during the course of construction and operation NRW acting on behalf of the Licensing Authority must be notified and contacted for advice on how to proceed.</p> <p>The bio-security risk assessment must be made available for inspection upon request by our Marine Enforcement Officers.</p>		
Condition 8.4	<p>The Licence Holder must submit details of the pontoon screening to NRW acting on behalf of the Licensing Authority for our written approval at least 8 weeks before the pontoon is brought into operation.</p>	Operations and maintenance Manager	
Condition 8.5	<p>The Licence Holder must submit a vessel embarkation/disembarkation plan to NRW acting on behalf of the Licensing Authority for our written approval at least 8 weeks before the pontoon is brought into operation.</p>	Operations and Maintenance Manager	
Condition 8.10	<p>The Licence Holder must ensure all mitigation measures in the Environmental Statement dated December 2011 (as amended) are adhered to at all times.</p>	Operations and Maintenance Manager	
Condition 8.11	<p>The Licence Holder must ensure that during the passage and overwintering periods for Common Redshank and Eurasian Oystercatcher the pontoon is managed in line with the 'Pontoon Vessel Management Plan' to be implemented as approved by NRW acting on behalf of the Licensing Authority. Any alterations to the plan must be submitted to and approved in writing by NRW acting on behalf of the Licensing Authority prior to</p>	Operations and Maintenance Manager	

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	the changes being implemented.		
Condition 8.12	The Licence Holder must ensure the pontoon is managed, at all times, in line with the agreed vessel embarkation / disembarkation plan.	Operations and Maintenance Manager	

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## EMDS 3 – Marine Archaeology

### Overview

This EMDS covers all issues relating to the protection of known archaeological remains which are located below the mean high water mark and to the identification, recording and reporting of archaeological discoveries during the operation of offshore wind farms.

Vessel activities associated with the operation and maintenance of offshore wind farms, have the potential to disturb and damage wrecks and archaeological remains within the area. The risk is low as very few activities will disturb the sea bed, the greatest risk is from anchors and anchor chains being deployed.

The risk of disturbance to onshore archaeological features as a result of onshore operation and maintenance activities is negligible.

### Compliance Requirements

- ✦ Electricity Act 1989
- ✦ Protection of Wrecks Act 1973
- ✦ The Protection of Wrecks (Designation No. 1) Order 1996
- ✦ Marine and Coastal Access Act 2009
- ✦ Merchant Shipping Act 1995
- ✦ Protection of Military Remains Act 1986
- ✦ Joint Nautical Archaeology Policy Committee Code of Practice for Seabed Developers

### Project Objectives


- ✦ To protect known archaeological remains.
- ✦ Record and protect discoveries of archaeological protection

### Control Measures

#### Gwynt y Môr Offshore Wind Farm

(Marine and Coastal Access Act – Marine Licence 11/52/ML/4)


Consent Condition Ref.	Consent Requirement	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Condition 8.18	The Licence Holder must adhere to the provisions of the Joint Nautical Archaeology Policy Committee Code of Practice for Seabed Development (2006) and COWRIE Historic Environment Guidance for the Offshore Renewable Energy Sector (2007).	Operations and Maintenance Manager	The principal means to mitigate risk of damage to archaeological remains during maintenance of the wind farm is by observation of the archaeological exclusion zones, in which vessels may not moor. The co-ordinates of the archaeological exclusion zones

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			will be passed to all vessels working on behalf of Innogy
Condition 8.19	The Licence Holder must adhere to the Written Scheme of Investigation. Any alterations to the Written Scheme of Investigation must be approved in writing by NRW acting on behalf of the Licensing Authority.	Operations and Maintenance Manager	
Condition 8.20	The Licence Holder must maintain a 300m exclusion zone around the wreck of the submarine <i>Resurgam</i> .	Operations and Maintenance Manager	The site where the vessel lies or is supposed to lie is in position Latitude 53° 23.78" North, Longitude 03° 33.18" West. This exclusion zone is also a requirement of The Protection of Wrecks (Designation No. 1) Order 1996, therefore all vessels working on behalf of Innogy are to maintain the exclusion zone.

There are no specific requirements under the Marine and Coastal Access Act 2009, Marine Licence for Rhyl Flats and North Hoyle Offshore Wind Farms and Gwynt y Môr pontoon.



