Environmental Management Plan Annex 3: O&M Marine Pollution Contingency Plan

In the event of a spill go straight to

Section 5: Pollution Incident Response Procedures

Document Control

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Acronyms and Abbreviations

ACRONYM	DEFINITION
CGOC	Coastguard Operations Centre
BEIS	Department of Business, Energy and Industrial Strategy
COSHH	Control of Substances Hazardous to Health
DECC	Department of Energy and Climate Change
ECoW	Environmental Clerk of Works
ERP	Emergency Response Plan
HSE	Health and Safety Executive
IFO	Intermediate Fuel Oil
IMO	International Maritime Organisation
ISM	International Safety Management
ITOPF	International Tanker Owners Pollution Federation
MCA	Maritime and Coastguard Agency
MCC	Marine Coordination Centre
MGO	Marine Gas Oil
MMO	Marine Management Organisation
MPCP	Marine Pollution Contingency Plan
MRC	Maritime Response Centre
MD-LOT	Marine Directorate Licensing and Operations Team
MSN	Merchant Shipping Notice
NCP	National Contingency Plan
NnGOWL	Neart na Gaoithe Offshore Wind Limited
O&M	Operation and Maintenance
OfTI	Offshore Transmission Infrastructure
OfTO	Offshore Transmission Owner

OPEP	Oil Pollution Emergency Plan
OSCP	Oil Spill Contingency Plan
OSS	Offshore Substation Platform
POLREP	Marine Pollution Report
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RNLI	Royal National Lifeboat Association
RSPB	Royal Society for the Protection of Birds
SDS	Safety Data Sheet
SEG	Standing Environment Group
SEPA	Scottish Environment Protection Agency
SOLAS Convention	International Convention for the Safety of Life at Sea
SOPEP	Shipboard Oil Pollution Emergency Plan
SOSREP	Secretary of State's Representative
STAC	Science and Technical Advice Cell
UKCS	United Kingdom Continental Shelf
VHF	Very High Frequency

Defined Terms

TERM	DESCRIPTION
Addendum	The Addendum of Additional Information submitted to the Scottish Ministers by NnGOWL on 26 July 2018.
Application	The Environmental Impact Assessment Report, Habitats Regulations Appraisal Report and supporting documents submitted to the Scottish Ministers by NnGOWL on 16 March 2018, and the Addendum of Additional Information submitted to the Scottish Ministers by NnGOWL on 26 July 2018 and the Section 36 Consent Variation Report 08 January 2019.
Company	Neart na Gaoithe Offshore Wind Limited (NnGOWL) (Company Number SC356223). NnGOWL has been established to develop, finance, construct, operate, maintain and decommission the Project.
Consent Conditions	The terms that are imposed on NnGOWL under the S36 Consent or Marine Licenses that must be fulfilled throughout the period that the Consents are valid.
Consent Plans	The plans, programmes or strategies required to be approved by the Scottish Ministers (in consultation with appropriate stakeholders) in order to discharge conditions attached to the Offshore Consents.
Contractors	Any Contractor/Supplier (individual or firm) working on the Project, hired by NnGOWL.
EIA Report	The Environmental Impact Assessment Report, dated March 2018, submitted to the Scottish Ministers by NnGOWL as part of the Application as defined above.
Inter-array Cables	The offshore cables connecting the wind turbines to one another and to the OSSs.
Interconnector Cables	The offshore cables connecting the OSSs to one another.
Marine Licences	The written consents granted by the Scottish Ministers under the Marine (Scotland) Act 2010, for construction works and deposits of substances or objects in the Scottish Marine Area in relation to the Wind Farm (Licence Number 06677/19/0) and the OfTW (Licence Number MS-00009831) dated 4 June 2019 and 26 May 2022, respectively.
Offshore Consents	The Section 36 Consent and the Marine Licences.
Offshore Export Cable Corridor	The area within which the offshore export cables are to be located.
Offshore Export Cables	The offshore export cables connecting the OSSs to the landfall site.
OfTI	The Offshore Transmission Infrastructure. The OfTI includes the OSSs and offshore export cables required to connect the Wind Farm to the Onshore Transmission Infrastructure at the landfall.
OfTI Area	The area outlined in red and blue in Figure 1 attached to Part 4 of the OfTI Marine Licence.

OnTW	The onshore transmission works from landfall and above Mean High Water Springs, consisting of onshore export cables and the onshore substation.
Project	The Wind Farm and the OfTW.
Section 36 Consent	The written consent granted by the Scottish Ministers under Section 36 of The Electricity Act 1989 to construct and operate the Wind Farm, as varied by issue of the varied S36 Consent on 4 June 2019.
Section 36 Consent Variation Report	The Section 36 Consent Variation Report submitted to the Scottish Ministers by NnGOWL as part of the Application as defined above on 08 January 2019.
Subcontractors	Any Contractor/Supplier (individual or firm) providing services to the Project, hired by the Contractors (not NnGOWL).
Wind Farm	The offshore array as assessed in the EIA Report including wind turbines, their foundations and inter-array cabling.
Wind Farm Area	The area outlined in black in Figure 1 attached to the Section 36 Consent Annex 1, and the area outlined in red in Figure 1 attached to Part 4 of the Wind Farm Marine Licence.

Consent Plans

CONSENT PLAN	ABBREVIATION	DOCUMENT REFERENCE NUMBER
Environmental Management Plan	EMP	NNG-NNG-ECF-PLN-0006
Operation and Maintenance Programme	OMP	NNG-NNG-ECF-PLN-0012
Navigational Safety Plan and Vessel Management Plan	NSVMP	NNG-NNG-ECF-PLN-0010
Emergency Response Cooperation Plan	ERCoP	NNG-NNG-ECF-PLN-0015
Cable Plan	CaP	NNG-NNG-ECF-PLN-0007
Lighting and Marking Plan	LMP	NNG-NNG-ECF-PLN-0009
Project Environmental Monitoring Programme	PEMP	NNG-NNG-ECF-PLN-0013
Fisheries Management and Mitigation Strategy	FMMS	NNG-NNG-ECF-PLN-0008
Marine Archaeology Reporting Protocol	MARP	NNG-NNG-ECF-PLN-0005

1 Introduction

1.1 Background

1. The Project has been developed by Neart na Gaoithe Offshore Wind Limited (NnGOWL), which is owned by EDF Power Solutions UK and Ireland (referred to as EDF throughout the remainder of this document).
2. NnGOWL are responsible in undertaking the operation and maintenance, and any residual construction activities, of the OfTI assets up to the point of transfer of the assets to an Offshore Transmission Operator (OfTO), thereafter the OfTO will be responsible for the above for the offshore transmission infrastructure (OfTI).
3. The consents for the generating station consist of the S36 Consent and Generating Station Marine Licence 06677/19/0 issued on 4 June 2019. The OfTI consent is the Transmission Works Marine Licence, originally MS-00008954 on the 12 October 2020 and most recently on the 26 May 2022 by issue of MS-00009831.

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1.2 Objectives of this Plan

4. The S36 Consent and Marine Licences contain a variety of conditions that must be discharged through approval by the Scottish Ministers prior to the commencement of any offshore construction works. One such requirement is the approval of an Environmental Management Plan (EMP), the purpose of which is to provide the over-arching framework for on-site environmental management during construction and operation of the Project (but excluding decommissioning).
5. Condition 14 of the S36 Consent and Condition 3.2.2.10 of the OfTW Marine Licence states that the EMP must include:

   … 'A pollution prevention and control method statement, including contingency plans;'
6. This Annex to the EMP outlines the NnGOWL and Contractor obligations regarding pollution prevention and control measures, and the management of any incidents that may occur during the operational lifetime of the Project.

1.3 Linkages with Other Consent Plans and Project Procedures

7. This MPCP should be read in conjunction with the NnGOWL EMP. The EMP sets out a number of project controls and management measures relating to minimising risk of pollution incidents, including restrictions around chemical usage, procedures for storage and labelling, bunding provisions within turbines and navigational management measures to minimise the risk of collision or allision.
8. In addition, a number of other Project procedures are relevant to emergency response and reporting including the following Project documents:

- Operational Phase Emergency Response and Cooperation Plan (NNG-NNG-ECF-PLN-0022); and
- ASSET OPERATIONS Emergency Response Plan (ERP) NnG Windfarm Site (NNG-NNG-OEM-PLN-4007).

1.4 Structure of the Plan

9. Table 1-1 below outlines the structure of this document.

Table 1-1: Structure of the Operations MPCP

SECTION	TITLE	SUMMARY OF CONTENT
1	Introduction	Background to consent requirements and overview of the MPCP scope and structure; and Identifies other Consent Plans and NnGOWL documentation that are relevant to pollution prevention and contingency planning and the linkage between those plans/documents and the MPCP.
2	Project Overview	Provides a high-level overview of the Project.
3	Roles and Responsibilities	Describes roles and responsibilities relevant to the delivery of the Operations MPCP.
4	Pollution Sources and Risk Assessment	Provides a list of the potential sources of pollution, the associated level of risk and the steps to be taken to mitigate against a potential pollution event.
5	Pollution Incident Response Procedures	Specific pollution response procedures and roles of key personnel including detailed reporting procedures in the event of a pollution incident.
Appendix A	Spill Procedures	Outlines spill response procedures to be followed in the event of an offshore spill originating from a NnGOWL-owned offshore structure.
Appendix B	Spill Notification Checklist	Outlines a spill notification checklist to be followed in the event of an offshore spill originating from a NnGOWL / OFTO-owned offshore structure.
Appendix C	Response Forms	Oil spill response and notification proformas.
Appendix D	Contacts Directory	Provides a template to be populated with contact details for those individuals and organisations with pollution reporting and response responsibilities.

2 Project Overview

10. The Wind Farm Area is located to the northeast of the Firth of Forth, 15.5 km directly east of Fife Ness on the east coast of Scotland (See Figure 2-1). The Wind Farm Area covers approximately 105 km^2. Offshore Export Cables are located within the 300 m wide Offshore Export Cable Corridor, running in an approximately southwest direction from the Wind Farm Area, making landfall at Thorntonloch beach to the south of Torness Power Station in East Lothian. Figure 2-1 shows the Wind Farm Area and Offshore Export Cable Corridor, boundaries and cable route to shore.

11. The Offshore Consents allow for the construction and operation of the following main components, which together comprise the Project:

- 54 wind turbines generating a maximum total output of 450 Megawatts (MW);
- 54 jacket substructures installed on pre-piled foundations, to support the wind turbines;
- Two alternating current (AC) substation platforms, referred to as Offshore Substation Platforms (OSSs), to collect the generated electricity and transform the electricity from 66kV to 220 kV for transmission to shore;
- Two jacket substructures installed on piled foundations, to support the OSSs;
- A network of inter-array subsea cables, buried and/or mechanically protected, to connect strings of turbines together and to connect the turbines to the OSSs;
- One interconnector cable connecting the OSSs to each other;
- Two buried and/or mechanically protected subsea export cables to transmit the electricity from the OSSs to the landfall at Thorntonloch and connecting to the onshore buried export cables for transmission to the onshore substation and connection to the National Grid network; and
- Minor ancillary works such as the deployment of metocean buoys and permanent navigational marks.

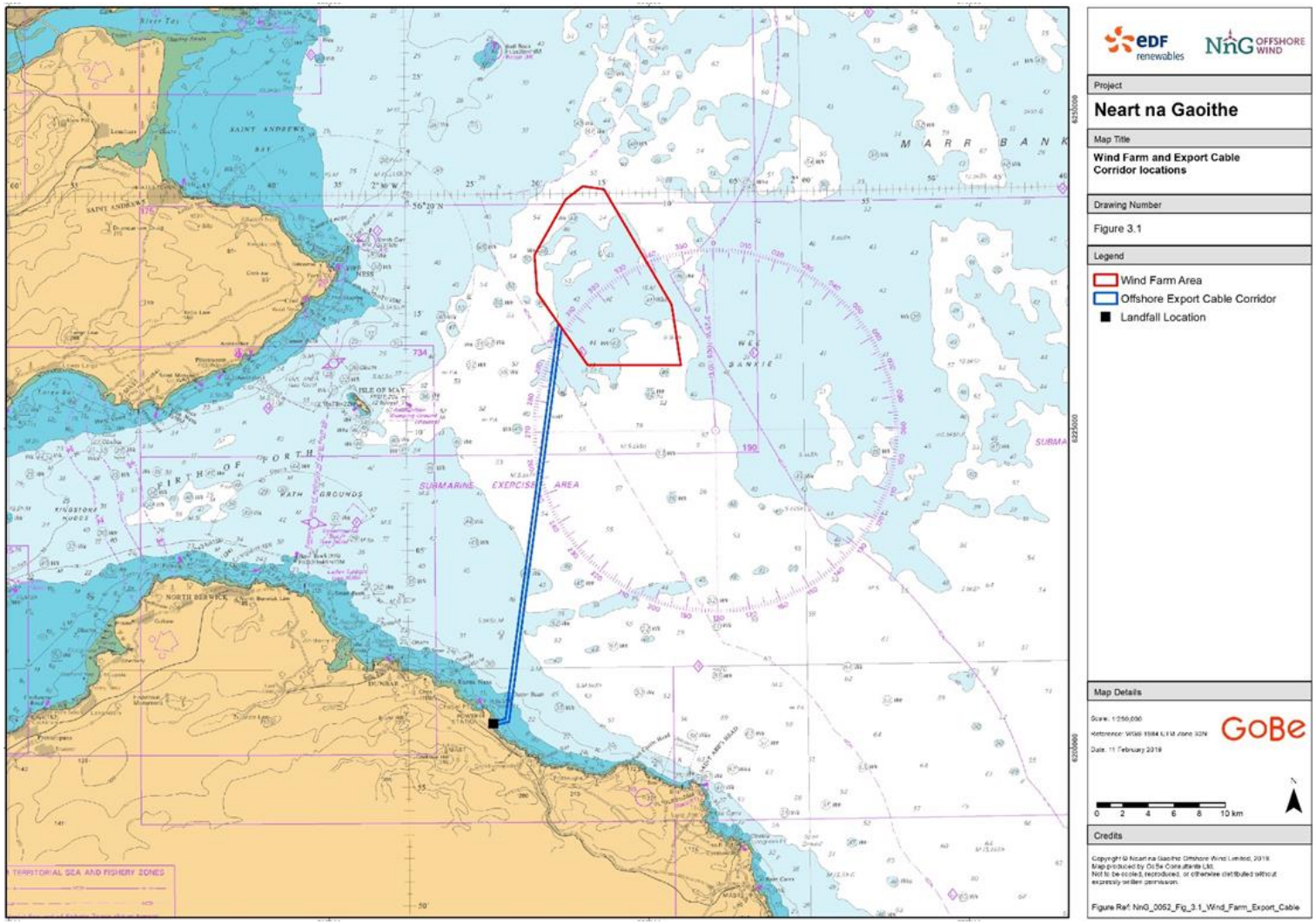

Figure 2-1: Wind Farm Area and Offshore Export Cable Corridor locations

3 Roles and Responsibilities

3.1 Introduction

12. In relation to pollution prevention and control, NnGOWL and NnGOWL's vessels and Contractors are responsible for:

- Developing, maintaining, communicating and implementing their own MPCPs, or equivalent spill plans that are consistent with this MPCP;
- Managing an ongoing spill response; and
- Liaising and co-operating with statutory bodies in the event of a spill.

