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UNITED KINGDOM

LBA CCS Project

Marine Pollution Contingency Plan

LBCCS-MPCP-001 — CML2365 Condition 3.25.1(iii)

00	Construction	DRAFT — For Review	A. Sneddon			18/06/2026
REV	PROJECT PHASE	REASON FOR ISSUE	PREPARED	VERIFIED	APPROVED	DATE

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CHANGE TRACKING/REVISION RECORD

Rev	Date	Description of Revision
00	18/06/2026	First issue for NRW review to discharge CML2365 Condition 3.25.1(iii). Key inputs confirmed: Heerema DCV Balder SOPEP (330-100-0003 Rev B) and Boskalis Ndurance SOPEP (FMO-805q Rev 05) both reviewed and confirmed MARPOL Annex I Regulation 37 compliant; vessel hydrocarbon inventories confirmed for both vessels and assessed against the 1,097.5 m ³ OSCAR modelled worst-case bound (Valaris Norway, Lennox, TOOPEP H-000-LZ-001 Rev 5). DCV Balder fuel oil figures presented as ranges/indicative values at HMC's request, consistent with HMC's conditional acceptance of inclusion of fuel inventory data in this MPCP (Frank de Groot, 18 June 2026).

HOLDS RECORDS

HOLD No	Description of HOLD
HOLD 1	WP Deputies 1 and 2 (Section 7, Table 7.1) to be identified before offshore works commence (confirmed by Tito Dimitri, LBCCS WP Project Manager, 11 June 2026).
HOLD 2	Vessel Master — CLV bridge contact (Table 7.1) — CLOSED. Confirmed by Boskalis Subsea Cables (Paul Oliver, 19 June 2026): Bridge ndurance-bridge@boskalis.com / Satellite +31 78 808 0920.

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**SPILL DETECTED — QUICK RESPONSE - LBCCS MPCP****Step 1
Spill detected**

Oil sheen ·
chemical release ·
subsea tool ·
bunkering

**Immediately —
all tiers****STOP
CONTAIN
NOTIFY**

- > Stop source if safe to do so
- > Boom / absorbents downwind & downtide
- > Vessel Master activates SOPEP
- > No dispersant without NRW approval

**Assess
Volume &
location?**

Estimate volume. Note lat/long or KP. Within 10 km of Dee Estuary or Gronant beach?

**TIER 1 — Minor
Vessel-contained**

- > Master commands · SOPEP activated
- > Notify Paul Gibson, Willem de Wit and Paul Oliver (BSC) as soon as practicable
- > Notify Dimitri Tito (WP PM) +44 (0) 7717715342 within 30 min
- > Notify NRW — Welsh waters (Cond. 3.14): 0300 065 3000
- > PON1 to OPRED — all waters, no threshold

**TIER 2 — Moderate
External support needed**

All Tier 1 actions, plus:

- > WP PM escalates to LBCCS PMT
- > Mobilise OSRL or equivalent
- > MCA / HM Coastguard notification

**TIER 3 — Major
National response**

All Tier 1 & 2 actions, plus:

- > LBCCS requests SOSREP via MCA
- > Boskalis HQ Papendrecht 24/7
- > Heerema Crewing 24/7: +31 71 579 9888 / crewingbalder@hmc-heerema.com
- > ROGI form to OMAR@hse.gov.uk

Notify — all tiers**NRW — Welsh waters only**

- > 0300 065 3000 — call immediately — Welsh waters
- > English waters: OPRED PON1 only (no NRW)
- > Cross-boundary trajectory: notify both
- > Written: ICC@naturalresourceswales.gov.uk

Notify — all tiers**WP PM → LBCCS PMT**

- > WP PM (Dimitri Tito) is first internal contact
- > PMT + HSE Manager notified without delay
- > Written report within 3 working days

Report — all tiers**PON1 to OPRED — all waters**

- > Welsh and English waters — applies in both
- > No minimum volume — minor sheens included
- > Via UK Energy Portal (IRS) — LBCCS submits

Dropped object**PON2 to OPRED**

- > Materials overboard — NRW per Cond. 3.7

**⚠ Heightened trigger
Dee Estuary proximity**

Any spill west of 3°25'W at West Hoyle Spit: auto Tier 2 regardless of volume. Flood tide transit to Dee Estuary SAC: 1–3 hrs.

**⚠ May–August
Gronant little tern colony**

53.338°N, 3.425°W. Any sheen toward Gronant/Talacre: Tier 2 + notify RSPB Warden 01745 562988.

**Bathing season
15 May – 30 Sep**

No discharge affecting bathing water quality. Monitor Gronant, Prestatyn, Rhyl, West Kirby.

EMERGENCY CONTACTS

NRW Pollution Hotline (24hr)

0300 065 3000

MRCC Liverpool — VHF Ch 16

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HSE Construction

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RSPB Gronant Warden (terns)

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Paul Oliver

Project SHE-Q Manager — BSC

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Menno Kroese

VP Operations — Heerema

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OSRL · Port HMs: confirm pre-mobilisation. Heerema Crewing 24/7: +31 71 579 9888 confirmed.

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1. INTRODUCTION AND SCOPE

1.1 Purpose

This Marine Pollution Contingency Plan (MPCP) sets out the framework for preventing, responding to, and reporting marine pollution incidents associated with construction activities under Marine Licence CML2365. It reflects the recognised duty of responsible offshore operators to plan effectively for accidental spills — protecting people, the marine environment, and sensitive ecological receptors — irrespective of regulatory requirements.