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## EMDS 4 – Other Sea Users

### Overview

This EMSD covers all issues relating to interaction with other sea users during the operation of offshore wind farms.

The physical presence of the wind farms presents an obstacle to other sea users. In exceptional circumstances, such as extreme weather, loss of steering, failure of navigational equipment, vessels may collide with the WTGs. Should cables become exposed these may represent a hazard to other sea users, particularly vessels which deploy fishing gear etc. which may become caught on the cables.

Increased vessel movements associated with the maintenance of the wind farm increase the risk of collision.

Dropped objects may prove hazardous to other sea users as well as having a localised impact upon the benthic communities in the vicinity.

### Compliance Requirements

- ✦ Continental Shelf Act 1964
- ✦ Marine and Coastal Access Act 2009
- ✦ Coast Protection Act 1949
- ✦ Energy Act 2004
- ✦ IMO Mandatory Instruments
- ✦ MCA Marine Guidance Note 371
- ✦ MCA Marine Guidance Note 372


### Project Objectives

- ✦ To minimise interference with other sea users
- ✦ To minimise the risk of collision during construction and operation.
- ✦ To comply with international marine safety

### Control Measures

#### Best Practice Requirements

Best Practice Technique	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Co-ordination of vessels working on behalf of Innogy to minimise risk of collision between these vessels, and with other sea users	Operations Manager	O&M Contractor will monitor vessel movements for each project.
Dropped objects will be recovered, or if this is not possible will be notified to the regulators and appropriate marking will be installed if required.	Operations Manager	In accordance with IRUL \WP\ENV.014 (formerly REN\WP\ENV.014) Dropped Object Recovery Plan.

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Strict inventory of all objects taken offshore to be maintained and checked upon return to shore to ensure all objects are accounted for.	Vessel Master	All organisations involved in offshore work
All materials to be securely fastened in place to prevent overboard loss	Vessel Master	All organisations involved in offshore work
If cable "trenches" have been created introduce checks to ensure that the "trench" has been adequately refilled by natural processes following installation to ensure the cable does not provide a snagging hazard to other sea users at a later time.	Operations Manager	In response to survey data

#### North Hoyle Offshore Wind Farm


(Marine and Coastal Access Act – Marine Licence CML1465v1)

Consent Condition Ref.	Consent Requirement	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Condition 8.5	The Licence Holder must ensure that local mariners and fishermen's organisations are made fully aware of the activity through local notices to mariners.	Operations Manager	
Condition 8.6	The Licence Holder must notify the UK Hydrographic Office to permit the promulgation of maritime safety information and updating of nautical charts and publications through the national Notice to Mariners system.	Operations Manager	
Condition 8.10	The Licence Holder must ensure that the Wave Monitoring Buoy must be yellow and exhibit a Fl (5) Y 20s light, the flash rate of which should not exceed 30 per minute.	Operations Manager	
Condition 8.13	The Licence Holder must ensure that all equipment, temporary structures, waste and/or debris associated with the works are removed on completion of the works.	Operations Manager	

#### Rhyl Flats Offshore Wind Farm

(Marine and Coastal Access Act – Marine Licence CML1466v1)

Consent	Consent Requirement	Responsibility	Mitigation Measure/
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Condition Ref.			Frequency/Timing of Actions
Condition 8.1	The Licence Holder must ensure that local mariners and fishermen's organisations are made fully aware of the activity through local notices to mariners prior to the commencement any phase of the works.	Operations Manager	
Condition 8.2	The Licence Holder must notify the UK Hydrographic Office to permit the promulgation of maritime safety information and updating of nautical charts and publications through the national Notice to Mariners system.	Operations Manager	


#### Gwynt y Môr Offshore Wind Farm

(Marine and Coastal Access Act – Marine Licence 11/52/ML/4)