13. NnGOWL are responsible in undertaking the operation and maintenance of the OfTI assets up to the point of transfer of the assets to an Offshore Transmission Operator (OfTO), thereafter the OfTO will be responsible for the above offshore transmission infrastructure (OfTI) in relation to pollution prevention and control.

14. The overarching responsibilities of NnGOWL and Contractors in relation to pollution prevention and control are set out immediately below. The responsibilities of those with specific roles in the event of a pollution incident are also described.

3.2 NnGOWL

15. NnGOWL recognise that as the Licence Holder, the company is responsible for ensuring adequate resources and procedures are in place and available to ensure that any oil or chemical spill originating from the Project during its lifetime is adequately dealt with. As such, NnGOWL will have the following responsibilities in relation to marine pollution and contingency planning:

- Require that all Contractors, through conditions of contract, make appropriate marine pollution response provisions commensurate with the level of risk associated with their activities to respond to any oil or chemical spills;
- Review Contractor pollution prevention procedures and plans in accordance with Licence requirements, NnGOWL procedures and current legislation;
- Ensure that measures are implemented in accordance with this MPCP, ensuring compliance with procedures and legislation through audits and inspections;
- Monitor the pollution prevention performance of the Project through maintaining an overview of incidents; and
- Ensure that all pollution incidents are reported in line with Section 5 - Pollution Incident Response Procedures.

3.2.1 NnG Control Room

16. Operation and maintenance (O&M) activities will be managed remotely by the NnG Control Room at the O&M Base in Eyemouth from 6am – 6pm Monday to Sunday and out of hours activities will be managed remotely from the Operation Control Centre (OCC) in France. The NnG Control Room/OCC France will be the main NnGOWL point of contact in the event of emergency and pollution incidents.

17. Where a spill is from an NnGOWL installation the NnG Control Room will report the spill to the Coastguard Operations Centre (CGOC) Aberdeen. Any spill response actions will be managed and coordinated by the

NnG Control Room unless the Maritime and Coastguard Agency (MCA) assume control. If the MCA assume primary control of the spill response the NNG Control Room / OCC will assist, making any NnGOWL resources available and facilitating with communications as required.

18. In the event of a pollution incident originating from a vessel or vessel-related activity, the NnG Control Room / OCC will assist with the coordination and execution of the ongoing response, maintaining close communication with the Vessel Master (see Section 3.3.1 below) and liaising with the CGOC Aberdeen, other contractors and statutory authorities as required. Primary responsibility for response will remain with the Vessel Master as set out in the vessels Shipboard Oil Pollution Emergency Plans (SOPEP) and described below.

3.2.2 Other Relevant Roles

19. The NnGOWL O&M Manager will be responsible for requiring that sufficient resources and processes are in place to deliver/comply with the MPCP. The Asset Manager will be responsible for reporting on any marine pollution incident to the NnGOWL Board, and for addressing Contractor non-compliance.

20. The NnGOWL Offshore HSE Advisor is responsible for providing support, advice and guidance on all aspects of Safety, Health & Environmental management on the Project. In relation to this MPCP the Offshore HSE Advisor and the Offshore Environment Manager will review contractor pollution response documents and arrangements to ensure they are fit-for-purpose. The Offshore HSE Advisor and Environment Manager will conduct auditing in relation to the MPCP provisions. In the event of a spill the NnGOWL Offshore HSE Advisor and Environment Manager will provide advice to the Primary Responder as required.

21. During Operations the Environment Manager is available to provide assistance to the NnG Control Room and Vessel Master wherever necessary and is responsible for initiating the investigation, closure and lessons learned process post-incident.

22. The Offshore Environment Manager will be responsible for ensuring incident response complies with the Offshore Consents and relevant Consent Plans where possible.

3.3 Contractors

23. Offshore O&M work will be primarily carried out by NnGOWL and any major maintenance/repairs by NnGOWL Contractors as required. NnGOWL will require that all O&M staff and Contractors are familiar with this MPCP.

24. NnGOWL chartered vessels and Contractors are expected to prepare and implement their own plans specific to their scope of works, which are to be compliant with the content of this document, for example SOPEP or a contractor specific MPCP. Contractor and vessel documents should clearly interface with this MPCP or other existing documents such as harbour Oil Spill Contingency Plans (OSCPs, or similar). Spill response should be a part of scheduled vessel drills (covering both spills into the sea and spills contained on deck).

25. During maintenance/repairs conducted by a Contractor, in the event of a spill from a vessel or from operations taking place on a vessel, the Contractor will assume primacy of the incident and be responsible for implementing an immediate response in accordance with their own SOPEP (or other relevant spill plan), which will be consistent with the requirements of this MPCP, and for informing NnGOWL of their actions.

26. The specific responsibilities of Contractors engaged in operation and maintenance activities in relation to pollution prevention and control are:

- Follow and implement current best practice;

- Submit complete pollution prevention procedures or SOPEPs (as appropriate) and method statements in advance of commencement of work, for review by NnGOWL, in order to ensure compliance with this MPCP, other relevant NnGOWL procedures and any other applicable legislation;
- Understand and implement procedures relevant to their role as laid out in this MPCP and associated documentation;
- Ensure that they have adequate pollution response capabilities commensurate with the level of risk associated with their specific scope of works (including details of the Contractor appointed 24 hour 365 days per year spill response subcontractor);
- Maintain environmental records, including waste management records in accordance with legal requirements;
- Ensure that pollution prevention considerations form an integral part of Design and Implementation of the O&M works and to include reviews as part of regular project meetings;
- Facilitate dissemination of pollution prevention requirements to their teams including sub-contractors;
- Report and liaise with NnGOWL on all pollution issues;
- Attend pollution prevention training as required; and
- Investigate any pollution incidents and take corrective action as required in liaison with NnGOWL.

3.3.1 Vessel Masters

27. The Vessel Master has overall responsibility for their vessel. The Vessel Master is responsible for activating the SOPEP (or equivalent spill response plan) when a spill originates from their vessel. If the SOPEP is activated the vessel master will be the Primary Responder of the incident unless primacy is assumed by the Secretary of State's Representative (SOSREP) as detailed within the NCP (Refer to Section 3.4).

28. The Vessel Master will maintain the safety of personnel, confirm source, initiate a log of events, undertake the necessary notifications and coordinate the monitoring, tracking and sampling of the spill and report the spill to the Maritime and Coastguard Agency and the NnG Control Room (see Section 5.2.1.).

29. The Vessel Master will liaise with the MCA and other relevant authorities as advised by the MCA to decide upon and implement the initial response strategy in line with the vessel SOPEP.

3.4 Interfaces with Other Pollution Contingency Plans or Organisations

30. Within the UK there is an adopted structure and procedure for response to marine pollution events, which clearly defines the roles and responsibilities of industry, the UK Government and Local Authorities.

31. In the event of a spill originating from an O&M activity, the NnG Control Room will ensure that other operators and/or vessels in the vicinity that may be impacted, are notified. Where a spill originating from the Project drifts towards and/or reaches neighbouring installations and/or vessels, this may instigate activation of their own pollution contingency plans. Where appropriate NnGOWL will work to implement a co-ordinated response and share pollution response resources.

32. Assuming pollution from an unidentifiable source is drifting towards the Project, NnGOWL shall comply fully with any instructions from the MCA or other relevant authority in order to facilitate an appropriate pollution response. As soon as the source has been identified, the relevant installation/operator will be notified and NnGOWL and/or their Contractors will continue to provide a supporting role.

33. Other pollution contingency plans, which may interact with this MPCP in the event of a spill originating from the Project, are as follows:

- Industry plans – These include SOPEPs/equivalent vessel-specific spill plans for vessels, port and harbour OSCPs, and oil pollution emergency plans (OPEPs) for other offshore installations. Eyemouth Harbour Trust's OSCP is particularly relevant given the O&M base is located at Eyemouth Harbour.
- Local Authority plans – In the event of actual or threatened shoreline impact, the oil spill contingency plan administered by the relevant Local Authority will be implemented.
- NCP - In the event of a significant oil spill incident, which calls for a Tier 2 or Tier 3 response (see Section 4.3 for Tier definition), the MCA may decide to implement the NCP. In such an event, the MCA may establish a Marine Response Centre (MRC) and the SOSREP has the powers to direct actions to be taken. In this instance the SOSREP will be considered the Primary Responder and NnGOWL will, as far as practicable, make all resources available to the SOSREP to respond to the incident.

4 Pollution Sources and Risk Assessment

4.1 Introduction

34. This section identifies the type and size of oil and chemical spill that the NnGOWL spill response arrangements will need to be able to address. It looks at the potential sources and likelihood of spills that could occur from typical operations, gives an overview of the potential 'operational' and 'worst case' scenarios, and the prevention and control measures proposed by NnGOWL to minimise or eliminate spill risks.

35. The severity of effects from a spill are dependent on a wide range of factors, including:

- The volume of oil or chemical spilled;
- The physical and chemical nature of the product;
- The location of the spill and proximity of shoreline or other sensitivities;
- The weather and sea state conditions during and following the spill; and
- Hydrographic conditions.

36. Given this variety of factors, accurate predictions of impacts before a spill are difficult to make. Rapid access to information on the environmental conditions and features is essential in spill response.

37. For offshore operations, oil spills often pose the most serious environmental risk. Chemical spills, although they can have localised highly toxic effects and pose particular risk to personnel, are generally lower risk, as inventories of stored chemicals are often much smaller in volume than those of hydrocarbons. In addition, chemicals commonly exhibit solubility in water and hence are diluted rapidly on contact with the sea in the event of a spill. Oil and other liquid hydrocarbons exhibit no such solubility on contact with water – the majority initially float on the water's surface, though may sink beneath the surface over time, and can persist in the marine environment for long periods of time, depending on the type of hydrocarbon released. For these reasons, hydrocarbon spills are considered in more detail in the below sections.

4.2 Hydrocarbon and Chemical Inventory

38. The type of hydrocarbons and chemicals that may be used during the O&M phase of the Project are listed in Table 4-1. Within the table, hydrocarbons are allocated to one of four 'groups' as defined by International Tanker Owners Pollution Federation (ITOPF) classification. Group 1 hydrocarbons are considered to be least persistent (i.e. if spilled, they will dissipate and not form a surface emulsion) whilst Group 4 hydrocarbons are very persistent (i.e. if spilled, they will not evaporate or disperse).

39. Information on the volume of these hydrocarbon types involved in the Project activity at any one time will be dependent on the specific vessels available to undertake the repair or maintenance works. Contractors for any major repair or maintenance activities will provide vessel data sheets for each of the associated vessels to NnGOWL. In the event of a pollution incident this information will be made available to the primary responder or response cells if required.

Table 4-1 Types of hydrocarbons and chemicals to be used during the Operational Phase of the Project

TYPE OF OIL	ITOPF OIL GROUP	COMMENTS
Intermediate Fuel Oil (IFO)	Group 3	Used as fuel for vessels involved in maintenance/repair activities and routine O&M activities.
Marine Gas Oil (MGO) (*Diesel*)	Group 2	Used as fuel for vessels involved in O&M activities including routine and major maintenance activities.
Lubricating Oil	Group 3	Used for vessels involved in O&M activities.
Hydraulic Oil	Group 2/3	Hydraulic oil used within plant equipment.
Chemicals	N/A	Various chemicals used routinely e.g. paints, paint thinners, solvents, coolants and cleaning fluids and asset toilet cassettes.
Transformer Oil	Group 3	Synthetic ester oil or mineral oil used in OSSs and turbines.
Gear Oil	Group 3	Oil for yaw gear in turbines.

4.3 Spill Classification

40. The response strategy that will be adopted in the event of a spill will ultimately depend upon several factors:

- The size and characteristics of the spilled oil/chemical;
- It's probable and predicted behaviour in the sea;
- Consideration of the environmental sensitivities in the path of the oil/chemical; and
- Consideration of the consequences of the different response options on the environment as a whole if they were to be adopted.

41. Oil spills will be classified in accordance with the internationally recognised and accepted three tier oil spill response classification system. Chemical spills will be classified according to the characteristics of the chemical and the behaviour exhibited by the chemical when released into the marine environment (i.e. whether the chemical evaporates, floats on the surface of the water, dissolves in the water, or sinks to the seabed).

42. For general oil spill response, it is common to divide levels of response into three tiers, according to the severity of the spill and the resources required to combat it. The three tiers are commonly defined as follows.

- **Tier 1** response is that which is immediately available on site, geared for the most frequently anticipated oil spill;
- **Tier 2** response is for less frequently anticipated oil spills of larger size and for which external resources on a regional level will be required to assist in monitoring and clean-up; and

- **Tier 3** response is in place for the very rarely anticipated oil spill of major proportions and which will possibly require national and international resources to assist in protecting vulnerable areas and in the clean-up.

43. The conventional view of a Tier 3 scenario is one involving an exceptionally large volume of spilled oil, for example from a major ship-sourced accident, an oil well blowout, or other such rare but highly significant event. However, a Tier 3 response may also be required for more modest volumes, perhaps where Tier 2 arrangements may be largely absent or overwhelmed, highly sensitive areas threatened, or highly-specialised strategies being required that are not available locally.

4.4 Spill Scenarios and Control Measures

44. Potential spill scenarios are dictated by the hydrocarbon and chemical inventories on the vessels and offshore installations. In practice, due to precautions such as training, operating procedures and engineered solutions, the majority of the spills that may occur are likely to be small.