The plan covers the full scope of CML2365 construction activities and sets out task-specific and site-specific detail including: a risk assessment of plausible spill scenarios; immediate response procedures for vessel masters and the project team; a directory of emergency contacts; regulatory reporting forms and pathways; and a sensitive areas plan identifying receptors requiring heightened protection.

1.2 Legal Basis

This MPCP is a conditioned mitigation measure under CML2365. NRW have confirmed that any conclusion of no adverse effect or no damage to the marine environment under the following legislation is predicated upon the effectiveness of this Plan:

- Conservation of Habitats and Species Regulations 2017
- Conservation of Offshore Marine Habitats and Species Regulations 2017
- Environment (Wales) Act 2016
- Water Environment (Water Framework Directive) (England and Wales) Regulations 2017
- Marine Works (Environmental Impact Assessment) Regulations 2007

This Plan must therefore be on-site and accessible to all relevant personnel prior to commencement of any licensable activity.

1.3 Relationship to Other Documents

This MPCP sits above contractor-level pollution response documents and governs the project-level response framework. It does not replace the following documents but cross-references them:

- Boskalis Subsea Cables Shipboard Oil Pollution Emergency Plan (SOPEP) — vessel-level response
- Heerema Marine Contractors (hereafter “Heerema”) SOPEP — vessel-level response
- LBCCS Project Emergency Response Plan (ERP)
- CEMP #3, Section 4.3 — incorporated and superseded by this Plan for marine pollution provisions
- Liverpool Bay CCS TOOPEP (Temporary Operations Oil Pollution Emergency Plan) — OPRED regime, adapted from March 2024 Well Abandonment TOOPEP
- Contractor-specific site Emergency Response Plans (ERPs)

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1.4 Scope of Activities

This MPCP covers all construction activities authorised under CML2365, including:

- Cable lay operations (Boskalis Subsea Cables CLV)
- Platform topsides heavy lift operations (Heerema heavy lift vessel)
- Seabed preparation works at West Hoyle Spit (dredging and mega-ripple levelling)
- Pipeline spool installation and tie-in
- Survey and inspection vessel operations
- Remotely Operated Vehicle (ROV) operations

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2. ACTIVITY AND SUBSTANCE RISK REGISTER

2.1 Overview

Table 2.1 below provides a task-specific and site-specific risk register for activities under CML2365 that present a plausible pathway to marine pollution. For each activity, the principal substance at risk, maximum volume, credible spill scenario, and receptor proximity are identified. Mitigation measures reducing or eliminating risks are specified alongside each scenario.

Inventory volumes for the primary construction vessels (DCV Balder and Ndurance CLV) have been confirmed from contractor returns. Survey and CTV vessel inventories have not been separately confirmed but are conservatively bounded by the CLV figures (2,263 m³ nameplate, ~500 m³ operational).

Table 2.1: Activity and Substance Risk Register.

Activity Vessel /	Substance	Max Volume at Risk	Worst-Case to Sea	Spill Scenario	Nearest Sensitive Receptor	Tier	Primary Mitigation
Cable Lay Vessel (CLV) — bunkering / fuel transfer	Marine Diesel Oil / MGO	2,263 m ³ max; ~500 m ³ operational (Ndurance, LBCCS-MPCP-INV-BOS-001)	~500 m ³ (operational quantity within OSCAR 1,097.5 m ³ bound)	Fuel tank breach following allision or collision; bunkering conducted in port only (confirmed Boskalis, 11 June 2026)	West Hoyle Spit / Dee Estuary SAC (~3–8 km inshore)	1–2	SOPEP activation; immediate notification to WP PM (Dimitri Tito); containment within vessel spill kit inventory. At-sea bunkering not applicable — CLV fleet bunkered in port only (confirmed BSC, 11 June 2026).
Cable Lay Vessel — hydraulic systems	Hydraulic fluid (mineral oil or synthetic)	Vessel systems: 1,500 L max; subsea HPU: 500 L max (Ndurance, LBCCS-MPCP-INV-BOS-001)	~1,150 L (750 L vessel + 400 L subsea HPU operational quantities)	Hydraulic line fracture; ROV umbilical parting	Liverpool Bay MCZ / SPA surface waters	1	Immediate isolation of hydraulic circuit; sorbent boom deployment; sea discharge volume logged



Activity / Vessel	Substance	Max Volume at Risk	Worst-Case to Sea	Spill Scenario	Nearest Sensitive Receptor	Tier	Primary Mitigation
Heavy Lift Vessel (Heerema) — bunkering / fuel	Marine Gas Oil (MGO) — no HFO carried. Also: hydraulic oil (16,500 L max), lubricating oil (40,000 L max), paint/solvent stock (9,500 L operational — field joint painting in scope)	MGO: 5,500–6,000 m ³ nameplate (range); operational range ~1,000–4,700 m ³ ; credible worst-case single-breach 166.3 m ³ (SB settling tank, above waterline). Hydraulic oil: 16,500 L. Lube oil: 40,000 L. (LBCCS-MPCP-INV-HMC-001 / Frank de Groot emails Jun 2026)	166.3 m ³ (SB FO settling tank, main deck, above waterline — largest single credible breach)	Fuel transfer spill; tank damage during lift operations	Liverpool Bay SPA surface waters; Hamilton / Lennox platform areas	2	SOPEP; pre-positioned boom; WP PM notification; OPRED PON1 reporting