Consent Condition Ref.	Consent Requirement	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Condition 8.12	The Licence Holder must ensure that details of major maintenance works are published prior to commencement, in the Kingfisher Fortnightly Bulletin to inform the Sea Fish Industry of the vessel routes, timings and locations.	Operations and Maintenance Manager	
Condition 8.13	The Licence Holder must ensure that a Notice to Mariners is issued at least 10 days prior to the commencement of planned maintenance works. For non-planned 'emergency works' a notice must be issued prior to works being undertaken.	Operations and Maintenance Manager	
Condition 8.14	The Licence Holder must ensure close liaison with the Harbour Master of the Port of Mostyn is maintained.	Operations and Maintenance Manager	
Condition 8.34	The Licence Holder must ensure that if any jack up barges/ vessels are utilised in undertaking the works, when jacked up they should exhibit signals in accordance with the UK Standard marking Schedule for Offshore Installations.	Operations and Maintenance Manager	
Condition 8.37	The Licence Holder must notify the United Kingdom Hydrographic Office, Ministry of Defence, Taunton,	Operations and Maintenance Manager	

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	Somerset, TA1 2DN of both the progress and completion of the works in order that all necessary amendments to nautical charts and publications can be made, to ensure navigational safety.		
Condition 8.40	Should the Licence Holder wish to move navigational buoys associated with the works written approval from NRW acting on behalf of the Licensing Authority must be sought prior to their movement.	Operations and Maintenance Manager	

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## EMDS 5 – Seabed Impacts

### Overview

This EMSD covers the impacts to the sea bed which may arise during the operation of an offshore wind farm, with the exception of the potential impacts upon marine archaeology which are considered in EMSD 3, and other sea users which are considered in EMSDS 4.

Impacts will arise from anchoring of vessels and the use of Jack-Up rigs for maintenance activities. The latter will have an immediate but localised impact upon the seabed. Subsequent infill of any jack up leg depressions and re-colonisation of the affected areas is expected to take place.

Vessel anchoring will also have an immediate, localised impact upon the seabed, with anchor mounds potentially being created. The sweeping motion of anchor chains upon the seabed can have a greater impact in terms of geographical extent. Seabed impacts arising from anchoring are anticipated to be minimal, with subsequent re-colonisation by benthic species.

In the event that cables are required to be replaced, or secondary burial is required there would be impact directly upon the seabed, with the release of suspended sediments into the water column, this has the potential to smother benthic organisms. However the scale of the work would be small and the impact upon benthic communities would not be significant.

### Compliance Requirements

- ✦ Marine and Coastal Access Act 2009
- ✦ Coast Protection Act 1949
- ✦ Merchant Shipping (Prevention of Oil Pollution) Regulations 1996
- ✦ The Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998
- ✦ Merchant Shipping (Reporting of Pollution Incidents) Regulations 1987
- ✦ Merchant Shipping (Dangerous or Noxious Liquid Substances in Bulk) Regulations 1996
- ✦ The Offshore Chemical Regulations 2002 (as amended)
- ✦ The Prevention of Oil Pollution Act 1971


### Project Objectives

- ✦ To minimise the impact upon sea bed habitats.
- ✦ To minimise the mobilisation of sediment, and effects upon water quality.

### Control Measures

### Best Practice Requirements

Best Practice Technique	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
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Jack Up movement only to commence in favourable sea states, currents and weather conditions, reducing likelihood of dropped objects and seabed damage.	Vessel Master	All organisations involved in offshore work will make appropriate assessment of the safety and environmental impacts associated with the sea state, currents and weather conditions.
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#### North Hoyle Offshore Wind Farm


##### (Marine and Coastal Access Act – Marine Licence CML1465v1)

Consent Condition Ref.	Consent Requirement	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Condition 8.12	The Licence Holder must ensure that any depth reductions resulting from the works do not compromise safe navigation and that there is no more than 5% reduction in surrounding depth referenced to Chart datum at any point.	Operations Manager	

#### Rhyl Flats Offshore Wind Farm


##### (Marine and Coastal Access Act – Marine Licence CML1466v1)

Consent Condition Ref.	Consent Requirement	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Condition 8.7	The licence Holder must ensure that the depth reductions resulting from the works do not compromise safe navigation and that there is no more than 5% reduction in surrounding depth referenced to Chart Datum at any point.	Operations Manager	

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**Gwynt y Môr Offshore Wind Farm**  
**(Marine and Coastal Access Act – Marine Licence 11/52/ML/4)**