45. A brief risk assessment of potential spill scenarios and proposed mitigation measures to minimise or eliminate the risks has been carried out for the O&M phase of the Project and is presented in Table 4-2. The risk assessment will be updated (if necessary) to ensure that the worst-case spill scenario is assessed.

46. The NnGOWL-specific risk assessment in Table 4-2 shows that small operational type spills (e.g., Tier 1 category) are the most likely. However, the risk assessment cannot predict with certainty the Tier level outcome of any spill, and under a worst-case spill scenario, it is possible (although considered highly unlikely) that a Tier 2 or Tier 3 response could be required

47. The main source of hydrocarbons associated with the Project will be MGO or IFO used to fuel O&M vessels (including the 45,000-litre diesel tank located at Eyemouth Harbour). The quantities of MGO and IFO contained within the vessels themselves will be limited to the bunkering capabilities of the vessels. The potential worst case spill scenario associated with the Project would be a complete loss of fuel inventory from two large vessels as a result of collision, complete loss of fuel from the diesel tank at Eyemouth Harbour into the harbour itself, or where a passing vessel collides with a wind farm vessel or structure.

48. Once spilled into the marine environment, oil immediately begins to undergo weathering, a term used to describe many natural, physical, chemical and biological changes. The changes that the oil undergoes will often influence the effectiveness of response options. Prevailing meteorological and oceanographic conditions, as well as the type of oil spilled, will determine its ultimate fate.

Table 4-2: Potential spill scenarios and control measures for the Project

POTENTIAL POLLUTANT	SPILL SCENARIO	CONTROL MEASURES	LIKELIHOOD WITH CONTROL MEASURES	LIKELY TIER
Hydrocarbons **Intermediate Fuel Oil (IFO)** **Marine Gas Oil (MGO) (Diesel)**	**Vessel refuelling** Loss of fuel during vessel to vessel refuelling at sea or refuelling at port / Eyemouth Harbour.	NnGOWL and/or contractors will undertake operationally necessary refuelling at sea as required, to fuel vessels that are extremely restricted in their capability to leave station to take on fuel, such as jack ups. Preparation and review of task-specific risk assessments, method statements and fuel transfer planning tools and checklists. Refuelling operations will be planned in advance and if practicable will aim to commence during daylight and in good weather conditions.	**Low**	**Tier 2**
	Equipment refuelling Loss of fuel during refuelling of equipment (on vessel or on turbine / OSS)).	Fuel transfer operations will be carefully conducted under the supervision by an appointed responsible person on board (e.g. Chief Engineer) and in accordance with each vessel's stipulated procedure and checklist. A bunker plan shall be developed and posted on the Bridge and in the Machinery Control Room. Before fuel transfer starts a meeting will be held with all ship staff involved in the operation and the following subjects should be discussed, as a minimum: • Bunker plan, including any anticipating changes; • Risk assessment; • Individual roles and responsibilities in the process; • Emergency situations; and • Bunkering Checklists. Only hoses fitted with non-return valves shall be used for the offshore transfer of fuel or other fluids.	**Low**	**Tier 1**

POTENTIAL POLLUTANT	SPILL SCENARIO	CONTROL MEASURES	LIKELIHOOD WITH CONTROL MEASURES	LIKELY TIER
		Vessels over 400 GRT will carry a SOPEP in compliance with The Merchant Shipping (Prevention of Oil Pollution) Regulations 1996. Vessels over 400 GRT will carry an Oil Record Book in compliance with The Merchant Shipping (Prevention of Oil Pollution) Regulations 1996. In the Oil Record Book particulars are entered of: • Details of fuel and oil bunker operations; • Disposal of sludge (oil residues); • Discharge overboard or disposal otherwise of machinery space bilge water; • Condition of oil discharge monitoring and control systems; • Accidental or other exceptional discharges of oil; and • Additional operational procedures and general remarks. • Appropriate training of personnel and supervision of activity. Compliance with conditions related to vessel refuelling set out in Merchant Shipping Notice (MSN) 1829 “Ship to Ship Transfer Regulations 2010/2012”. A visual lookout will be made at all times during fuel transfer operations to verify hose integrity throughout the transfer and in order to spot any leaks immediately. All storage tanks and/or areas shall be bunded to at least 110% of the total oil storage inventory volume. Personnel shall be trained in spill prevention awareness, and in the use of spill kits. Spill kits shall be readily available for mopping up any minor spills. Regular inspection and maintenance of equipment.		

POTENTIAL POLLUTANT	SPILL SCENARIO	CONTROL MEASURES	LIKELIHOOD WITH CONTROL MEASURES	LIKELY TIER
		The means of preventing any fuel oil from escaping into the bilges such as trays beneath oil pumps, heaters etc., special oil gutter ways etc. will be regularly inspected and drained or cleaned. Oil pressure pipes and fuel oil pipes and fittings will be inspected regularly to ensure that leaks are detected at an early stage and rectified.		
	Vessel to vessel collision Loss of fuel from collision between two vessels.	All vessels will comply with the measures set out in the Navigational Safety and Vessel Management Plan (NSVMP) to prevent vessel to vessel collision and vessel to structure allision.	**Very low**	**Tier 2** **(possible but unlikely Tier 3)**
	Vessel to structure allision Loss of fuel from allision between vessel and structure (e.g., wind turbine).		**Very low**	**Tier 2** **(possible but unlikely Tier 3)**
	Vessel stranding / grounding Loss of fuel due to vessel stranding / grounding.	All vessels will comply with the measures set out in the NSVMP to prevent vessel stranding / grounding.	**Very low**	**Tier 2** **(possible but unlikely Tier 3)**
	Failure of plant or equipment	All equipment shall be operated and maintained in good order and in accordance with legal requirements.	**Low**	**Tier 1**

POTENTIAL POLLUTANT	SPILL SCENARIO	CONTROL MEASURES	LIKELIHOOD WITH CONTROL MEASURES	LIKELY TIER
	Release of fuel due to failure of plant or equipment.	All plant and equipment shall only be operated by adequately trained and competent personnel. All storage tanks and/or areas shall be bunded to at least 110% of the total oil storage inventory volume. The means of preventing any fuel oil from escaping into the bilges such as trays beneath oil pumps, heaters etc., special oil gutter ways etc. will be regularly inspected and drained or cleaned. Oil pressure pipes and fuel oil pipes and fittings will be inspected regularly to ensure that leaks are detected at an early stage and rectified.		
	Release of fuel during major maintenance campaigns (e.g. transformer oil exchange)	Preparation and review of task-specific risk assessments and method statements. Pre-works inspections of all equipment to ensure no damage. Operations will be planned in advance and if practicable will aim to commence during daylight and in good weather conditions. Contractor appointed oil spill response contractor put on standby. Spill containment equipment (e.g. absorbent pads, booms, portable bunds) located at high-risk locations prior to works commencing to minimise delay with containment in the event of a spill. Pumping of oil from the transformer to bunded transfer tanks or intermediate storage container using a closed loop pumping system. Oil pressure pipes and fuel oil pipes and fittings will be inspected regularly to ensure that leaks are detected at an early stage and rectified. Tool-box talks prior to activity commencing to ensure all parties involved are aware of their roles and responsibilities, specifically covering spill response.	**Low**	**Tier 2**

POTENTIAL POLLUTANT	SPILL SCENARIO	CONTROL MEASURES	LIKELIHOOD WITH CONTROL MEASURES	LIKELY TIER
	Spillage during use of equipment Small spills during equipment operation.	Preparation and review of task-specific risk assessments and method statements. Personnel shall be trained in spill prevention awareness, and in the use of spill kits. Spill kits shall be readily available for mopping up any minor spills. The means of preventing any fuel oil from escaping into the bilges such as trays beneath oil pumps, heaters etc., special oil gutter ways etc. will be regularly inspected and drained or cleaned. Oil pressure pipes and fuel oil pipes and fittings will be inspected regularly to ensure that leaks are detected at an early stage and rectified.	**Low**	**Tier 1**
Lubricating Oil	Incident Loss of lubricating oil from collision between two vessels, or allision between vessel and structure, or stranding/grounding of vessel.	All vessels will comply with the measures set out in the NSVMP to prevent vessel to vessel collision, vessel to structure allision and vessel stranding / grounding.	**Very low**	**Tier 2**
	Leakage within Turbines Leakage of lubricating oil,	All equipment shall be operated and maintained in good order and in accordance with legal requirements. Turbine sensors will enable early detection of loss of fluid and leaks. There is a bunded area within the nacelle to collect lubricating oil in the unlikely event of a leak.	**Low**	**Tier 1**

POTENTIAL POLLUTANT	SPILL SCENARIO	CONTROL MEASURES	LIKELIHOOD WITH CONTROL MEASURES	LIKELY TIER
	transformer oil or grease within nacelle.	Gear oil seals shall be routinely checked during planned maintenance programmes.		
	Leakage within OTMs Leakage of transformers.	All equipment shall be operated and maintained in good order and in accordance with legal requirements. Transformer oil seals shall be routinely checked during planned maintenance programmes.	**Low**	**Tier 1**
	Spillage during use of equipment Small spills during equipment operation.	Preparation and review of task-specific risk assessments and method statements. Personnel shall be trained in spill prevention awareness, and in the use of spill kits. Spill kits shall be readily available for mopping up any minor spills. Fittings will be inspected regularly to ensure that leaks are detected at an early stage and rectified.	**Low**	**Tier 1**
	Failure of plant or equipment Release of lubricating oil due to failure of plant or equipment.	All equipment shall be operated and maintained in good order and in accordance with legal requirements. All plant and equipment shall only be operated by adequately trained and competent personnel.	**Low**	**Tier 1**
Hydraulic Oil	Incident Loss of hydraulic oil from collision between two vessels, or collision between vessel and structure, or	All vessels will comply with the measures set out in the NSVMP to prevent vessel to vessel collision, vessel to structure allisions and vessel stranding / grounding.	**Very low**	**Tier 1**

POTENTIAL POLLUTANT	SPILL SCENARIO	CONTROL MEASURES	LIKELIHOOD WITH CONTROL MEASURES	LIKELY TIER
	stranding/grounding of vessel.			
	Leakage within turbines	All equipment shall be operated and maintained in good order and in accordance with legal requirements. Turbine sensors will enable early detection of loss of fluid and leaks. There is a bunded area within the nacelle to collect lubricating oil in the unlikely event of a leak. Oil seals shall be routinely checked during planned maintenance programmes.	**Low**	**Tier 1**
	Failure of plant or equipment Release of hydraulic oil due to failure of plant or equipment, e.g., hydraulic hoses.	All equipment shall be operated and maintained in good order and in accordance with legal requirements. All plant and equipment shall only be operated by adequately trained and competent personnel. All storage tanks and/or areas shall be bunded to at least 110% of the total oil storage inventory volume.	**Low**	**Tier 1**
	Spillage during use of equipment Small spills during operation.	Preparation and review of task-specific risk assessments and method statements. Personnel shall be trained in spill prevention awareness, and in the use of spill kits. Spill kits shall be readily available for mopping up any minor spills. Fittings will be inspected regularly to ensure that leaks are detected at an early stage and rectified.	**Low**	**Tier 1**
Chemicals	Incident	All vessels will comply with the measures set out in the NSVMP to prevent vessel to vessel collision, vessel to structure allisions and vessel stranding / grounding.	**Very low**	**Tier 1**

POTENTIAL POLLUTANT	SPILL SCENARIO	CONTROL MEASURES	LIKELIHOOD WITH CONTROL MEASURES	LIKELY TIER
	Loss of chemical load from vessel collision/allision, or stranding/grounding of vessel.	Chemicals will, where relevant, be selected, stored and managed in accordance with the Offshore Chemical Regulations 2002 (as amended).		
	Leakage within turbines Leakage of coolant or transformer fluid within nacelle.	All equipment shall be operated and maintained in good order and in accordance with legal requirements. Turbine sensors will enable early detection of loss of fluid and leaks. There is a bunded area within the nacelle to collect lubricating oil in the unlikely event of a leak. Equipment including hoses, pipes and seals shall be routinely checked during planned maintenance programmes. Chemicals will, where relevant, be selected, stored and managed in accordance with the Offshore Chemical Regulations 2002 (as amended).	**Low**	**Tier 1**
	Spillage during use Spillage of paints, paint thinners, solvents, cleaning fluids etc during use.	Preparation and review of task-specific risk assessments and method statements. Personnel shall be trained in the correct handling and use of chemicals. Personnel shall be trained in spill prevention awareness, and in the use of spill kits. Spill kits shall be readily available for mopping up any minor spills. All hazardous substances shall have a safety data sheet (SDS) which is intended to provide procedures for handling or working with that substance in a safe manner. The handling and use of chemicals and hazardous substances shall be in compliance with the information on the SDS. COSHH assessments should be conducted for Project specific hazardous substances.	**Low**	**Tier 1**

POTENTIAL POLLUTANT	SPILL SCENARIO	CONTROL MEASURES	LIKELIHOOD WITH CONTROL MEASURES	LIKELY TIER
		Segregated storage facilities will be used to control the separation of hazardous substances. Chemicals will, where relevant, be selected, stored and managed in accordance with the Offshore Chemical Regulations 2002 (as amended).		

5 Pollution Incident Response Procedures

5.1 Introduction

49. This section sets out the response procedures to be adhered to in the event of a marine pollution incident. It is supported by the following:

- Appendix A – Spill Procedures: to be followed in the event of an offshore spill originating from a NnGOWL-owned offshore structure.
- Appendix B – Spill Notification Checklist: Spill notification checklists to be completed in the event of an offshore spill originating from a NnGOWL-owned offshore structure.
- Appendix C – Response Forms: Oil spill response and notification proformas.

50. NnGOWL require that any spill (actual or probable) into the marine environment, no matter how small, and no matter whether it arises from NnGOWL activities or not, is responded to following the procedures set out below.

51. Priority in the event of a spill is to take measures to ensure the safety of personnel and the offshore installations and vessels, and to prevent escalation of the incident.