Activity Vessel /	Substance	Max Volume at Risk	Worst-Case to Sea	Spill Scenario	Nearest Sensitive Receptor	Tier	Primary Mitigation
Seabed Preparation (dredge/rock placement vessel, Boskalis)	Marine Diesel Oil	Typically 10–50 m ³ per run (indicative)	~50 m ³ per run (single fracout event)	Fuel tank breach or bunkering incident at WHS work area	Dee Estuary SAC / Ramsar boundary (~3 km); Hilbre Island Ramsar (~5 km)	1–2	SOPEP; boom deployment downwind/downtide; WHS proximity to intertidal features requires rapid Tier escalation assessment
Survey / CTV Vessels	Marine Diesel Oil	~50 m ³ (CBT-2400 trenching tool HPU system, based on May 2026 incident data)	~50 m ³ (HPU reservoir, full loss)	Minor fuel spill during refuelling or collision damage	Variable — dependent on vessel location at time of incident	1	Vessel SOPEP; onboard spill kit; immediate reporting to WP PM (Dimitri Tito)
All Vessels — lubricants, bilge water, sewage	Lube oil, bilge, greywater, sewage	N/A (managed as ongoing)	Minimal if MARPOL compliant	MARPOL non-compliance ; separator failure	Liverpool Bay generally	1	MARPOL Annex I/IV/V compliance; oil-water separators; zero-discharge policy in Welsh Waters

Inventory data confirmed from LBCCS-MPCP-INV-BOS-001 (Ndurance, 11 June 2026) and LBCCS-MPCP-INV-HMC-001 / Frank de Groot correspondence (DCV Balder, June 2026). Survey and CTV vessel inventories not separately confirmed; bounded by CLV figures..

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3. WORST-CASE SPILL SCENARIO AND TRAJECTORY ASSESSMENT

3.1 Identification of Worst-Case Scenario

The worst-case credible spill scenario for LBCCS construction activities is an instantaneous loss of a substantial volume of marine diesel / Marine Gas Oil (MGO) from a construction vessel operating in the Liverpool Bay area, arising from structural failure, collision damage, or a bunkering incident. This approach is consistent with that adopted for OPRED regulatory purposes under the Offshore Installations (Offshore Safety Directive) (Safety Case etc.) Regulations 2015.

For the purposes of trajectory modelling, the worst-case source term is established by reference to existing OSCAR modelling conducted for the Valaris Norway jack-up rig, which was formally modelled at the Lennox platform location for LBCCS regulatory purposes. The Valaris Norway is not a CML2365 construction vessel; it is referenced here solely because its modelled diesel inventory (1,097.5 m³) provides a well-characterised, conservatively large source term for a diesel release within the Liverpool Bay project area. This modelling serves as a bounding analogue for the CML2365 construction fleet. Although construction vessels are mobile and may be operating at any point along the cable route corridor at the time of an incident, any credible spill scenario — collision, allision, or fuel system breach — would result in a release at a single location rather than a distributed release along the route. The Lennox location was selected as the modelled release point because it represents the most exposed position within the project area in terms of receptor proximity and drift potential; a release anywhere along the cable route would produce equal or lower receptor exposure than a release modelled at Lennox. Provided confirmed vessel inventories remain at or below 1,097.5 m³, the existing modelling is directly applicable and no additional trajectory assessment is required.

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3.2 Reference Modelling: Valaris Norway OSCAR Model

Parameter	Value / Description
Source document	Well Abandonment Temporary Operations Oil Pollution Emergency Plan (TOOPEP), March 2024. Stochastic modelling conducted using SINTEF OSCAR (Marine Environmental Modelling Workbench v14.1).
Modelling basis	Instantaneous loss of full diesel inventory from Valaris Norway jack-up at Lennox platform (UKCS Block 110/15: 53°37'56.66"N, 003°09'42.49"W). The Valaris Norway is used as a reference vessel to establish a conservatively large fixed-point source term within the Liverpool Bay area; it is not a CML2365 construction vessel.
Substance modelled	Marine Diesel (ITOPF Group II); Specific Gravity 0.843; Viscosity 3.9 cSt at 13°C; Pour Point -36°C
Release volume (worst-case)	1,097.5 m ³ — maximum worst-case diesel/MGO inventory predicted within a non-production installation in-field (Table 25.1, Reg 12(1) Response, Oct 2024)
Release type / duration	Surface instantaneous release; modelled as 1-hour release duration
Metocean data	Wind: ECMWF 2008–2014; Currents: Met Office 3-year seasonal shelf hourly current data 2008–2014
Simulation approach	40 simulations per year; 120 total multi-year statistics; 10-day simulation period

3.3 Trajectory Results and Receptor Exposure

The OSCAR model results for the Valaris Norway worst-case scenario (1,097.5 m³ instantaneous marine diesel release at Lennox) establish the following bounding parameters for the LBCCS project area:

Table 3.1: OSCAR modelling results

Receptor / Coastline	Dec–Feb	Mar–May	Jun–Aug	Sep–Nov
Merseyside coast (nearest shoreline)	40–50%, 3 hrs	40–50%, 5 hrs	30–40%, 3 hrs	40–50%, 4 hrs
Lancashire coast	40–50%, 12 hrs	20–30%, 21 hrs	20–30%, 16 hrs	40–50%, 12 hrs
Flintshire / N. Wales coast	1–5%, 33 hrs	1–5%, 42 hrs	1–5%, 2 days	1–5%, 32 hrs
Denbighshire coast	—	1–5%, 2 days	—	1–5%, 39 hrs
Isle of Man / Irish median line	< 1% within 10 days			
Max onshore accumulation after 10 days	772 m ³	791 m ³	741 m ³	718 m ³

Probability and earliest arrival time of surface oil ($\geq 1\%$ probability, $\geq 0.3\mu\text{m}$ thickness) at key shorelines. Source: LBCCS Reg 12(1) Response, October 2024, Table 25.2