Consent Condition Ref.	Consent Requirement	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Condition 8.4	The licence Holder must ensure that all equipment, temporary structures, waste and/or debris associated with the works are removed on completion of each phase of the works.	Operations Manager	
Condition 8.5	The Licence Holder must maintain a detailed transportation audit sheet, audit procedure and dropped objects plan. The audit sheet must be completed, prior to sailing, for all aspects of maintenance. The audit sheet should include loading facility, vessels, equipment, shipment routes, schedules and all materials. Any changes to the components of the audit sheet should be notified to NRW acting on behalf of the Licensing Authority in accordance with an approved dropped object plan.	Operations and Maintenance Manager	The Dropped Object Recovery Plan IRUL\WP\ENV.014 (formerly REN\WP\ENV.014) is located in the Innogy HSEMS.
Condition 8.30	The Licence Holder must adhere to the approved Scour Protection Plan. Any alterations to the Scour protection plan must be agreed in writing with NRW acting on behalf of the Licensing Authority.	Operations and Maintenance Manager	

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Condition 8.31	This Licence does not authorise the deposit of materials for scour protection or cable armouring (including remediation of cable spans or exposed cables) other than as detailed in the Environmental Statement and subsequently agreed Scour Protection Plan.	Operations and Maintenance Manager	
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## EMDS 6 – Pollution Discharges

### Overview

This EMDS covers all potential effluent and fugitive discharges to the marine and onshore environment during the operation of offshore wind farms. Refer to REN\WP\ENV013 Marine Pollution Contingency Plan for comprehensive details on the management of marine pollution events.

Small oil spills, which could occur from minor vessel leaks, would disperse rapidly upon entering the marine environment. Larger-sized oil spills could occur as a result of bunker tank overflows, transfer hose or hull leakage's, and would have a greater potential to impact upon the marine environment.


The likelihood of chemical spills occurring during operation of offshore wind farms is low, however chemical releases to the marine environment could have a detrimental impact depending upon the size of spill and the chemical concerned. Risk of spills from chemical use has been identified during grouting and cementing exercises offshore, as well as anti-freeze for use within the wind turbines throughout the project life.

Normal deck wash-down will enter the marine environment via exit drains on marine vessels. Depending on the nature and volume of any chemicals there is the potential for temporary localised toxic impacts, whilst, in the case of oil discharge, there may be a temporary sheen on the water surface.

Sewage from vessels may, if accidentally discharged, have a localised enrichment effect upon the marine environment; however, due to the amounts concerned and the tidal regime in the vicinity, this impact is anticipated to be transient.

### Compliance Requirements

- ⊕ Merchant Shipping (Prevention of Oil Pollution) 1996
- ⊕ The Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998
- ⊕ Merchant Shipping (Reporting of Pollution Incidents) Regulations 1987
- ⊕ The Merchant Shipping (Prevention of Pollution by Sewage and Garbage from Ships) Regulations 2008
- ⊕ Merchant Shipping (Dangerous or Noxious Liquid Substances in Bulk) Regulations 1966
- ⊕ The Offshore Chemical Regulations 2002
- ⊕ The Prevention of Oil Pollution Act 1971
- ⊕ MARPOL 73/78 Annex IV
- ⊕ Water Resources Act 1991

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## Project Objectives

- ✦ To minimise the risk of spills of any magnitude to as low as reasonably practicable
- ✦ To ensure that sufficient clean-up procedures and spill containment equipment are in place
- ✦ To ensure that personnel are fully aware of clean-up procedures and equipment
- ✦ To ensure that appropriate handling and storage of oil and chemicals is undertaken to minimise the risk of spill events
- ✦ To use lowest toxicity chemicals wherever possible