52. Where a spillage is part of a wider emergency, such as fire or explosion, reference should also be made to the following documents:

- Operations Phase Emergency Response Cooperation Plan (ERCoP); and,

5.2 ASSET OPERATIONS Emergency Response Plan (ERP) NnG Windfarm Site (NNG-NNG-OEM-PLN-4007).Response Procedures

5.2.1 Spills Originating from a Vessel

53. The process set out below should be followed in the event of a marine pollution (hydrocarbon or chemical) incident where a spill originates from a vessel, from vessel related activity during maintenance of offshore installations:

- When a spill is observed, it will be reported to the Vessel Master.
- The Vessel Master will report the spill as soon as it is safe to do so via phone, to CGOC Aberdeen and then to the NnG Control Room / Operational Control Centre (out-of-hours). Verbal notification should be followed up when practicable with the submission by the Vessel Master of a Marine Pollution Report (POLREP) (Appendix C – Response Forms) via email to the CGOC and to the NnG Control Room / Operational Control Centre. The Vessel Master will ensure the POLREP has been received by a follow up email and call.
- The Vessel Master (with Contractor responsible for the vessel from which the spill has originated) will engage the vessel SOPEP and assume primacy for the incident, ensuring ongoing reporting on spill status as necessary and initiating response or clean-up operations as required. During major component change activities the Vessel Master will request support from a specialist accredited Oil Spill Response Contractor as required. During routine operation and maintenance activities the NnG Control Room / Operational Control Centre will request support from a specialist accredited Oil Spill Response

Contractor as required. The NnG Control Room / Operational Control Centre will provide a supporting role and assist with communication throughout an incident, supporting the shore-based response where required and notifying the NnG Offshore Environment Manager.

- In the event that a regional or national (Tier 2 or 3) response is required the NCP (see Section 3.4) will be implemented.
- The Offshore HSE Advisor and the Offshore Environment Manager will be available to advise on health and safety, and environmental sensitivities for consideration when developing a response strategy.
- The detailed stages of this process are outlined in Appendix A – Spill Procedures. The outlined procedure will be followed in managing a marine pollution incident originating from a vessel or vessel related activity.

54. NnGOWL will request Contractors to hold a copy of this MPCP on the bridge of any large vessels conducting major repairs during the operational lifetime of the Project.

55. The flow of information between the personnel named above is summarised in **Error! Reference source not found.**. Following initial notification of the spill, communications between all parties is likely to be regular and ongoing throughout the response.

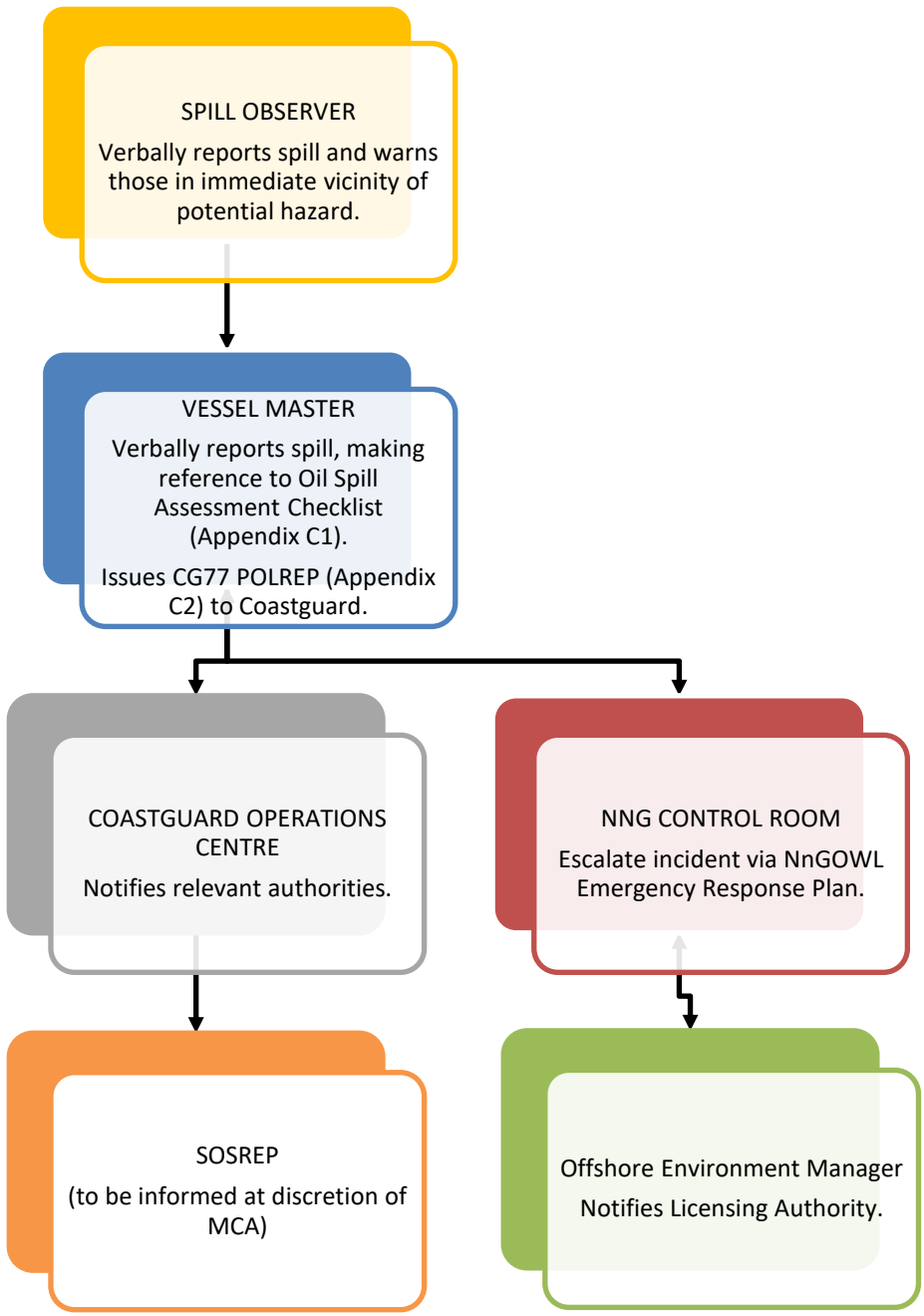

Figure 5-1: Flow of information during initial reporting of a spill originating from a vessel or vessel related activity

5.2.2 Spills Originating from an NnGOWL owned turbine or OSSSpills Originating from an Asset

56. When a spill is observed originating from a turbine or an OSS (up to the point the applicable assets on the OSS are transferred to the OfTO), it will be reported to the NnG Control Room / Operational Control Centre (out-of-hoirs) by the Spill Observer and the NnG Control Room will then report the spill to CGOC Aberdeen via phone. Verbal notification should be followed up when practicable with the submission of a POLREP via email to the CGOC by the NnG Control Room. The NnG Control Room will ensure the POLREP has been received by a follow up email and call.

57. The NnG Control Room will engage the MPCP and assume primacy of the incident. The NnG Control Room will be responsible for ongoing reporting on spill status and will coordinate an initial response with the Spill Observer who may utilise spill kits on the turbines or OSSs. The NnG Control Room will request support from a specialist accredited Oil Spill Response Contractor as required. The NnG Control Room / Operational Control Centre will notify the NnG Offshore Environment Manager.

58. The quantities and type of hydrocarbons and chemicals on the turbines and OSSs are not sufficient to warrant a Tier 2 or Tier 3 response. Any leakage from the equipment within the nacelle will be contained by the nacelle cover and any leakage from the transformer in the tower will be contained by a bund. Similarly, adequate bunding has been installed within the OSSs to ensure loss of the oil and chemical inventory would be contained within the OSS platform. It is therefore not anticipated that the MCA would implement the NCP or take command of an incident from an offshore structure associated with the Project. However, the MCA will be kept informed by verbal communications and through ongoing submission of the POLREP.

59. The flow of information between the personnel named above is summarised in Figure 5-2. Following initial notification of the spill, communications between all parties is likely to be regular and ongoing throughout the response. Appendix A – Spill Procedures provides detailed spill response procedures for personnel who will have key responsibilities in the event of a spill originating from a NnGOWL owned turbine or OSS.

60. The detailed stages of this process are outlined in Appendix A – Spill Procedures.

61. The flow of information between the personnel named above is summarised in Figure 5-2. Following initial notification of the spill, communications between all parties is likely to be regular and ongoing throughout the response.

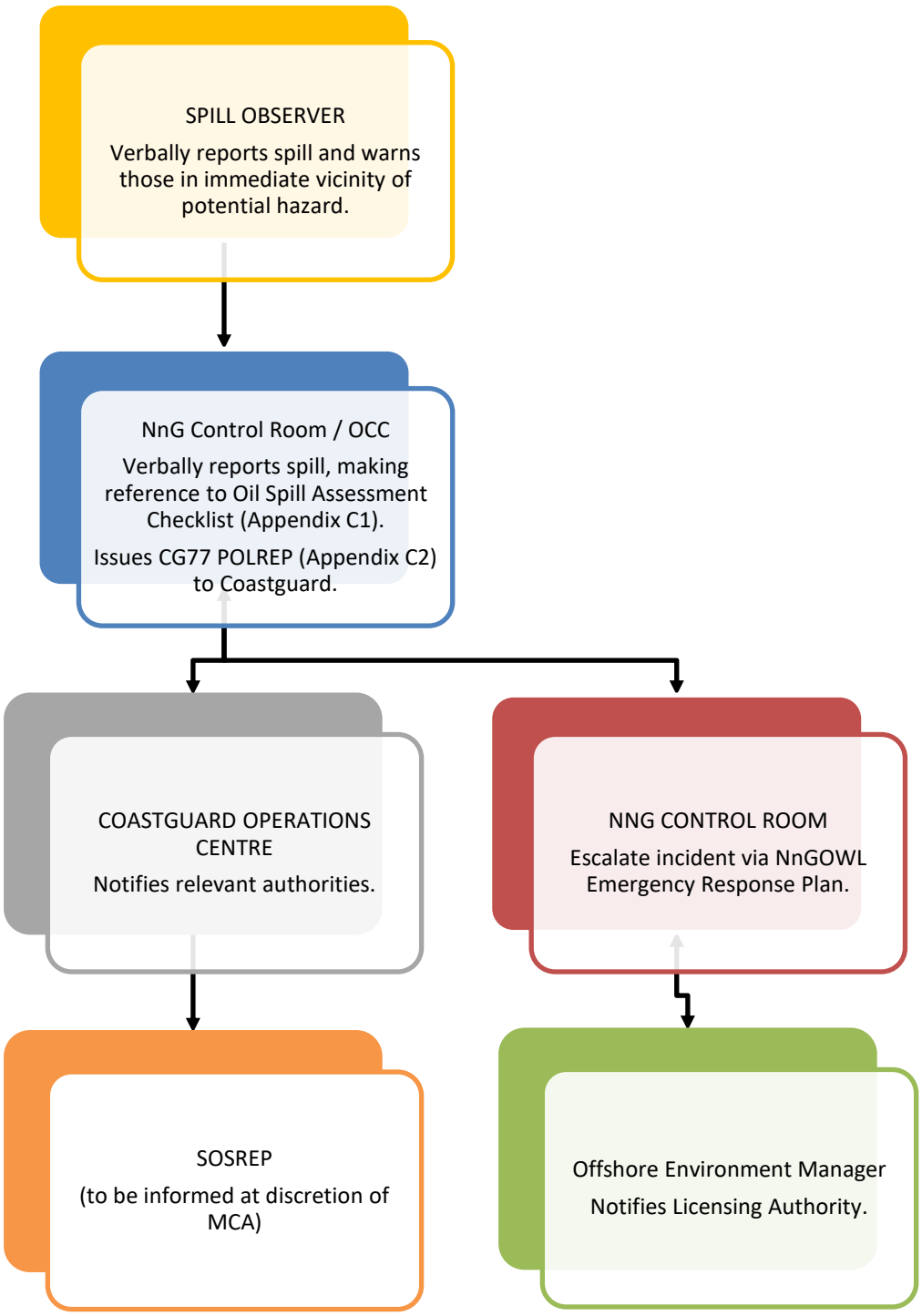

Figure 5-2: Flow of information during initial reporting of a spill originating from a turbine or OSS

5.2.3 Spills Occurring in Eyemouth Harbour

62. O&M activities will, in the main be conducted from the O&M Base at Eyemouth harbour with vessels operating from the O&M pontoons situated in Gunsgreen Basin.

63. The EHT OSCP has been produced to cover the response to any spillage caused by or during berthing, refuelling, maintenance and other commercial operations by vessels within Eyemouth Harbour. The OSCP indicates the Tier 1 response available at Eyemouth Harbour relevant to the perceived risk through normal operations at the Harbour (which includes the use of the Harbour as the NNG O&M base), as well as a mechanism for calling upon Tier 2/3 response in the event of an abnormal incident or major accident affecting the Harbour. Table 5-1, taken from the OSCP, defines the tier levels used for spills at Eyemouth Harbour by the EHT.

64. NnGOWL has contracted Eyemouth Harbour Trust (EHT) to provide spill response services when EHT man the harbour (i.e. from 08:00 - 17:00 in the winter months (October to March) and 06:00 to 19:00 in the summer months (April to September)). During these hours, EHT will provide a Tier 1 response and has a contract with Briggs Marine for Tier 2 spill response when required. Locations covered include the quay, pontoon and basin. EHT's Tier 1 response is land based, and using its absorbent boom, could apply a temporary holding response at the entrance or around a vessel to a maximum of 20 litres. The OSCP states that EHT also have a working relationship with SBC Emergency Planning Team, who could potentially offer support in a Tier 2 pollution event. NnGOWL also has a contractor in place to provide spill response services in the event of Teir 2 or 3 spills.

Table 5-1 Incident report tiers used in Eyemouth Harbour (Source: Eyemouth Harbour Trust, Oil Spill Contingency Plan 2021)

Tier	Definition
Tier 1	Small operational type spills that may occur within a location as a result of daily activities. The level at which a response operation could be carried out successfully using individual resources and without assistance from others. Small operational spills where events can be controlled by onsite resources. A Tier 1 spill is not likely to require recourse to intervention by resources out with the port, an external incident response organisation or external authorities, except for purposes of notification.
Tier 2	A medium sized spill within the harbour limits where immediate resources are insufficient to cope with the incident and further resources may be called in on a mutual aid basis. A Tier 2 incident may involve Local Government. Medium sized spills up to an operational maximum of 20 litres within Eyemouth Harbour, that will be handled by nominated Personnel and a contractor or other external assistance as nominated within this plan.
Tier 3	A large spill where substantial further resources are required and support from a national (Tier 3) or international co-operative stockpile may be necessary. A Tier 3 incident is beyond the capability of both local and regional resources. This is an incident that requires national assistance through the implementation of the National Contingency Plan and will be subject to Government controls.