3.4 Designated Site Exposure Under Worst-Case Scenario

Under the worst-case unmitigated Lennox diesel release scenario, the following designated sites could potentially be exposed to surface oiling:

- Liverpool Bay SPA — surface waters and coastline (ornithological features including common scoter and red-throated diver)
- Liverpool Bay MCZ — surface and benthic habitats
- Dee Estuary SAC and Ramsar — waters and coastline; intertidal and subtidal benthic features; supporting prey features for SPA ornithology
- Ribble Estuary SSSI — waters and coastline
- Fylde MCZ — surface waters
- Hilbre Island Ramsar — intertidal features

ANNEX 1 –



It is important to note that this scenario represents a completely unmitigated instantaneous release of the full reference inventory from a fixed point — a deliberate conservative upper bound. CML2365 construction vessels carry lower fuel inventories than the 1,097.5 m³ reference figure, operate across a mobile worksite rather than from a fixed platform location, and are subject to the conditioned mitigation measures in this MPCP (SOPEP activation, boom deployment, OSRL or equivalent response). The combination of lower source volume, mobile release geometry, and active mitigation means that a realistic spill from a CML2365 construction vessel would produce materially lower receptor exposure than the modelled scenario. A mitigated release from a CML2365 construction vessel is assessed as having a minor adverse significance of effect, consistent with the EIA conclusion in Volume 2, Chapter 7 of the Environmental Statement.

A comparison of confirmed vessel inventory volumes against the 1,097.5 m³ bounding source term is set out in Table 3.2. Where confirmed operational inventories are at or below this threshold, the existing Valaris Norway OSCAR modelling is directly applicable and no additional trajectory assessment is required. Where a confirmed operational inventory appears to exceed this threshold, the structural and operational arguments in the note below Table 3.2 will be applied to establish the credible worst-case volume to sea before any question of further modelling arises.

Table 3.2: *Vessel Hydrocarbon Inventory — Comparison Against Modelled Worst-Case Source Term*

Vessel	Substance	Confirmed Volume (m ³)	vs. 1,097.5 m ³ bound
Ndurance (Boskalis CLV) — IMO: 9632466	MGO	1,097.5 m ³ (Valaris Norway, Lennox, TOOPEP modelling)	Yes — 500 m ³ operational quantity well within bound
DCV Balder (Heerema Marine Contractors)	MGO (no HFO carried)	5,500–6,000 m ³ nameplate (range); operational range ~1,000–4,700 m ³ ; worst-case single-breach 166.3 m ³ (SB settling tank, above waterline). Confirmed: Frank de Groot, June 2026.	Nameplate (5,500–6,000 m ³ range) exceeds bound; credible worst-case single-breach 166.3 m ³ — within bound. See note below table.
Dredging vessels (WID, TSHD, BHD) — Boskalis	MGO	1,097.5 m ³ (Valaris Norway, Lennox, TOOPEP modelling)	Yes — credible worst-case single-breach 166.3 m ³ (SB settling tank, above waterline) well within bound. Storage tanks structurally protected — see Section 3.2 note.
Survey / CTV vessels — Boskalis	MGO	Typically 20–80 m ³ (vessel-class dependent; inventory outstanding)	~80 m ³ (conservative upper bound; well within OSCAR 1,097.5 m ³ bound)

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All figures confirmed June 2026. Ndurance (Boskalis CLV): MGO max 2,263 m³, operational ~500 m³ — within 1,097.5 m³ OSCAR bound. DCV Balder: nameplate 5,500–6,000 m³ (range); credible worst-case single-breach 166.3 m³ (SB settling tank, above waterline) — within bound. CLV accepted as bounding vessel for Boskalis fleet. Survey/CTV inventory outstanding — bounded by CLV.

Note on vessels exceeding the 1,097.5 m³ OSCAR modelled bound

The DCV Balder (Heerema) has a nameplate FO capacity in the range of 5,500–6,000 m³, which exceeds the modelled source term. However, the credible worst-case volume to sea is assessed as substantially lower than nameplate capacity for the following reasons, confirmed by Frank de Groot (Heerema HSE Advisor, June 2026):

1. The two main FO storage tanks are enclosed within the semi-submersible floater structure, sandwiched between ballast water tanks on both PS and SB floaters. A side collision impact cannot reach the FO tanks directly, and a collision from between the floaters is precluded by the bracing structure.
2. All settling and day tanks are located at main deck level above the waterline. Any breach results in atmospheric rather than hydrostatic loss. The largest single above-waterline tank is the SB FO settling tank at 166.3 m³.
3. The Balder bunkers offshore via bunker barge; bunkering is condition-based and limited to the minimum required to complete scope and return.

The credible worst-case single-breach volume to sea is therefore 166.3 m³ — well within the 1,097.5 m³ bound. The Ndurance (Boskalis CLV) carries a maximum of 2,263 m³ nameplate but an operational quantity of approximately 500 m³, also within the bound. The OSCAR modelling is applicable to all CML2365 construction vessels without modification.

3.5 Near-Field Assessment: Seabed Preparation Works at West Hoyle Spit

Works at West Hoyle Spit (WHS) are of particular significance given proximity to the Dee Estuary SAC boundary (approximately 3 km) and Hilbre Island Ramsar (approximately 5 km). The prevailing tidal stream in this area runs approximately NNW–SSE on a spring tidal cycle, with flood tides setting broadly south-southeast towards the Estuary entrance. Under southerly wind-driven drift, a surface spill at WHS could reach the outer Dee Estuary within 3–6 hours under spring tide conditions.