## Control Measures

### Best Practice Requirements

Best Practice Technique	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Storage, handling, transport and use of fuels, lubricants, chemicals etc on vessels and equipment should prevent releases to the marine environment, i.e. bunding should be 10% total volume of all reservoirs, containers etc.	Operations Manager  Vessel Masters	All facilities at Port of Mostyn.  All organisations engaged in offshore works will implement adequate storage, handling, transport and use of chemicals, lubricants and fuels.
Vessel staff to be competent in the application of the Shipboard Oil Pollution Emergency Plan (SOPEP) and the NRL Marine Pollution Contingency Plan (MPCP).	Vessel Master	Staff to be appropriately trained and competent.
Conduct SOPEP and MPCP drills and exercises to maintain personnel awareness	Vessel Master	At regular intervals
Report any marine spill to the NRL Environment Manager, and appropriate authorities and mobilise appropriate response immediately as per SOPEP and MPCP	Vessel Master	As IRUL\WP\EAP.020 (formerly REN\WP\EAP.020) MPCP
If spills occur use appropriate clean-up equipment and dispose of material in accordance with approved waste management procedures	Operations Manager  Vessel Master	As IRUL\WP\EAP.020 (formerly REN\WP\EAP.020) MPCP As Offshore Contractors SOPEP
Assessment of spill clean up equipment on board each vessel to ensure adequacy for dealing with any spill events.	Vessel Master and Operations Manager	During inspections and audit
Visual inspection of diesel bunkering hoses before and after use, including couplings, to ensure integrity.	Vessel Master	Each Contractor will appoint a deckhand to be responsible for monitoring at each bunkering operation.
Visual monitoring of diesel bunkering hoses	Vessel Master and	Each Contractor will appoint a


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throughout bunkering operations by a designated Watch	Operations Manager	deckhand to be responsible for monitoring at each bunkering operation.
The Watch posted during bunkering operations will raise the alarm in the event of any problem, firstly resulting in the cessation of bunkering operations, and secondly initiating actions as per SOPEP / MPCP	Vessel Master	Each Contractor will appoint a deckhand to be responsible for raising alarm in the event of a problem during bunkering operations.
Bunkering not to be undertaken during hours of darkness or during periods of inclement weather	Vessel Master	Throughout Operation
Ensure deck areas are kept clean and free from oil and chemical contamination.	Vessel Master	Throughout Operation
All excess chemicals, including anti-freeze etc not used to be returned to shore to be stored for re-use, or for disposal by a licensed waste disposal contractor	Vessel Master	Each Contractor will be required to maintain a balance inventory of materials
Maintain inventory of all materials taken offshore and keep records of materials used to ensure a balance of inventory.	Vessel Master	Each Contractor will be required to maintain a balance inventory of materials
All sewage will be macerated prior to discharge, meeting the requirements specified under MARPOL, Annex IV where reasonably practicable	Vessel Master	Throughout Operation
Regular maintenance of sewage plant machinery to ensure adequate treatment is maintained	Vessel Master	Throughout Operation

### North Hoyle Offshore Wind Farm

(Marine and Coastal Access Act – Marine Licence CML1465v1)

Consent Condition Ref.	Consent Requirement	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Condition 8.4	The Licence Holder must ensure bunding and storage facilities are installed to contain and prevent the release of fuel, oils and chemicals associated with the plant, refuelling and construction equipment into the marine environment.	Operations Manager	
Condition 8.7	The Licence Holder must ensure Environment Agency Pollution Prevention Guidelines – works and maintenance in or near water: PPG5 – are adhered to at all times. Any incidents should be reported immediately to Natural Resources Wales using their hotline number 0800 807060.	Operations Manager	<a href="https://www.gov.uk/government/publications/works-in-near-or-over-watercourses-">https://www.gov.uk/government/publications/works-in-near-or-over-watercourses-</a>

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			ppg5-prevent-pollution
Condition 8.9	The Licence Holder must ensure that any coatings and/or treatment used is suitable for use in the marine environment and are used in accordance with best environmental practice, e.g. approved by HSE, Environment Agency Pollution Prevention Control Guidelines.	Operations Manager	