65. A spill originating from a vessel in the harbour will follow the procedure in Section 5.2.1 with the addition of contacting EHT as follows:

66. The Vessel Master will report the spill as soon as it is safe to do so via phone to the EHT and CGOC Aberdeen via and then to the NnG Control Room or Operational Control Centre if out of hours Verbal notification should be followed up when practicable with the submission of a POLREP (Appendix C2) via

email to EHT and the CGOC by the Vessel Master l. The Vessel aster will ensure the POLREP has been received by a follow up email and call (see Appendix A2 for further information.

67. A spill originating from a pontoon or from land into the harbour will follow the procedure in 5.2.2 with the addition of contacting EHT as follows:

68. The Spill Observer will report the spill as soon as it is safe to do so via phone, to the NnG Control Room or OCC France if out of hours and the NnG Control Room / OCC France will then report the spill to the EHT and CGOC Aberdeen via phone. Verbal notification should be followed up when practicable with the submission of a POLREP (Appendix C2) via email to the CGOC by the EHT or NnG Control Room. The NnG Control Room will ensure the POLREP has been received by a follow up email and call (see Appendix A2 for further information.

69. The flow of information between the personnel named above is summarised in Figures 5-3 – 5-5 for spills occurring within the harbour within and out -of normal working hours. Following initial notification of the spill, communications between all parties is likely to be regular and ongoing throughout the response.

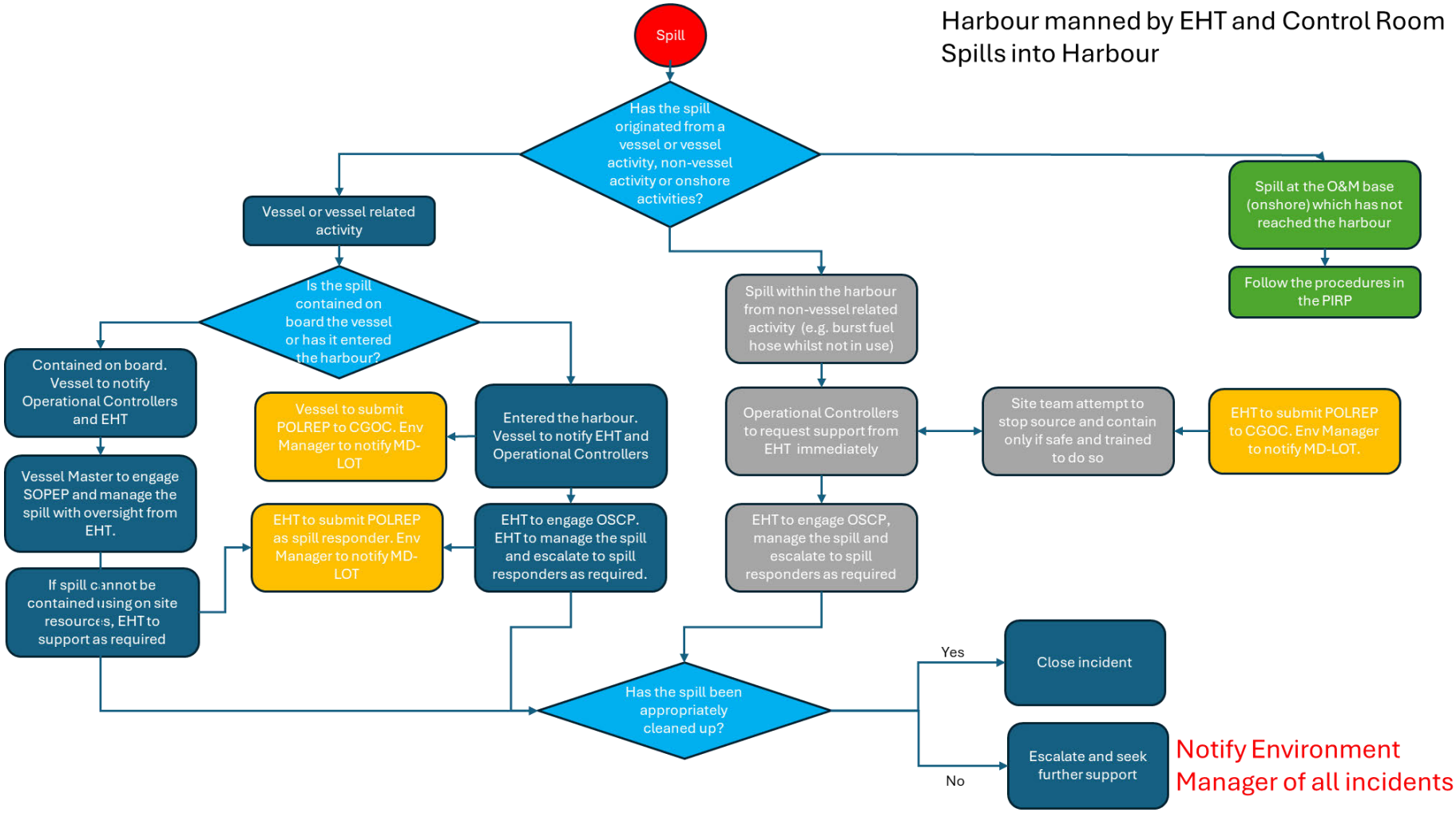

Figure 5-3 Flow of information during initial reporting of a spill occurring within Eyemouth harbour

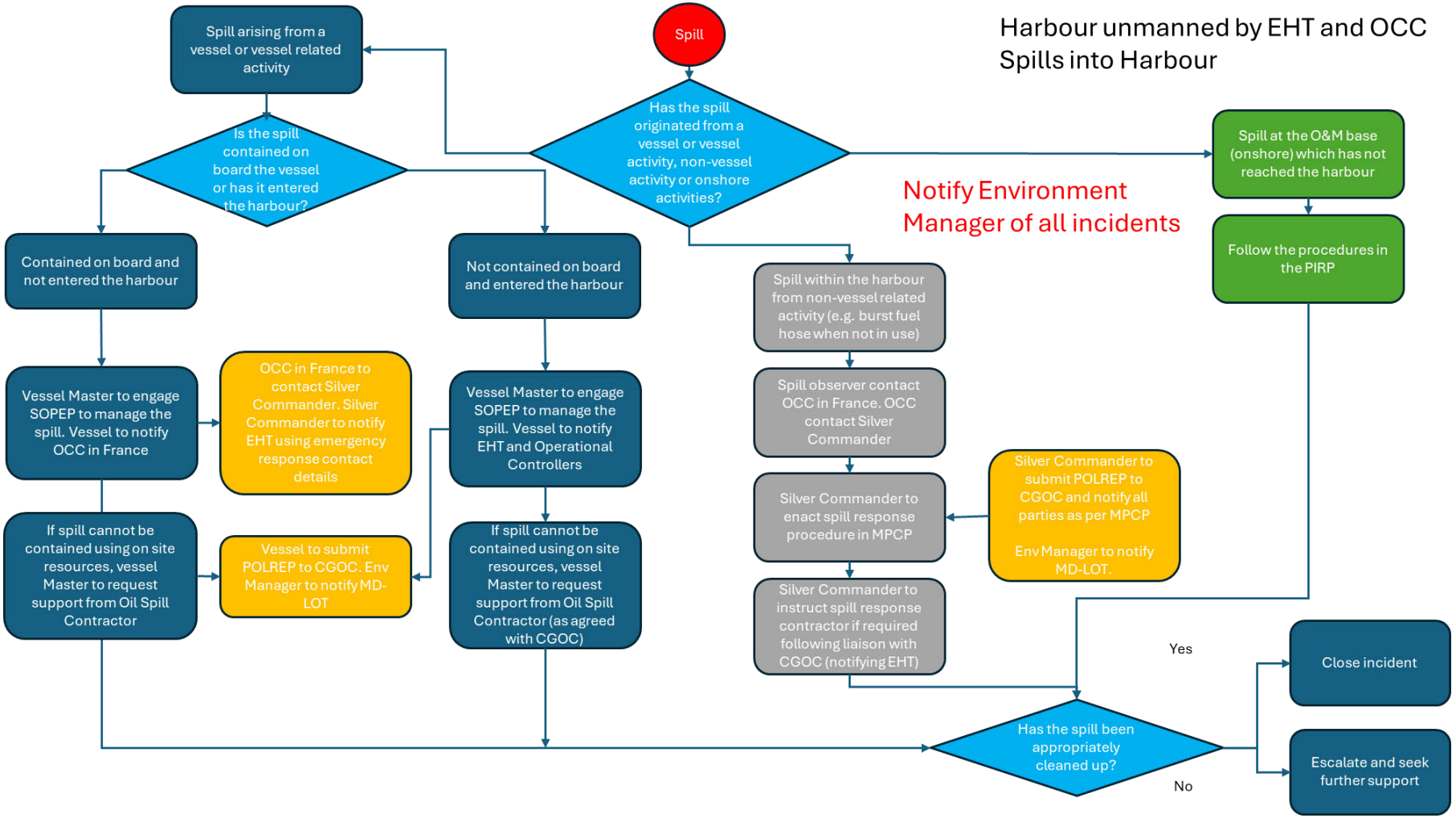

Figure 5-4 Flow of information during initial reporting of a spill occurring within Eyemouth harbour

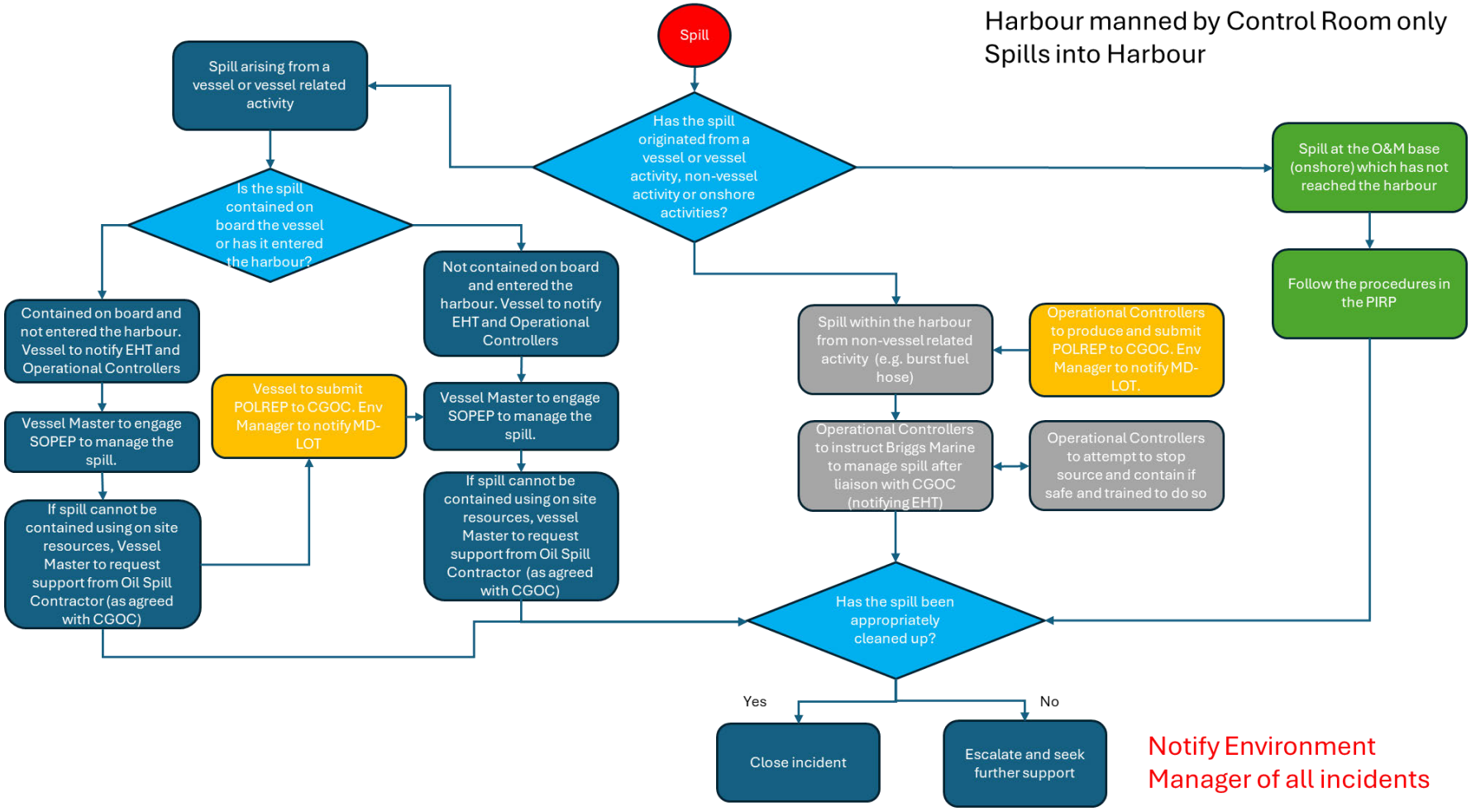

Figure 5-5 Flow of information during initial reporting of a spill occurring within Eyemouth harbour

5.3 Spill Response Strategies

70. The appropriate response strategy will depend not only on the potential limitations of each of the possible response options, but also on the type of oil and/or chemical spilled and the environmental sensitivities that are potentially threatened by the spill.

71. Table 5-2 presents the response strategies that are generally followed on the UK Continental Shelf (UKCS), according to spill Tier and oil type.

Table 5-2- General response strategies according to spill Tier and oil type

TIER & RESOURCES	RESPONSE STRATEGIES	
	NON-PERSISTENT OIL (MGO AND DIESEL)	PERSISTENT OIL (HYDRAULIC AND LUBE OILS)
Tier 1 (small spill) **On site resources**	Natural dispersion and monitoring (using support vessel). If safe to do so, agitate using standby vessel propeller ('prop-wash'), by steaming through the slick at speed.	Natural dispersion and monitoring.
Tier 2 **(medium spill)** **Spill Response Contractor and additional support where necessary**	Natural dispersion and monitoring. Chemical dispersion only if safety or environmental sensitivities are threatened, in consultation with the relevant authorities.	Consult specialist services from a spill response contractor. Continue to monitor and evaluate strategy using aerial surveillance. Boat-based dispersant application likely to be the primary response strategy – liaise with an oil spill response contractor as required. Consider mechanical recovery where possible. Mobilise shoreline containment and recovery equipment if shoreline is threatened – spill response contractor to engage additional support if necessary.
Tier 3 (large spill) **Appointment of a Tier 2/3 Spill Response Contractor**	Natural dispersion and monitoring (aerial surveillance). Chemical dispersion only if safety or environmental sensitivities are threatened, in consultation with the relevant authorities.	Contract specialist services through the appointment of a Tier 2/3 spill response contractor. Continue to monitor and evaluate strategy using aerial surveillance. Aerial dispersant application likely to be the primary response strategy – through appointment of a Tier 2/3 spill response contractor. Consider mechanical recovery where possible. Mobilise shoreline containment and recovery equipment if shoreline is threatened.