Vessels operating at WHS must therefore maintain full SOPEP readiness with pre-positioned containment boom prior to commencement of bunkering or any fuel transfer operation. Tier escalation criteria (Section 4.3) must be reviewed with specific reference to Dee Estuary proximity, and any Tier 2 trigger must prompt immediate notification to NRW Marine.



4. RESPONSE PROCEDURES

4.1 General Principle: STOP — CONTAIN — NOTIFY

All pollution incidents shall be managed through the STOP — CONTAIN — NOTIFY sequence:

- **STOP:** Cease activity causing or exacerbating the discharge. Where personal safety prevents this, the safety of personnel takes precedence over stopping the source.
- **CONTAIN:** Deploy containment equipment (boom, absorbents, secondary containment) to prevent further spread. Assess location and likely drift trajectory.
- **NOTIFY:** Notify the LBCCS WP Project Manager (Dimitri Tito, +44 (0) 7717715342) and initiate the reporting chain without delay. Notification should run concurrently with containment where practicable.

4.2 Tiered Response Framework

Pollution incidents are categorised by severity and resource requirement:

Tier	Severity	Resources Required	Response Lead
1	Minor spill — contained within vessel capability	Onboard equipment and crew	Vessel Master; SOPEP activated; WP PM notified
2	Moderate spill — exceeds vessel capability or threatens shoreline within 12 hours	External support within regional capacity (e.g. OSRL or equivalent)	WP PM escalates to LBCCS PMT; NRW/MCA notified; external response resource mobilised
3	Major spill — widespread environmental damage; Tier 2 resources insufficient	National or international response; MCA SOSREP involvement	LBCCS escalates to OPRED/NSTA; MCA SOSREP activated; full statutory notification

Spills arising from LBCCS construction vessel operations are expected to fall under Tier 1 in the normal course of operations, given vessel inventory volumes and embedded mitigation. However, proximity to the Dee Estuary SAC and Hilbre Island Ramsar at WHS requires automatic Tier 2 assessment for any surface spill in that area, regardless of source volume.

4.3 Tier 1 Response Actions

- Vessel Master activates SOPEP and assumes incident command.
- Cease bunkering, fuel transfer, or activity causing the spill.
- Deploy onboard boom downwind and downtide of the spill origin.
- Deploy absorbent pads and granules to contain surface sheen.
- Notify LBCCS WP PM (Dimitri Tito) by VHF Channel 16 (distress/initial contact) then designated working channel; follow with DSC notification to nearby vessels if shipping hazard.
- WP PM notifies LBCCS PMT and HSE Manager without delay.

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- Assess volume, substance, and weather/tidal conditions; determine whether Tier 2 escalation is required.
- Document incident in vessel log; initiate Boskalis/Heerema internal report (24-hour written notification to LBCCS PMT required).
- Complete PON1 form (oil/chemical release) and submit via OPRED Integrated Reporting Service (UK Energy Portal). No minimum threshold — all discharges to sea must be reported.
- Notify NRW in accordance with Condition 3.14 and 3.7.

4.4 Tier 2 Response Actions (additional to Tier 1)

- WP PM contacts OSRL or equivalent specialist oil spill response contractor; agree mobilisation timeline.
- LBCCS PMT coordinates external notifications: MCA/HM Coastguard (where applicable), NRW Marine, OPRED, Port of Liverpool/Mostyn as relevant.
- Assess need for vessel traffic management (500m safety zone notification to HM Coastguard).
- Commission trajectory update if spill is mobile: reference OSCAR seasonal results in Section 3 to identify likely receptor exposure timeline.
- Issue site safety stand-down for adjacent operations if appropriate.
- Prepare media/stakeholder statement if onshore receptor contact is probable.

4.5 Tier 3 Response Actions (additional to Tier 1 and 2)

- LBCCS notifies OPRED/NSTA and requests SOSREP involvement via MCA.
- Boskalis Security Office (Papendrecht, 24/7) activated as secondary communication hub.
- Full statutory reporting chain activated under OPRC Regulations 1998.
- ROGI form submitted to OMAR for incidents qualifying under the Offshore Installations (Safety Case) Regulations.



5. ROLES AND RESPONSIBILITIES

Role	Organisation	Responsibilities
Vessel Master	Boskalis / Heerema (vessel-specific)	First responder; SOPEP activation; Tier 1 incident command; initial WP PM notification; vessel log documentation
LBCCS WP Project Manager (Tito Dimitri)	LBCCS	Receives initial notification; informs LBCCS PMT and HSE Manager; coordinates escalation; manages statutory notifications in Welsh Waters
Project SHE-Q Manager (Field)	Boskalis Subsea Cables	Ensures environmental controls are in place before works commence; oversees spill response; coordinates PON1/PON2 reporting; manages follow-up investigation
Project Management Team (PMT)	LBCCS	Receives incident notification from Vessel Master; coordinates external notifications (NRW, OPRED, MCA); approves Tier escalation; manages stakeholder communication
HSE Manager	LBCCS	Receives without-delay notification for all environmental incidents; oversees investigation and corrective action
Boskalis Security Office	Boskalis (Papendrecht HQ)	24/7 emergency notification backstop if direct PMT communication fails; Tier 3 escalation support
LBCCS Commercial/Contracts Lead	LBCCS	Manages contractual notification obligations to Boskalis/Heerema; interface with insurers if required

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6. ONSHORE EMERGENCY RESPONSE ARRANGEMENTS

6.1 Overview

LB CCS operates within the Eni UK emergency response framework. Construction activities under CML2365 are conducted under the direct contractual oversight of Liverpool Bay CCS Limited (LBCCS), an Eni UK-operated asset. Accordingly, the onshore emergency response capability underpinning this MPCP is provided through Eni UK's established Incident Management Team (IMT) arrangements, which were updated to a hybrid outsourced model in June 2026. This section describes those arrangements and the manner in which they interface with LBCCS contractor emergency response obligations.