#### Rhyl Flats Offshore Wind Farm


##### (Marine and Coastal Access Act – Marine Licence CML1466v1)

Consent Condition Ref.	Consent Requirement	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Condition 8.3	The Licence Holder must ensure bunding and storage facilities are installed to contain and prevent the release of fuel, oils and chemicals associated with the plant, refuelling and construction equipment into the marine environment.	Operations Manager	See also Marine Pollution Contingency Plan for Liverpool Bay Offshore Wind Farms IRUL\WP\EAP.020 (formerly REN\WP\EAP.020)
Condition 8.4	The Licence Holder must produce and implement a contingency plan to handle accidental spillages of fuel, oils and chemicals utilised during the works. The contingency plan must be available for inspection at all reasonable times at the locations detailed in paragraph 3 by NRW acting on behalf of the Licensing Authority and/or Marine Enforcement Officers.	Operations Manager	See also Marine Pollution Contingency Plan for Liverpool Bay Offshore Wind Farms IRUL\WP\EAP.020 (formerly REN\WP\EAP.020)
Condition 8.5	The Licence Holder must ensure Environment Agency Pollution Prevention Guidelines – works and maintenance in or near water: PPG5 – are adhered to at all times. Any incidents should be reported immediately to Natural Resources Wales using their hotline number: 0800 807060.	Operations Manager	<a href="https://www.gov.uk/government/publications/works-in-near-or-over-watercourses-ppg5-prevent-pollution">https://www.gov.uk/government/publications/works-in-near-or-over-watercourses-ppg5-prevent-pollution</a>


#### Gwynt y Môr Offshore Wind Farm

##### (Marine and Coastal Access Act – Marine Licence 11/52/ML/4)

Consent Condition Ref.	Consent Requirement	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
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Condition 8.6	The Licence Holder must ensure that any coatings and/or treatment used is suitable for use in the marine environment and are used in accordance with best environmental practice.	Operations and Maintenance Manager	
Condition 8.7	The Licence Holder must ensure that all chemicals utilised in the operations must be selected from the List of Notified Chemicals assessed for use by the offshore oil and gas industry under the Offshore Chemicals Regulations 2002.	Operations and Maintenance Manager	<a href="https://www.cefas.co.uk/publications-data/offshore-chemical-notification-scheme/">https://www.cefas.co.uk/publications-data/offshore-chemical-notification-scheme/</a>
Condition 8.8	The Licence Holder must ensure that any chemical agents placed within the void of the monopole, e.g. biocides, corrosion inhibitors, are selected from the List of Notified Chemicals. The use of any chemical not contained on this list will require prior consent from NRW acting on behalf of the Licensing Authority following a comparable ecotoxicological hazard/risk assessment undertaken at the Licence Holders own expense.	Operations and Maintenance Manager	<a href="https://www.cefas.co.uk/publications-data/offshore-chemical-notification-scheme/">https://www.cefas.co.uk/publications-data/offshore-chemical-notification-scheme/</a>
Condition 8.9	The Licence Holder must ensure bunding storage facilities and spill kits are installed to contain and prevent the release of fuel, oils and chemicals from the plant, refuelling and construction equipment associated with the works in to the marine environment at all times. Any incidents should be reported immediately to Natural Resources Wales using their hotline 0800 807060.	Operations and Maintenance Manager	See also Marine Pollution Contingency Plan for Liverpool Bay Offshore Wind Farms (REN\WP\EAP.020)
Condition 8.10	The Licence Holder must produce a Marine Pollution Contingency Plan (MPCP) for spills and collision incidents during operation, and this must be adhered to and be included in the Environmental Management Plan (EMP). The Contingency Plan must take into account existing plans for all operations, including offshore installations, which may have an influence on the MPCP. Practices used to refuel vessels at sea must conform to industry standards. The Contingency Plan must outline plans, including methods and procedures to deal with any potential oil leaks so as to ensure no such material comes into contact with the marine environment.	Operations and Maintenance Manager	See also Marine Pollution Contingency Plan for Liverpool Bay Offshore Wind Farms IRUL\WP\EAP.020 (formerly REN\WP\EAP.020)


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Condition 8.11	The Licence Holder must ensure that all reasonable care is taken to prevent the accidental release of chemicals into the marine environment. To facilitate this, a risk assessment of all chemical usage should be undertaken prior to the relevant phase of planned maintenance and submitted to NRW acting on behalf of the Licensing Authority for approval at least 28 days prior to undertaking planned works. This risk assessment should include how and when the chemicals are used, stored and transported; best practice guidelines for the equipment/techniques used; the integrity of the equipment and the risk of spills and must be included in the MPCP.	Operations and Maintenance Manager	See also Marine Pollution Contingency Plan for Liverpool Bay Offshore Wind Farms IRUL\WP\EAP.020 (formerly REN\WP\EAP.020)
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### Gwynt y Môr Pontoon