72. Prior to construction the Contractors will make provisions for oil spill response capabilities commensurate with their level of risk associated with their scope of works.

73. The majority of spills likely to occur during operation would be small spills that would fall within a Tier 1 response category comprising small volumes of light non-persistent oil types. The spill response strategies most appropriate to this oil spill risk are detailed immediately below.

5.3.1 Tier 1 Oil Spill Response Strategies

5.3.1.1 Monitor and Evaluate

74. For all spills, any oil slick should be monitored from the outset. In the case of the Project, this will typically involve monitoring by use of a vessel, either already on site, or mobilised for the specific purpose. Monitoring should be carried out by personnel that have adequate training in oil slick monitoring and evaluation.

75. The physical appearance of any oil slick should be monitored closely, in addition to changes in the oil or changes to sea state conditions, which may influence the perceived environmental impact. Dispersant application is not normally necessary for Tier 1 spills.

5.3.1.2 Natural Dispersion

76. If light non-persistent oil has been spilled, the best strategy will be to allow physical processes to disperse the oil naturally. However, this strategy should always be backed up by thorough monitoring and evaluation.

77. If natural dispersion is selected as the key response strategy, it must be demonstrated through close monitoring of the oil slick that natural dispersion is in fact taking place.

78. If a light oil has been spilled, such as diesel or hydraulic oil, the process of natural dispersion can be aided by a technique called prop-washing. This involves using a vessel to steam at speed through the oil slick, creating a wash with the vessel's propellers and wake. This procedure should only be used for small quantities of light oil; note that a heavily oiled hull may prohibit entry of a vessel to port.

79. Note that prop-washing will involve interference with the vessels hull and the oil slick itself, and may cause oil to be taken in by the vessel's sea water intakes. Awareness of explosion risk from gas clouds or risk to crew on deck must be maintained with the vessel approaching with extreme caution and with appropriate mitigation such as approaching from upwind and taking gas readings.

80. Prop-washing should only be carried out if considered safe to do so by the Vessel Master. An alternative to prop washing is to agitate the slick with vessel fire hoses.

5.3.2 Tier 2/3 Oil Spill Response Strategies

81. In most cases, any oil spills from the Project are likely to be small in nature. However, in the unlikely event of a larger oil spill, or if the spilled oil persists, then regional or national response capabilities may need to be mobilised. It is anticipated that in the event that regional or national resources are required the MCA will implement the NCP and SOSREP will take command of the incident. The NnG Control Room will maintain continued communications with those on site (such as Vessel Masters) and provide assistance to the relevant response cells established by the MCA. The Offshore Environment Manager on the project will, where necessary or requested to do so, liaise with the SEG and Science and Technical Advice Cell (STAC), as may be established through the procedures outlined in the NCP.

82. Any oil spill response resources held by the Key Contractors will be made available to the MCA throughout the duration of the incident. The following additional resources may be deployed in response to a Tier 2 or Tier 3 incident.

5.3.2.1 Dispersant Application

83. There is the option to apply dispersant by sea and/or air to aid and accelerate natural processes dispersing the oil, thus removing it from the sea surface.

84. Due to the light nature of the oils associated with the Project, dispersant application is not likely to be a viable response option. However, in the unlikely event of a large spill of more persistent oil, dispersant application may be considered if the oil is not observed to be dispersing naturally.

85. Appropriate consultation is required with regulatory bodies before initiating the use of dispersant as a response.

86. Formal approval for dispersant use from MD-LOT will be required in water depths of less than 20 metres or within 1 NM of such depths.

87. However, UK approved oil treatment products may be used without prior consultation with the licensing authority in Force Majeure situations where there is a genuine risk to human life or to the safety of an installation or vessel, such as where there is a serious danger from fire or explosion.

88. The window of opportunity to use chemical dispersants will be dependent upon various factors including the quantity of oil, sea temperature, the nature of the spill (i.e. instantaneous or continuous release), prevailing weather and environmental sensitivities.

89. A dispersant response capability would be available through the appointment of a Tier 2 and Tier 3 response contractor.

90. The Marine Management Organisation (MMO) acts on behalf of Marine Directorate for the testing and approval of dispersants and other oil treatment products which are intended for use in all UK waters. It also regularly reviews existing approvals to ensure that products remain safe (MMO, 2015).

91. The MMO has published a list of the latest oil treatment products approved for use on the UKCS (MMO, 2018).

5.3.2.2 Containment and Recovery

92. For larger spills of more persistent oil in environmentally sensitive areas, or oils that are not amenable to dispersion at sea, offshore mechanical containment and recovery may be considered as a response option. This would involve the deployment of an oil recovery vessel(s) with offshore oil containment booms and oil skimming equipment.

93. Mechanical containment and recovery capability would be available through the appointment of a Tier 2/3 response contractor.

94. Note that for the general UKCS environment, offshore containment and recovery is not normally considered to be a viable response strategy due to the rough offshore weather conditions that are often encountered.

95. However, if a large volume of more persistent oil is spilled and the oil is not dispersing naturally, and the weather conditions are amenable, offshore containment and recovery may be a useful response strategy.

5.3.3 Offshore Chemical Spill Response

96. Volumes of chemicals utilised in the Project will be relatively small. Chemical spills are considered unlikely, however in the event of a chemical spill advice would be sought from the spill response contractor and the Offshore Environment Manager will notify and seek advice from the licencing authority.

97. Under Marine Licence condition 3.1.7, all chemicals to be utilised during and major component exchange works must be approved in writing by the Licensing Authority prior to use. In addition, all chemicals to be utilised in an 'open' system must be selected from the List of Notified Chemicals assessed for use by the offshore oil and gas industry under the Offshore Chemical Regulations 2002, unless approved in writing by the Licensing Authority.

98. A brief summary of potential response techniques for different groups of chemicals (according to their behaviour on contact with water) is presented below:

- Gases and Evaporators - The release of a gas or evaporating liquid chemical has the potential to generate vapour clouds that might be toxic or form an explosive mixture with air. In an open environment, toxic vapour will usually disperse as a result of natural air movement and often the only feasible response measure will be to monitor any vapour cloud/plume as it disperses.
- Floaters - Floaters may spread across the water surface to form a slick. For spills involving relatively persistent chemicals that float, it may be possible to detect and monitor floating materials. If safe, it may be possible to consider deploying booms to contain and control the movement of substances. Skimmers and other oil response equipment may also be used to recover material from the surface. Containment and recovery may not be advisable when dealing with highly toxic or flammable chemicals. In certain circumstances, sorbent materials may be deployed to collect and concentrate a chemical spill. The assessment of these chemicals may utilise the oil spill Tier Strategy described in Section 4.3.
- Dissolvers - The ability to contain and recover dissolved chemicals in extremely limited. Providing means to accelerate the natural processes of dispersion and dilution may be the only way to respond to spills of such chemicals. Some dissolved chemical plumes may, in theory, be neutralised, flocculated, oxidised or reduced by the application of other chemicals, but chemical treatment is unlikely to be practical and would not normally be recommended.
- Sinkers - Chemicals that sink have the potential to contaminate the seabed and may persist in sediments. Any response may therefore need to consider the recovery of any chemicals and heavily contaminated sediment. In shallow waters, mechanical dredgers and pump/vacuum devices may be used to recover materials.

6 References

Marine Management Organisation. Approved oil spill treatment products. Available from: https://www.gov.uk/government/publications/approved-oil-spill-treatment-products [Accessed on 17/05/2019]

Maritime and Coastguard Agency (2014) The National Contingency Plan A Strategic Overview for Responses to Marine Pollution from Shipping and Offshore Installations. Available from: https://www.gov.uk/government/publications/national-contingency-planncp [Accessed on 17/05/0219]]

Appendix A – Spill Procedures

A1 – Spill Originating from an NnGOWL-owned Asset

The following stages will be observed in managing a marine pollution incident where the spill originates during typical day-to-day operations from an NnGOWL-owned offshore installation asset, or from an asset at the O&M base (such as the NNG owned diesel fuel tank located within Eyemouth Harbour which shall be used for refuelling CTVs).

In the event of a spill into a Harbour / Port, the Harbour / Port OSCP will take priority over this MPCP in terms of response to an incident.

ASSESS SITUATION AND COMMENCE RESPONSE
ACTIONS to be taken by Spill Observer: • Contact all personnel in the vicinity of the leak or spill and warn of the potential hazard. • If safe to do so, stay in vicinity of the leak or spill and continue observation. • If safe to do so, take any reasonable action to contain or reduce the leak or spill using minor spill kits on the asset
NOTIFICATIONS to be made by Spill Observer: • The Spill Observer shall notify the NnG Control Room / OCC France.

REPORT SPILL
ACTIONS to be taken by Spill Observer: • If safe to do so, immediately initiate actions to identify source and stop leakage at source. • Maintain safety of personnel; the installation and any vessel within 500 metres. • Initiate a chronological log of events and actions taken – maintain this log until stand down.
NOTIFICATIONS to be made by the NnG Control Room / Silver Commander if out of hours: • All marine pollution incidents must be reported as soon as is safely possible to the Coastguard Operations Centre (CGOC) Aberdeen via phone (or via Very High Frequency (VHF) radio) on 01595 692976. • The initial verbal report to CGOC Aberdeen via phone (or VHF radio) must be followed up when practicable with the submission of a **Marine Pollution Report** (POLREP) via

email to CGOC Aberdeen at aberdeen.coastguard@mcga.gov.uk. The NnG Control Room will submit the POLREP.

- Note that CGOC Aberdeen will pass the POLREP on to the MCA Counter Pollution and Response Branch, who will advise on actions to be taken, and at the same time issue it to other relevant authorities.
- The NnG Control Room will notify other operators/users in the vicinity of the spill.
- The NnG Control Room will inform the NnGOWL Offshore Environment Manager) of the incident and the other responsible NnGOWL personnel (Project Manager and Offshore HSE Advisor).
- Ensure a log keeper is assigned to monitor response operations and keep a chronological log of events and conversations.
- Notify EHT if the spill is within the harbour from an NNG owned asset

NOTIFICATIONS to be made by Harbour / Port Authority (if spill within Harbour / Port limits):

- Notify all parties as per OSCP

NOTIFICATIONS to be made by the Environment Manager:

- Notify Consents Manager and MD-LOT of the incident within 24 hours for serious incidents (and 72 hours for less serious incidents).
- Ensure appropriate spill notifications have been issued as required by this MPCP. Record times and key details of notifications.

CLASSIFY AND QUANTIFY SPILL

ACTIONS to be taken by Spill Observer:

- Confirm source and estimate quantity of oil / chemical spilled. Classify spill size and determine likely slick movement.
- Assess the ongoing nature of the spill and the possible need to mobilise additional resources.

NOTIFICATIONS to be made by NnG Control Room / Harbour or Port Authority:

- Updates on status of incident to be passed to CGOC Aberdeen (verbally and/or via submission of updates to the POLREP form) (and other response organisations as relevant).

DECIDE UPON RESPONSE STRATEGY

ACTIONS to be taken by NnG Control Room:

- NnG Control Room to liaise with contractors and vessels and request and coordinate support if required.

ACTIONS to be taken by Harbour or Port Authority (if spill within Harbour or Port limits)

- Engage OSCP and determine level of response needed
- Mobilise spill responders to site

SAMPLE OIL AND TRACK SLICK

ACTIONS to be taken by NnG Control Room:

- If no risk to personnel or installation, request a vessel to track oil spill location and take samples and photographs of spilled oil.
- Sampling of the oil spill and tracking will be undertaken by trained personnel.
- Liaise with Spill Observer and other resources as available (e.g. standby vessels) to assist with slick monitoring.

ACTIONS to be taken by Harbour or Port Authority (if spill within Harbour or Port limits):

- If safe to do so, take samples and photographs of spilled oil.

MONITOR AND EVALUATE SPILL

ACTIONS to be taken by NnG Control Room:

- Liaise with the Spill Observer to maintain slick monitoring, as required, and observe the following:
  - Overall extent and on-going nature of oil slick;
  - Direction of movement, especially noting other installations and vessels in the vicinity;
  - Proximity to environmentally sensitive areas (as set out in the EIA Report and the Addendum of Additional Information and other relevant Consent Plans;
  - Areas possibly in need of urgent clean-up measures;
  - Need for additional assistance and back-up services;
  - Progress and dispersion of slick during clean-up operations.
- Ensure that the slick is monitored until complete dispersion.

ACTIONS to be taken by Harbour or Port Authority (if spill within Harbour or Port limits)

- Ensure that spill response has been effective.
- Engage specialist spill responders if required

- Monitor until clean up completed – obtain regular briefings from clean up supervisor on progress of clean up

STAND DOWN AND PREPARE INCIDENT REPORT

ACTIONS to be taken by NnG Control Room:

- Ensure that any waste arising from a spill is managed in accordance with the procedures set out in the NnG Environmental Management Plan (EMP) and disposed of responsibly.
- Make an assessment of when to demobilise any response. Commence "stand-down" procedures as follows:
    - Ensure all local authorities, contractors, vessels and any external resource suppliers, etc. are contacted, notified of the end of the incident and stood down;
    - Prepare internal incident report and remain accessible to support other personnel in compiling their reports.

ACTIONS to be taken by Port / Harbour authority (if spill within Harbour or Port limits) :

- Dispose of arisings
- Complete spill report

A2 – Spill Originating from a vessel

The following stages will be observed in managing a marine pollution incident where the spill originates from a vessel.

In the event of a spill from a vessel into a Harbour / Port, the Harbour / Port OSCP will take priority over this MPCP in terms of response to an incident.

ASSESS SITUATION AND COMMENCE RESPONSE
ACTIONS to be taken by Spill Observer: • Contact all personnel in the vicinity of the leak or spill and warn of the potential hazard. • If safe to do so, stay in vicinity of the leak or spill and continue observation. • If safe to do so, take any reasonable action to contain or reduce the leak or spill using minor spill kits on the WTGs and OTMs.
NOTIFICATIONS to be made by Spill Observer: • The Spill Observer shall notify the Vessel Master.