6.2 Eni UK / Restrata Hybrid IMT Model

With effect from 12:00 on 11 June 2026, Eni UK transitioned from an entirely in-house IMT to a hybrid model incorporating Restrata, a specialist 24/7 emergency response provider with over 15 years' experience supporting UK offshore oil and gas operations. Restrata provides 24/7 emergency response services to approximately 70% of UK offshore oil and gas operations. Under the new model:

- The primary onshore emergency contact number is Restrata's 24/7 Aberdeen Control Room: **01224 646258**. All emergency notifications that would previously have been directed to POA Security must now be directed to this number.
- Eni UK retains full command and control throughout any incident. The Eni UK IMT Leader holds decision-making authority and manages liaison with the Executive Liaison Team (ELT) and Eni HQ. Restrata's IMT (eight persons, mobilisable within one hour) acts in support of and on instruction from the Eni UK IMT Leader.
- Restrata provides three concurrent 24/7 specialist support streams: relatives response (managed by the Eni UK HR role); media response (Eni UK retains control of all external communications); and medevac meet-and-greet / Evacuation Reception Centre support from dedicated Restrata teams in Blackpool and Norwich.
- All incident logging and tracking is conducted through shared ICM (Incident Crisis Management) and MyGIS tools accessible to both Eni UK and Restrata personnel.
- Boskalis Subsea Cables and Heerema will be informed in writing of any further changes to the Eni UK IMT organisation and formal reporting lines in the event of an emergency.

The transition to the hybrid model was implemented following a recognition that reduced Eni UK headcount made it impractical to sustain a prolonged internal emergency response, that the operational context had evolved with more dynamic activities and reduced hydrocarbon inventory, and that the growing complexity of multiple contractor ER bridging arrangements required a more integrated and professionally managed response capability.



6.3 Emergency Response Communication Flowchart

Figure 6.1 below illustrates the Eni UK / Restrata emergency response communication chain as it applies to incidents reported from LB CCS construction activities. The flowchart follows the four-tier structure described in Section 6.2: incident origination; initial notification; IMT activation; and specialist support service deployment.