#### (Marine and Coastal Access Act – Marine Licence 11/76/ML/4)

Consent Condition Ref.	Consent Requirement	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Condition 8.7	The Licence Holder must submit a method statement for the refuelling process for our written approval at least 8 weeks before the pontoon is brought into operation	Operations and Maintenance Manager	See also Port of Mostyn Pontoon Refuelling Procedure RIUK/WP/OFW.009
Condition 8.8	The Licence Holder must submit a spill response plan for our written approval at least 8 weeks before the refuelling system is brought into operation.	Operations and Maintenance Manager	See also Marine Pollution Contingency Plan for Liverpool Bay Offshore Wind Farms (REN\WP\EAP.020)
Condition 8.15	The licence Holder must ensure Environment Agency Pollution Prevention Guidelines – works and maintenance in or near water: PPG5 – are adhered to at all times. Any incidents should be reported immediately to the Environment Agency using their hotline 0800 807060 and NRW acting on behalf of the Licensing Authority using our mailbox: <a href="mailto:marinelicensing@naturalresource">marinelicensing@naturalresource</a>	Operations and Maintenance Manager	


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	<a href="http://swales.gov.uk">swales.gov.uk</a>		
Condition 8.16	The Licence Holder must ensure any coatings/treatments are suitable for use in the marine environment and are used in accordance with best environmental practice (e.g. approved by HSE, EA Pollution Prevention Control Guidelines)	Operations and Maintenance Manager	
Condition 8.17	The Licence Holder must install bunding and/or storage facilities to contain and prevent the release of fuel, oils, and chemicals associated with plant, refuelling and construction equipment, into the marine environment. Secondary containment must be used with a capacity of not less than 110% of the containers storage capacity.	Operations and Maintenance Manager	
Condition 8.18	The Licence Holder must ensure that no waste concrete slurry or wash water from concrete or cement works are discharged into the marine environment. Concrete and cement mixing and washing areas should be contained and sited at least 10 meters from any watercourse or surface water drain to minimise the risk of run off entering a watercourse.	Operations and Maintenance Manager	
Condition 8.19	The Licence Holder must ensure that during the works all wastes are stored in designated areas that are isolated from surface water drains, open water and bunded to contain any spillage.	Operations and Maintenance Manager	
Condition 8.20	The Licence Holder must ensure that the Waste (England and Wales) Regulations 2011, for dealing with waste materials, is adhered to at all times for any off-site movements of waste.	Operations and Maintenance Manager	Refer to the procedure Management of Waste IRUL\WP\ENV.002 (formerly REN\WP\ENV.002
Condition 8.24	The Licence Holder must ensure	Operations and	

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	the best method of practice is used to minimise re-suspension of sediment during these works.	Maintenance Manager	
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## EMDS 7 – Miscellaneous

### Overview

This EMDS covers items not fitting into the previous EMDS categories. These are normally as a result of Marine Licence conditions and may not be as a result of an environmental risk. A copy of the Marine Licence is required to be kept at the address of the licence holder, at Innogy site offices located at or adjacent to the works and also those of contractors. The Marine Licence must also be held onboard vessels. Knowledge of the content and conditions held in the Marine Licence must be maintained by the Innogy Operations and Maintenance Manager/ Operations Manager, vessel Masters and other persons whose work may be affected by the Marine Licence.

### Compliance Requirements

#### ✚ Marine and Coastal Access Act 2009

### Control Measures for Work Process and Additional Reporting Responsibilities

The following Marine Licence conditions are common across the various Offshore Wind Farms and Pontoon. There are slight wording differences between Marine Licences, but the requirement is the same on all sites.


*North Hoyle Offshore Wind Farm (Marine and Coastal Access Act – Marine Licence CML1465v1)*

*Rhyl Flats Offshore Wind Farm (Marine and Coastal Access Act – Marine Licence CML1466v1)*


*Gwynt y Môr Offshore Wind Farm (Marine and Coastal Access Act – Marine Licence 11/52/ML/4)*

*Gwynt y Môr Pontoon (Marine and Coastal Access Act – Marine Licence 11/76/ML/4)*