REPORT SPILL
ACTIONS to be taken by Vessel Master: • Vessel Master will activate the SOPEP or equivalent vessel-specific spill plan. • If safe to do so, immediately initiate actions to identify source and stop leakage at source. • Maintain safety of Personnel; the installation / vessel and any vessel within 500 metres. • Initiate a chronological log of events and actions taken – maintain this log until stand down. • Ensure the initial assessment of the oil is accurate and all aspects are considered thoroughly. ACTION to be taken by NnG Control Room / OCC: • Ensure a log keeper is assigned to monitor response operations and keep a chronological log of events and conversations. ACTION to be taken by Environment Manager: • Remain available to provide advice to the NnG Control Room on environmental sensitivities for consideration when developing a response strategy

NOTIFICATIONS to be made by Vessel Master:

- All marine pollution incidents must be reported as soon as is safely possible to the Coastguard Operations Centre (CGOC) Aberdeen via phone (or via VHF radio) on 01224 592 334.
- The initial verbal report to CGOC Aberdeen via phone (or VHF radio) must be followed up when practicable with the submission of a Marine Pollution Report (POLREP) via email (or fax) to CGOC Aberdeen at aberdeen.coastguard@hmcg.gov.uk. The Vessel Master will submit the POLREP.
- Where a spill originates from a vessel in a harbour or port, the Vessel Master shall notify the Harbour or Port Authority.
- Note that CGOC Aberdeen will pass the POLREP on to the MCA Counter Pollution and Response Branch, who will advise on actions to be taken, and at the same time issue it to other relevant authorities.
- Vessel Master shall inform the NnG Control Room / OCC (if out of hours) of the spill.

NOTIFICATIONS to be made by NnG Control Room / OCC:

- The NnG Control Room / OCC will report the incident to the on call EDF Emergency Responder as required
- The NnG Control Room / OCC will inform the Environment Manager and the other responsible NNG personnel (Project Director, O&M Site Manager or Construction Manager, HSE Manager and Marine Operations Manager) who will assist if requested to do so by the Primary Responder.

NOTIFICATIONS to be made by the Environment Manager:

- Notify Consents Manager and MD-LOT of the incident within 24 hours for serious incidents (and 72 hours for less serious incidents).
- Ensure appropriate spill notifications have been issued as required by this MPCP. Record times and key details of notifications.

CLASSIFY AND QUANTIFY SPILL

ACTIONS to be taken by Vessel Master:

- Confirm source and estimate quantity of oil / chemical spilled. Classify spill size and determine likely slick movement.
- Assess the ongoing nature of the spill and the possible need to mobilise additional resources.

NOTIFICATIONS to be made by Vessel Master:

- Updates on status of incident to be passed to CGOC Aberdeen (verbally and/or via submission of updates to the POLREP form) (and other response organisations as relevant).

DECIDE UPON RESPONSE STRATEGY

ACTIONS to be taken by Vessel Master:

- Vessel Master to liaise with the MCA and other relevant authorities as advised by the MCA to decide upon and implement initial response strategy in line with the vessel SOPEP.
- Response strategy may alter as spill is monitored and evaluated.
- Vessel Master to liaise with the NnG Control Room who will assist with dissemination of information as required.

ACTIONS to be taken by NnG Control Room / OCC:

- NnG Control Room / OCC to liaise with Vessel Master, MCA, other installations and vessels and other relevant authorities as advised by the MCA and other Contractors, if requested, to provide support to the Primary Responder.

ACTIONS to be taken by Environment Manager:

- Remain available to provide advice to the NnG Control Room on environmental sensitivities for consideration when developing a response strategy

SAMPLE OIL AND TRACK SLICK

ACTIONS to be taken by Vessel Master:

- If no risk to personnel or installation, vessel to track oil spill location and take samples and photographs of spilled oil.
- Sampling of the oil spill and tracking will be undertaken by trained personnel.
- Liaise with Spill Observer and other resources as available (e.g. standby vessels) to assist with slick monitoring.

ACTIONS to be taken by NnG Control Room:

- Marine Coordinator to liaise with Vessel Master and other resources as available (e.g. standby vessel) to provide support with slick monitoring.

MONITOR AND EVALUATE SPILL

ACTIONS to be taken by Vessel Master:

- Monitor and evaluate spill and continue to report on spill status in line with vessel SOPEP and report on the following:

- Overall extent and on-going nature of oil slick;
- Direction of movement, especially noting other installations and vessels in the vicinity;
- Proximity to environmentally sensitive areas (as set out in the EIA Report and the Addendum of Additional Information and other relevant Consent Plans;
- Areas possibly in need of urgent clean-up measures;
- Need for additional assistance and back-up services;
- Progress and dispersion of slick during clean-up operations.

- Ensure that the slick is monitored until complete dispersion.
- In the event that on site resources are not able to adequately respond to the existing spill or if the existing spill is likely to escalate, the Vessel Master may seek to engage greater response resources as detailed within the Vessel SOPEP

ACTIONS to be taken by Environment Manager:

- Remain available to provide advice to the NnG Control Room on environmental sensitivities for consideration when developing a response strategy

STAND DOWN AND PREPARE INCIDENT REPORT

ACTIONS to be taken by Vessel Master:

- Ensure that any waste arising from a spill is managed in accordance with the procedures set out in the EMP and disposed of responsibly.
- Make an assessment of when to demobilise any response. Commence “stand-down” procedures as follows:
  - Ensure Local Authority, Contractors, vessels and any external resource suppliers, etc. are contacted, notified of the end of the incident and stood down;
  - Prepare internal incident report, provide incident log and remain accessible to support other personnel in compiling their reports

ACTIONS to be taken by NnG Control Room:

- Assist with dissemination of information to all relevant parties as required.
- Collect copies of incident logs.

ACTIONS to be taken by the O&M Operations Manager:

- Initiate the lessons learned process and review and update procedures where necessary.

Appendix B – Spill Notification Checklist

Key actions and notifications for spills originating from a vessel or OSSNnGOWL asset for the following personnel are summarised in Checklists Checklist C-1 to Checklist C- 3, respectively:

Spill Observer (first person sighting the pollution incident)
NnG Control Room
Offshore Environment Manager
Vessel Master
Silver Commander

Checklists should be referred to and completed in the event of an oil and/or chemical spill and actions and notifications checked off during incident response (following the key stages set out above). Completed checklists will be submitted to the NnG Control Room following the incident as part of the auditing process to determine lessons learned from any spill response procedures, and any amendments to procedures required to prevent the incident occurring again. Following initial notification of the spill, communications between all parties should be regular and ongoing throughout the response.

Checklist C-1: SPILL OBSERVER (first person sighting the pollution incident) – Actions & Notifications

ACTIONS BELOW SHOULD BE COMPLETED BY THE PERSON WHO OBSERVES THE SPILL	
INITIAL ACTIONS	
❒	Notify the NnG Control Room and provide details of: • Time of spill; • Possible source of spill; • Current spill location; • Oil / chemical type; • Estimation of quantity of oil / chemical spilled; and • Any other relevant actions.
❒	Contact all personnel in the vicinity of the leak or spill and warn of the potential hazard.
ONGOING ACTIONS	
❒	**If safe to do so,** stay in vicinity of the leak or spill and continue observation.
❒	**If safe to do so,** take any reasonable action to contain or reduce the leak or spill.

❒	Assess the ongoing nature of the spill and determine whether on site resources are able to adequately respond to the spill or if additional support is required and inform the NNG Control Room as soon as possible.

Checklist C- 2: NnG Control Room – Actions & Notifications

COMPLETION OF THE ACTIONS BELOW ARE THE RESPONSIBILITY OF THE NNG CONTROL ROOM	
INITIAL ACTIONS	
❒	Receive report on spill from Spill Observer and take charge of the situation.
❒	If safe to do so, immediately initiate actions to assist with identifying the source and stop leakage at source.
❒	Maintain safety of: • Personnel; • The installation; • Any vessel within 500 metres.
❒	Notify CGOC Aberdeen of spill via telephone (or Harbour / Port Authority if spill in harbour/port).
❒	Activate the MPCP.
❒	Submit completed POLREP form to CGOC Aberdeen via email or fax if spill from an NNG owned asset / ensure Vessel Master has submitted POLREP if from vessel.
❒	On notification from the Spill Observer, record all details of the incident and all incoming information and conversations, maintaining a chronological log of events, including issue of notifications.
❒	Notify the O&M Manager, Environment Manager and H&S advisor of the spill.
❒	Maintain contact with the Spill Observer. Ensure the slick is being observed, and determine likely slick movement (towards other installations/environmentally sensitive areas/coastal regions).
❒	Assist the Spill Observer in arranging for photographs and samples to be taken of the slick.
❒	For spills from NNG owned assets, seek immediate advice from oil spill response contractor and request spill response contractor to attend site as required.
❒	Record incident on EDF incident reporting system (Sphera) when safe to do so.
ONGOING ACTIONS	
❒	Work with the Spill Observer and to reduce or prevent further oil / chemical leakage without endangering the safety of personnel.

❒	Assess the ongoing nature of the spill and the possible need to mobilise additional resources. If spill from an NNG owned asset, seek advice from an oil spill response contractor as required on the following: • Overall extent and on-going nature of oil slick; • Direction of movement, especially noting other installations and vessels in the vicinity; • Proximity to environmentally sensitive areas; • Areas possibly in need of urgent clean-up measures; • Need for additional assistance and back-up services; • Progress and dispersion of slick during clean-up operations.
❒	Ensure a log keeper is assigned and continues to maintain a chronological log of response procedures, events and conversations.
❒	Liaise with and co-operate with statutory bodies as necessary in determining and managing spill response.
❒	Ensure all other installations and vessels in the vicinity have been informed of the spill if deemed necessary.
❒	If no risk to personnel or installation, request vessel to track oil spill location and take samples of spilled oil. Ensure spill is tracked until complete dispersion.
CLOSE-OUT ACTIONS	
❒	If spill from an NNG owned asset, make an assessment of when to demobilise any response. Commence "stand-down" procedures in liaison with the NnG Control Room as follows: Ensure all local authorities, contractors, vessels and any external resource suppliers, etc. are contacted, notified of the end of the incident and stood down; Prepare internal incident report and remain accessible to support personnel in compiling their reports.
❒	If spill from a vessel, assist Vessel Master with 'stand-down' procedures
❒	Collect copies of all Incident Logs available.
❒	Ensure that a "lessons identified" profile is available quickly so that remedial action and the possible upgrading of procedures can take place.

Checklist C- 3: Environment Manager – Actions & Notifications.

COMPLETION OF THE ACTIONS BELOW IS THE RESPONSIBILITY OF THE ENVIRONMENT MANAGER	
INITIAL ACTIONS	
❒	On notification from the NnG Control Room / on-call Emergency Responder, notify the NnG Consents Team at the earliest opportunity and, in any event, within 24 hours / ensure consents team is already aware via on call Emergency responder.
❒	On notification from the NnG Control Room / on-call Emergency Responder, notify the Licensing Authority within 24 hours for serious incidents (and 72 hours for less serious incidents) / ensure Licensing Authority already notified via on call Emergency Responder.
❒	Ensure appropriate spill notifications have been issued as required by this MPCP. Record times and key details of notifications.
❒	Provide advice on environmental sensitivities and assistance to the NnG Control Room and primary responder, if required.
ONGOING ACTIONS	
❒	Provide advice to the NnG Control Room as required.
CLOSE-OUT ACTIONS	
❒	Remain accessible to support personnel in compiling their reports.
❒	Work with the NnG Project Team to ensure that a “lessons identified” profile is available quickly so that remedial action and the possible upgrading of procedures can take place (and update/amend this MPCP where necessary).
❒	Following the ‘lessons learned’ process issue close-out note to MD-LOT setting out remedial action and amendments and updates to the MPCP and procedures if required.

Checklist C- 4: Vessel Master – Actions & Notifications.

ACTIONS BELOW SHOULD BE COMPLETED BY THE VESSEL MASTER	
INITIAL ACTIONS	
❒	Receive report on spill from Spill Observer and take charge of the situation.
❒	If safe to do so, immediately initiate actions to identify source and stop leakage at source.
❒	Maintain safety of: • Personnel; • The installation / vessel; • Any vessel within 500 metres.
❒	Notify CGOC Aberdeen of spill via telephone
❒	Notify Harbour / Port Authority if spill in harbour/port
❒	Activate the SOPEP, or equivalent vessel-specific spill plan.
❒	Inform the NnG Control Room or OCC in France (if out of hours).
❒	Submit completed POLREP form to CGOC Aberdeen via email or fax
❒	Initiate a chronological log of events and actions taken – maintain this log until stand down
ONGOING ACTIONS	
❒	Confirm source and estimate quantity of oil / chemical spilled. Classify spill size and determine likely slick movement. Pass information to NnG Control Room and EHT (if within Harbour).
❒	Assess the ongoing nature of the spill and the possible need to mobilise additional resources. Seek advice from an Oil Spill Response Contractor as required on the following: • Overall extent and on-going nature of oil slick; • Direction of movement, especially noting other installations and vessels in the vicinity; • Proximity to environmentally sensitive areas; • Areas possibly in need of urgent clean-up measures; • Need for additional assistance and back-up services; and • Progress and dispersion of slick during clean-up operations. In the event that on site resources are not able to adequately respond to the existing spill or if the existing spill is likely to escalate inform the NnG Control Room / OCC in France as soon as practicable who will support the mobilisation of additional resources and assist with seeking advice as required.

❒	If no risk to personnel, request vessel to track oil spill location and take samples and photographs of spilled oil.
❒	Take steps to reduce or prevent further leakage of the oil/ chemical.
❒	In the event that the spill escalates to a Tier 2 or Tier 3 spill (or a Tier 1 response is not available), advice will be sought from an Oil Spill Response Contractor who may choose to sample a slick using vessel based or aerial based observations as required.
❒	If spill occurred within the Harbour / Port, liaise as required with the Harbour / Port authority and provide all applicable information as requested.
❒	Ensure that any waste arising from a spill is managed in accordance with the procedures set out in the Environmental Management Plan and disposed of responsibly.
❒	At the end of the incident, input to report of the incident and any lessons learnt.

Checklist C- 5: EDF on call emergency responder – Actions & Notifications.