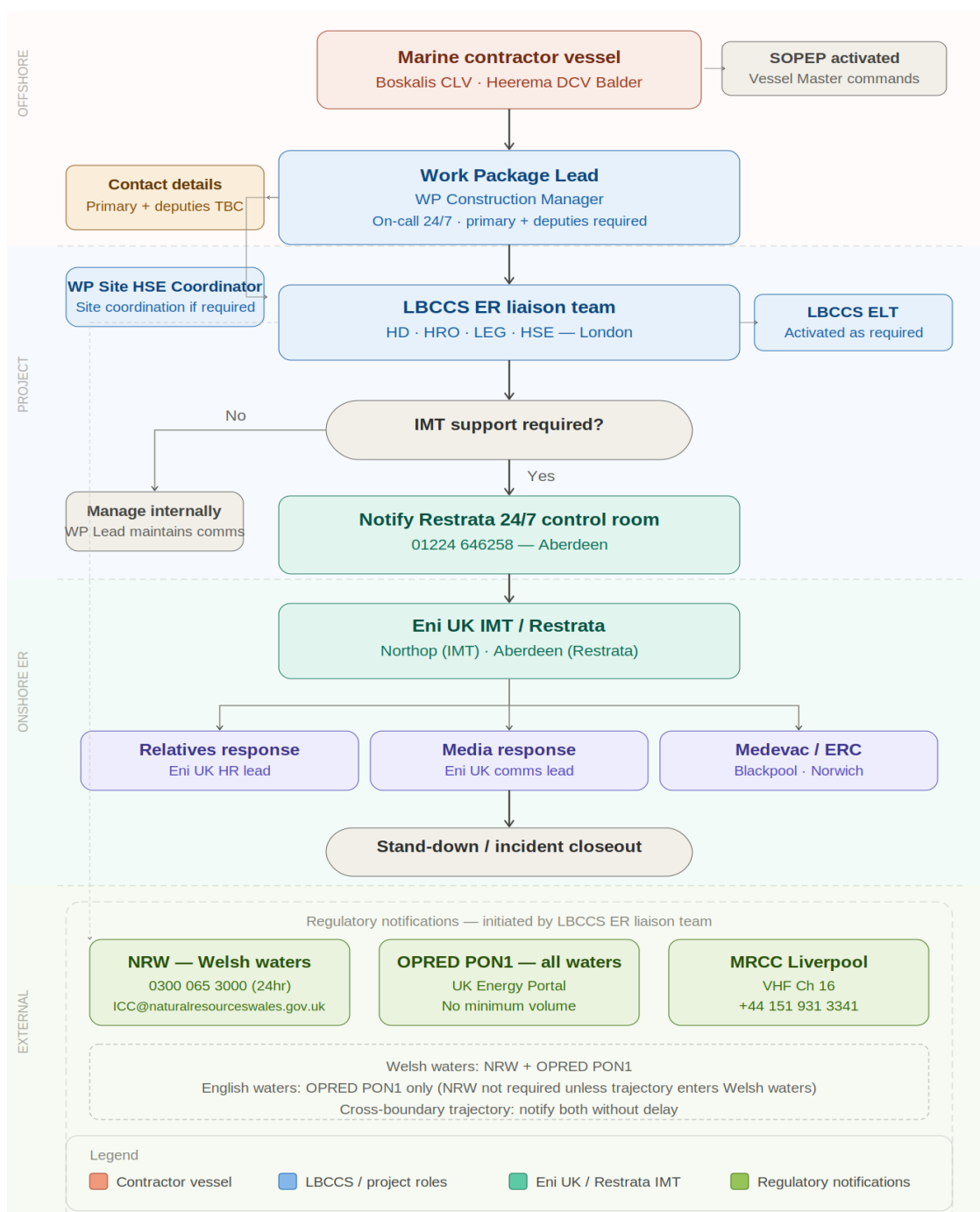


Figure 6.1: LB CCS / Eni UK / Restrata emergency response arrangement. Eni UK retains full command and control throughout. Restrata acts on instruction. Emergency number: 01224 646258.

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6.4 Interface with Contractor Emergency Response Plans

The Eni UK / Restrata IMT arrangement described in this section constitutes the onshore emergency management capability that receives escalated notifications from LBCCS construction vessels and shore-based operations. It does not replace the vessel-level and contractor-level emergency response obligations of Boskalis Subsea Cables and Heerema, which are addressed in each contractor's own ER Bridging Document as described in Section 6.5 below.

The notification pathway for a marine pollution incident originating on an LB CCS construction vessel is as follows: the Vessel Master activates the SOPEP and notifies the LBCCS WP Project Manager (Dimitri Tito, +44 (0) 7717715342); the WP PM notifies the LBCCS PMT and HSE Manager; the PMT initiates notification to NRW (Condition 3.14) and OPRED (PON1) as required; and, where the incident meets the threshold for escalation, the PMT contacts Restrata's 24/7 Control Room on 01224 646258 to activate the Eni UK IMT chain.

6.5 ER Bridging Document: LBCCS / Boskalis / Heerema

It is each contractor's responsibility to formally bridge their own vessel-level emergency response and pollution response plans to this MPCP (which is project- and location-specific under CML2365). Boskalis Subsea Cables and Heerema are each required to produce their own ER Bridging Document defining the interface between their contractor-level command and this MPCP, establishing the notification chain between their SOPEP and this MPCP, and setting out the agreed escalation triggers. References in earlier drafts of this MPCP to a single LBCCS-prepared bridging document (LBCCS-ERB-001) are superseded by this arrangement. Each contractor's ER Bridging Document will be referenced here and cross-referenced in that contractor's mobilisation documentation once received.

7. EMERGENCY CONTACT DIRECTORY

Table 7.1 provides the emergency contact directory for use during a marine pollution incident. This table has been consolidated from the LB CCS WP2 ER Scheme (previously a separate document) and incorporates all confirmed contacts as at 11 June 2026. All personnel with response responsibilities must have a current copy of this table accessible on-site and on-vessel at all times during operations.

Table 7.1: *Emergency Contact Directory — incorporated from LB CCS WP2 ER Scheme, 11 June 2026. Amber entries outstanding; must be confirmed before offshore works commence. This table must be printed and posted in the WP PM office and on each project vessel.*

Role	Organisation	Name	Telephone Contact	24/7?
OFFSHORE — VESSEL LEVEL				
Vessel Master — CLV	Boskalis Subsea Cables	Duty Master Vessel	Bridge: ndurance-bridge@boskalis.com / Satellite: +31 78 808 0920	Yes
Vessel Master — DCV Balder	Heerema Marine Contractors	Duty Master Vessel	Bridge: radio@balder.hmc-heerema.com / Fleet broadband: +870 773 261 351	Yes
WORK PACKAGE LEAD — PRIMARY ESCALATION				
WP Project Manager (primary ER contact)	LBCCS	Tito Dimitri	+44 (0) 7717715342 / dimitri.tito@eni.com	24/7
WP Deputy (1)	LBCCS / ERM	<i>TBC pre-mobilisation</i>	<i>TBC pre-mobilisation</i>	TBC
WP Deputy (2)	LBCCS / ERM	<i>TBC pre-mobilisation</i>	<i>TBC pre-mobilisation</i>	TBC
WP Site HSE Coordinator	LBCCS / ERM	Shaun Hughes	shaun.hughes@external.eni.com (no direct tel)	TBC
LBCCS PROJECT — ONSHORE				



Role	Organisation	Name	Telephone Contact /	24/7?
Project Manager	LBCCS	Tito Dimitri	+44 (0) 7717715342	—
HSE Manager	LBCCS	Mark Yates	+44 7557 774042	—
Environmental Lead	LBCCS / ERM	Lamia Gherbi	07771 501100	—
HR Officer (NoK / relatives)	Eni UK	Sandra Bass	+44 7710 164204	—
Legal	LBCCS	Jamie Salsman	+44 7721 812785	—
Communications	LBCCS	Cerys Percival	+44 7793 820682	—
Head of Project Development	LBCCS	Bruce Becker	+44 (0)20 7344 6313	—
CONTRACTOR — FIELD CONTACTS				
Project Manager	Boskalis Subsea Cables	Paul Gibson	+44 7976 720 597	—
Package Manager Offshore	Boskalis Subsea Cables	Willem de Wit	+31 6 1928 3902	—
Package Manager Onshore	Boskalis Subsea Cables	Guy Lister	+44 7801 167526	—
Project SHE-Q Manager	Boskalis Subsea Cables	Paul Oliver	+44 7577 470955	—
Security Office (24/7 back-stop)	Boskalis (Papendrecht HQ)	Security Officer Duty	+31 78 696 9696	Yes
Project HSE Advisor	Heerema Marine Contractors	Frank de Groot	Mob: +31 65 359 7178 / Work: +31 71 579 9059 / fdegroot@hmc-heerema.com	—
Sr. Project Manager	Heerema Marine Contractors	Martin Rensing	Mob: +31 65 337 6061 /	—