Consent Condition Ref.	Consent Requirement	Responsibility	Mitigation Measure/ Frequency/Timing of Actions
Condition 1.6 All sites	The works shall be carried out in accordance with the works schedule and method statements as detailed in the application form.	Operations and Maintenance Manager/ Operations Manager	
Condition 2.1 (GYMOWF) Condition 2.2 (NH & RF) Condition 2.4 (GyM Pontoon)	The Licence Holder must ensure that details of any additional Operator(s) and Contractor(s) utilised to undertake the works are submitted to NRW acting on behalf of the Licensing Authority prior to the commencement of works.	Operations and Maintenance Manager/ Operations Manager	
Condition 2.2 (GYMOWF) Condition 2.3 (NH & RF)	The Licence Holder must ensure that the details of the vessels and/or vehicles utilised to undertake the works are submitted to NRW acting on	Operations and Maintenance Manager/ Operations Manager	

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Condition 2.4 (GyM pontoon)	behalf of the Licensing Authority prior to the commencement of the works,		
Condition 2.3 (GYMOWF)	Only those Operator(s) or Contractor(s) and vessels and/or vehicles whose details have been notified to NRW acting on behalf of the Licensing Authority may operate under the terms of this Licence. Any changes must be notified to and be approved by NRW acting on behalf of the licensing Authority in writing prior to operating under this Licence.	Operations and Maintenance Manager/ Operations Manager	
Condition 2.4 (NH, RF & GyM pontoon)			
Condition 2.4 (GYMOWF)	All vessels employed to perform the deposit (and removal) operation permitted by this Licence shall be so constructed and equipped as to be capable of the proper performance of these operations in compliance with the conditions set out in the Schedule to this licence.	Operations and Maintenance Manager/ Operations Manager	
Condition 2.5 (NH & RF)			
Condition 7.1 (NH, RF, GYMOWF & GyM Pontoon)	In the event of the Licence Holder becoming aware that any of the information on which the granting of this Licence was based has changed or is likely to change he/she shall notify NRW acting on behalf of the Licensing Authority at the earliest opportunity of the details.	Operations and Maintenance Manager / Operations Manager	
Condition 7.2 (NH, RF, GYMOWF & GyM Pontoon)	Similarly in the event that the Licence Holder wishes any of the particulars set down in the Schedule to be altered he/she shall inform NRW acting on behalf of the Licensing Authority at the earliest opportunity before taking further action.	Operations and Maintenance Manager / Operations Manager	
Condition 8.12 (GYMOWF)	8.12 The Licence Holder must ensure that details of major maintenance works are published prior to commencement, in the	Operations and Maintenance Manager/ Operations	
Condition 8.1 (RF)			
Condition 8.5			

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(NH)	Kingfisher Fortnightly Bulletin to inform the Sea Fish Industry of the vessel routes, timings and locations	Manager	
Condition 8.13 (GYMOWF)	8.13 The Licence Holder must ensure that a Notice to Mariners is issued at least 10 days prior to the commencement of planned maintenance works. For non-planned 'emergency works' a notice must be issued prior to works being undertaken.	Operations and Maintenance Manager/ Operations Manager	
Condition 8.14 (GYMOWF)	8.14 The Licence Holder must ensure close liaison with the Harbour Master of the Port of Mostyn is maintained.	Operations and Maintenance Manager/ Operations Manager	
Condition 8.15 (GYMOWF)	8.15 The Licence Holder must ensure that a suitably qualified and experienced liaison officer or officers are appointed for fisheries liaison and NRW acting on behalf of the Licensing Authority notified of their identity and credentials before any work commences. Liaison officers must establish and maintain effective communications between the Licence Holder, contractors, fishermen, conservation groups and other users of the sea.	Operations and Maintenance Manager	
Condition 8.16 (GYMOWF)	8.16 The Licence Holder must ensure that this/these liaison officer(s) undertakes(s) the following: a. Monitoring compliance with the commitments made in the Environmental Statement and the EMP b. Providing a central point of contact for the Monitoring Programme. c. Establishing and maintaining effective communications	Operations and Maintenance Manager	a) HSE team b) Environmental Liaison Officer (ELO) c) ELO d) HSE team e) ELO

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	between the Licence Holder, contractors, fishermen, conservation groups and other users of the sea concerning the overall project and any amendments to the method statement and site environmental procedures. d. Inducting site personnel on site / works environmental policy and procedures. e. Delivering the functions and duties specified in the Archaeological Protocol.		
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