COMPLETION OF THE ACTIONS BELOW IS THE RESPONSIBILITY OF THE EDF ON CALL EMERGENCY RESPONDER (FOR SPILLS FROM NNG OWNED ASSETS DURING DAY TO DAY OPERATIONS OR FROM VESSELS OR VESSEL RELATED ACTIVITY OUTSIDE OF MANNED HOURS)	
INITIAL ACTIONS	
❒	Receive notification of spill from OCC in France.
❒	Maintain chronological log of incident including events and actions taken
❒	Notify the NNG Consents Team at the earliest opportunity and, in any event, within 24 hours.
❒	Notify MD-LOT within 24 hours for serious incidents (and 72 hours for less serious incidents).
❒	Notify the NNG Operations Manager, Control Room, Environment Manager and the H&S advisor
❒	Notify the Port / Harbour authority if spill within Port / Harbour boundaries
❒	Where possible, contact the original spill observer and request an update on the spill.
❒	If spill from NNG asset, complete POLREP based on the information provided by OCC and submit to CGOC by email.
❒	If spill from NNG asset, liaise with NNG spill response contractor (Briggs Marine) to determine appropriate course of action and instruct spill responder to attend site as required.
❒	If spill from vessel or vessel related activity, ensure Vessel Master has submitted POLREP to CGOC.
❒	If spill from vessel or vessel related activity, liaise with Vessel Master to determine clean up response. Should Vessel Master not be responding sufficiently quickly, engage NNG spill response contractor as backup.
❒	Record the incident at the earliest opportunity when safe to do so on EDF's Sphera incident reporting system.
ONGOING ACTIONS	
❒	Stay in contact with NNG spill response contactor or Vessel Master (if spill from vessel or vessel related activity) to determine if spill has been managed.
❒	Provide regular email updates to the NNG Control Room, Operations Manager, Environment Manager, H&S Advisor, GCOC (and Port / Harbour authority if spill within Port / Harbour limits).
❒	Ensure spill response contractor has taken samples of the spilled product, **only if safe to do so**.
❒	Escalate incident to senior parties within Emergency Response team if required

CLOSE-OUT ACTIONS	
❒	Liaise with spill response contractor / Vessel Master to understand when to demobilise any response. Ensure all NNG personnel (i.e. Operations Manager, Control Room, Environment Manager, H&S advisor), local authorities, contractors, vessels and any external resource suppliers, etc. are contacted, notified of the end of the incident and stood down.
❒	Collect copies of all Incident Logs available.

Appendix C – Response Forms

C1 – Oil Spill Assessment Checklist

To be referred to by the Primary Responder. This checklist ensures that the initial assessment of the oil spill is accurate and all aspects likely to affect the spill classification such as quantity, oil type and likely fate of the spilled oil, are considered thoroughly.

OIL SPILL ASSESSMENT CHECKLIST	
This checklist is designed to assist those personnel who have the primary responsibility of assessing the oil spill incident. These personnel are likely to be: The Marine Co-ordinator; or The Vessel Master.	
STEP	**GUIDANCE**
Determine Essential Details	Location of pollution incident; Source of spill; Oil type; Extent of oil spill; Time of incident; Potential hazardous circumstances; Any other relevant information (particularly: is spill contained or ongoing?).
Assess Safety Hazards	Until otherwise established, assume oil spill is giving off potentially dangerous VOCs (i.e. gas or hydrocarbon vapours). ELIMINATE IGNITION SOURCES Approach Oil Spill from upwind to reduce effects of vapours. APPROACH ONLY IF SAFE TO DO SO!
Determine Oil Spill Source	If source unknown, investigate with care. Instigate actions to stop spillage at source. IF SAFE TO DO SO!
Estimate quantity of Oil released if exact amount unknown	To be conducted by trained personnel
Predict oil fate; determine direction and speed of oil	To be conducted by trained personnel

movement in addition to weathering characteristics	
Assess prevailing and if possible future weather conditions	Determine: Wind speed and direction; State of tide and current speed; Sea state.

C2 - Marine Pollution Incident Report - CG77 POLREP

An incident report form, CG77 POLREP, is to be completed by the Primary Responder – specifically either the Vessel Master or NnG Control Room/OCC in France as detailed in Section 5 in the event of a spill and issued to CGOC Aberdeen:

CGOC Aberdeen	Tel: 01224 592334	aberdeen.coastguard@mcga.gov.uk

The Vessel Master or NnG Control Room/OCC in France should not delay sending a report. If certain information is lacking, this may be provided at a later date.

Where a spill arises from a vessel or vessel related activity the Vessel Master will provide updates to CGOC and to the NnG Control Room throughout any pollution incident verbally and/or via updates to the POLREP in line with the SOPEP. Where a spill arises from an NNG owned installation the NnG Control Room / OCC in France will provide updates to the CGOC verbally and through submission of a POLREP.

CG77 - POLREP

INITIAL INCIDENT REPORT

A. Classification: -	
B. Date/Time/Observer: -	
C. Position and Extent of Pollution: -	
D. Tide: - **Wind: -**	
E. Weather: -	
F. Characteristics of Pollution: -	
G. Source and Cause of Pollution: -	
H. Details of Vessels in area: -	
I. Not Used	
J. Any Photographs or Samples: -	
K. Remedial Action: -	
L. Forecast of oil movement: -	
M. Names of others informed: -	
N. Other relevant information: -	

99. Guidance is given below on the type of information to be recorded in a CG77 POLREP.

A. Classification: - Select – Doubtful, Probable, ConfirmedSelect – Doubtful, Probable, ConfirmedSelect – Doubtful, Probable, ConfirmedSelect – Doubtful, Probable, ConfirmedSelect – Doubtful, Probable, ConfirmedSelect – Doubtful, Probable, ConfirmedSelect – Doubtful, Probable, ConfirmedSelect – Doubtful, Probable, Confirmed

B. Date/Time/Observer: - Enter date/time of obs. – state UTC or local time / Enter name or title of observer

C. Position and Extent of Pollution: - by latitude and longitude if possible, state range and bearing from some prominent landmark and estimated amount of pollution, e.g. size of polluted area; number of tonnes of spilled oil; or number of containers, drums etc. lost. When appropriate, give position of observer relative to pollution

D. Tide: - Speed/Direction **Wind: -** Speed/Direction

E. Weather: - Conditions and Sea State

F. Characteristics of Pollution: - give type of pollution, e.g. oil crude or otherwise; packaged or bulk chemicals; garbage. For chemicals, give proper name or United Nations Number, if known. For all, give appearance e.g. liquid; floating solid; liquid oil; semi-liquid sludge; tarry lumps; weathered oil; discoloration of sea; visible vapour etc.

G. Source and Cause of Pollution: - from vessels or other undertaking. If from a vessel, say whether as a result of apparent deliberate discharge or a casualty. If the latter, give a brief description. Where possible, give name, type, size, nationality and Port of Registry of polluting vessel. If vessel is proceeding on its way, give course, speed and destination, if known.

H. Details of Vessels in area: - to be given if the polluter cannot be identified and the spill is considered to be of recent origin.

I. Not Used

J. Any Photographs or Samples: - Give details of any photographs or samples taken.

K. Remedial Action: - Give details of any actions taken, or intended, to deal with spillage.

L. Forecast: - Likely effects of pollution – e.g. arrival on shore and estimated timings.

M. Names: - of others informed apart from addressees to this message.

N. Other relevant information: - e.g. Names of other witnesses or references to other instances of pollution which may point to a source.

C3 - Oil Spill Incident Log Sheet

To be completed by all key personnel involved in the oil spill response, including the NnG Control Room. As a minimum, key decisions and events, communications, and deployment of resources should be recorded.

Name:	
Team:	
Role:	
Location:	
DATE / TIME	**COMMUNICATION / ACTION TAKEN / NOTES**

C4 - Incident Briefing Checklist

To be completed by the NnG Control Room / OCC in France / Vessel Master as appropriate when briefing other members of staff.

BRIEFING CHECKLIST	
This checklist is designed to facilitate an effective response team briefing and should be used by the NnG Control Room / OCC in France / Vessel Master when briefing other members of staff.	
STEP	**NOTES**
Specify Safety Hazards	
Extent of Problem **Size of spillage, type of oil, source**	
Slick Trajectory **Tide and Wind conditions**	
Response Actions **Strategies to consider**	
Resource Mobilisation **Equipment and personnel**	
Planning Cycle **Meetings schedule**	
Additional Information **Communications, Waste Disposal, Weather Forecast**	

C5 - Dispersant Application

Prior to dispersant application, the information in the form below is required to be submitted to Marine Directorate, unless there are force majeure circumstances where there is a genuine risk to human life or to the safety of an installation or vessel. Under such circumstances, dispersants may be used without prior agreement.

This information should be completed by the Primary Responder (Vessel Master or NnG Control Room) following discussion with an external oil spill response organisation.

MARINE DIRECTORATE EMAIL: MD.SPILLRESPONSE@GOV.SCOTAND 07770 733423	
INSTALLATION / SPILL INFORMATION	
Name and contact details for person requesting approval / advice:	
Name of Responsible Person:	
Name of site:	
Location of spill (in degrees of Latitude and Longitude):	
Oil type or description of appearance if not known. If crude oil, state type:	
Volume of oil spilled – preferably in tonnes:	
Source of oil spill:	
Potential for further spillage:	
Description of slick – including dimensions and colour:	
DISPERSANT USE INFORMATION	
Dispersant type(s):	
Dispersant proprietary name(s):	
Marine Scotland approval status:	
Quantity / quantities proposed for use:	
Method(s) of application:	
Have efficacy tests been undertaken to confirm hydrocarbons are amenable to treatment (e.g. bottle tests / test sprays)? If so, what were the results?	

Location(s) of application:	
Water depth (m) in application area(s):	
Minimum distance (km) from nearest shoreline:	
Minimum distance (km) from nearest median line:	
Environmental sensitivities relevant to location(s) of application (including any protected sites within 20 km):	
Prevailing weather conditions: **Wind speed** **Wind direction** **Wave height**	
Other methods of response being applied or considered and assistance being sought (e.g. oil spill response contractor):	

The information in the form below is required to be submitted to Marine Scotland after the use of dispersant (adapted from DECC, 2015[1]).

MARINE SCOTLAND EMAIL: MS.SPILLRESPONSE@SCOTLAND.GSI.GOV.UK AND SPILLRESPONSE@MARLAB.AC.UK; FAX NUMBER: 01224 295524	
INSTALLATION / SPILL INFORMATION	
Name of operator:	
Name of site:	
Location (in degrees of Latitude and Longitude):	
DISPERSANT USE INFORMATION	
Date:	
Dispersant proprietary name(s):	
Quantity / quantities used:	

[1] Department of Energy and Climate Change (DECC) (2015) Guidance Notes for Preparing Oil Pollution Emergency Plans, for Oil & Gas Installations and Relevant Oil Handling Facilities, January 2015

Method(s) of application:	
Location(s) of application:	
Prevailing weather conditions at time of use: **Wind speed** **Wind direction** **Wave height**	
Reason for use:	
Was approval or advice obtained prior to use?	
Estimate quantity of oil treated:	
Comments on effectiveness of treatment:	
Other relevant observations / comments on use:	
Name and contact details for person reporting use:	
Date and time report was completed:	

Appendix D – Contacts Directory

ORGANISATION	CONTACT NAME	TELEPHONE (OFFICE HOURS)	FAX	24 HR. TELEPHONE	MOBILE / PAGER / EMAIL
NnGOWL					
NnG Control Room	NnG Control Room	0131 3770060			nngcontrolroom@edf-re.uk
O&M Manager	Chris Woods	[Redacted]			[Redacted]
Production Manager	Ross Aitchison	[Redacted]			[Redacted]
Offshore HSE Manager	Paul Franklin	[Redacted]			[Redacted]
Asset Manager	Thomas Helfer	[Redacted]			[Redacted]
Offshore HSE Advisor	Lee Barker	[Redacted]			[Redacted]
EDF 24 HR Emergency Reporting Line	NnG Control Room/OCC France	0131 3770060/0207 0992099			
Offshore Environment Manager	Steven Rayner	[Redacted]			[Redacted]
Operational Control Centre	NnG Control Room	0131 3770060			nngcontrolroom@edf-re.uk
NnGOWL CONTRACTORS					
SGRE site manager	Jon Cowan	[Redacted]			[Redacted]
OIL SPILL RESPONSE ADVISORS					
Briggs Marine	This service will be requested by the			0800 374 348	

ORGANISATION	CONTACT NAME	TELEPHONE (OFFICE HOURS)	FAX	24 HR. TELEPHONE	MOBILE / PAGER / EMAIL
	Client via call to the Contractor's National Spill Response 24 Hour Emergency Response				
MCA AND COASTGUARD CENTRES					
CGOC Aberdeen	Duty Officer	01224 592334	TBC	01224 592334	aberdeen,coastguard@hmcg.gov.uk
Maritime & Coastguard Agency (MCA)	Admin Operations Advice Scientific Advice Head of Counter Pollution & Response Branch	02380 329483 02380 329407 02380 329411 02380 329525	02380 329485 02380 329446 (MEOR)	TBC	If contact with MCA outside office hours is needed, then the relevant local coastguard office should be contacted.
Royal National Lifeboat Association (RNLI)	-				
MARINE DIRECTORATE					
Marine Directorate	Duty Officer	[Redacted]	01224 295511	[Redacted]	[Redacted] MS.SpillResponse@gov.scot
DEPARTMENT OF BUSINESS ENERGY AND INDUSTRIAL STRATEGY					
BEIS	Duty Officer				
PORTS					
Eyemouth Harbour Trust	Brendan Bates –	018907 50223		[Redacted]	harbourmaster@eyemo

ORGANISATION	CONTACT NAME	TELEPHONE (OFFICE HOURS)	FAX	24 HR. TELEPHONE	MOBILE / PAGER / EMAIL
	Charles Fisher – Deputy Harbour Master				uth-harbour.co.uk
ENVIRONMENTAL AGENCIES AND LOCAL AUTHORITIES					
Scottish Environmental Protection Agency (SEPA)	Pollution hotline	-	-	0800 80 70 60	-
NatrueScot (previously SNH)	National Oil Spill Officer	0131 3162610	0131 3162690		[Redacted]
Add local authority emergency response / duty officers numbers					
OTHER INSTALLATIONS					
Inch Cape Offshore Wind Farm operators					
Seagreen Wind Energy					
OTHER CONTACTS (FOR POSSIBLE INFORMATION AND ADVICE)					
International Tanker Owners Pollution Federation (ITOPF)	Main	0207 566 6999	-	[Redacted]	-
Royal Society for the Protection of Birds (RSPB)	North Scotland Regional Office, Inverness	01463 715000	-	-	-