Role	Organisation	Name	Telephone Contact /	24/7?
			mrensing@hmc-heerema.com	
Crewing 24/7 emergency —	Heerema Marine Contractors	Duty Officer Crewing	+31 71 579 9888 / crewingbalder@hmc-heerema.com	Yes
ENI UK / RESTRATA IMT				
Restrata 24/7 Control Room (primary onshore ER)	Restrata Aberdeen —	Control Room Operator	01224 646258	Yes
Eni UK Duty Manager	Eni UK Northop —	Via Restrata CRO	Via 01224 646258	Yes
REGULATORY AND EMERGENCY SERVICES				
NRW Pollution Hotline — Welsh waters (Cond. 3.14)	Natural Resources Wales	Duty Officer	0300 065 3000	Yes
NRW written follow-up	Natural Resources Wales	—	ICC@naturalresourceswales.gov.uk	—
OPRED PON1 — all waters	OPRED	—	UK Energy Portal (online)	Yes
HM Coastguard	MRCC Liverpool	Duty Officer	VHF Ch 16 / +44 (0)151 931 3341	Yes
HSE Construction Division	HSE	—	01519 229 235	—
RSPB Gronant warden — tern colony	RSPB	Duty Warden	01745 562988	May–Aug
Flintshire County Council	Local authority	—	01352 752121	—
Oil spill response contractor	OSRL equivalent or	Duty Manager	+44 (0)23 8033 1551	Yes



Role	Organisation	Name	Telephone Contact /	24/7?
Duty Harbour Master	Port of Mostyn	Duty HM	01745 560335 (24hr) / hm@portofmostyn.co.uk	Yes
Duty Harbour Master	Port of Heysham (Peel Ports)	Duty HM	01524 868305 / Peel Ports Marine: 01524 868306	—
Duty Harbour Master	Port of Liverpool (Peel Ports / MDHC)	Duty HM	0151 949 6112	—

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8. INCIDENT REPORTING FORMS AND PATHWAYS

8.1 PON1 — Oil or Chemical Discharge to Sea

Use: Any release to sea of oil or offshore chemicals from a vessel or installation, regardless of volume. No minimum reporting threshold applies.

Submitted by: LBCCS, via OPRED Integrated Reporting Service (IRS) on the UK Energy Portal.

Timing: Without delay, as soon as reasonably practicable after the incident.

NRW notification: Where operations are being conducted in Welsh Waters, any release to sea of oil or offshore chemicals must additionally be reported to NRW as soon as possible using the NRW emergency hotline (0300 065 3000), followed by written confirmation without delay to ICC@naturalresourceswales.gov.uk. It is the responsibility of LBCCS to make this notification. Where operations are in English waters, OPRED PON1 notification is the primary obligation; NRW notification is not required unless the spill trajectory is forecast to cross into Welsh Waters.

PON1 form: Available via the UK Energy Portal (<https://portal.beis.gov.uk>) or from OPRED on request. A current copy of the blank form shall be held on each project vessel and by the WP PM.

8.2 PON2 — Loss or Deposition of Materials to Sea

Use: Any loss of equipment or materials overboard (dropped objects), including cable sections, tools, structural components, and non-oil/chemical materials.

Submitted by: LBCCS, via OPRED IRS on the UK Energy Portal.

Timing: Without delay. A Dropped Objects Management Plan (submitted with CEMP #3) provides further detail on prevention and management of dropped object risk.

NRW notification: In accordance with Condition 3.7 (Condition 3.14 if material involves potential pollution).

8.3 ROGI — Safety of Major Accident Events

Use: Incidents qualifying under the Offshore Installations (Safety Case) Regulations 2005 or equivalent (major accident events — Tier 3 escalation).

Submitted by: LBCCS to OMAR (Offshore Major Accident Regulator).

8.4 Internal Incident Report

Use: All environmental incidents, near-misses, and non-conformances during project operations.

Process: Boskalis Subsea Cables / Heerema to notify LBCCS PMT and HSE Manager without delay (within 24 hours by telephone); followed by initial written report within 3 working days; final written report including root cause analysis and corrective/preventative actions following investigation.

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All environmental accidents and near-misses will be reported and investigated in line with the contractor's stated procedures and shared with LBCCS.

8.5 NRW Condition 3.7 Notification

For any incident requiring direct notification to NRW under CML2365 Condition 3.7, the LBCCS Environmental Lead shall contact NRW using the emergency hotline (0300 065 3000) in the first instance, followed by written confirmation to ICC@naturalresourceswales.gov.uk without delay. A formal written report in the format prescribed by NRW shall follow within the timescale specified in that Condition.



9. SENSITIVE AREAS PLAN

This section identifies the designated sites and sensitive environmental receptors that could potentially be impacted in the event of a marine pollution incident arising from LBCCS construction activities. Receptor boundaries, approximate distances from key work locations, and likely exposure pathway under worst-case trajectory are provided.

9.1 Sensitive Areas Plan

Figure 9.1 (LBCCS Sensitive Receptors Mapping) presents the sensitive areas and designated site context for the LBCCS construction area, covering statutory designations including SPAs, SACs, Ramsar sites, SSSIs, and MCZs relevant to the construction footprint.

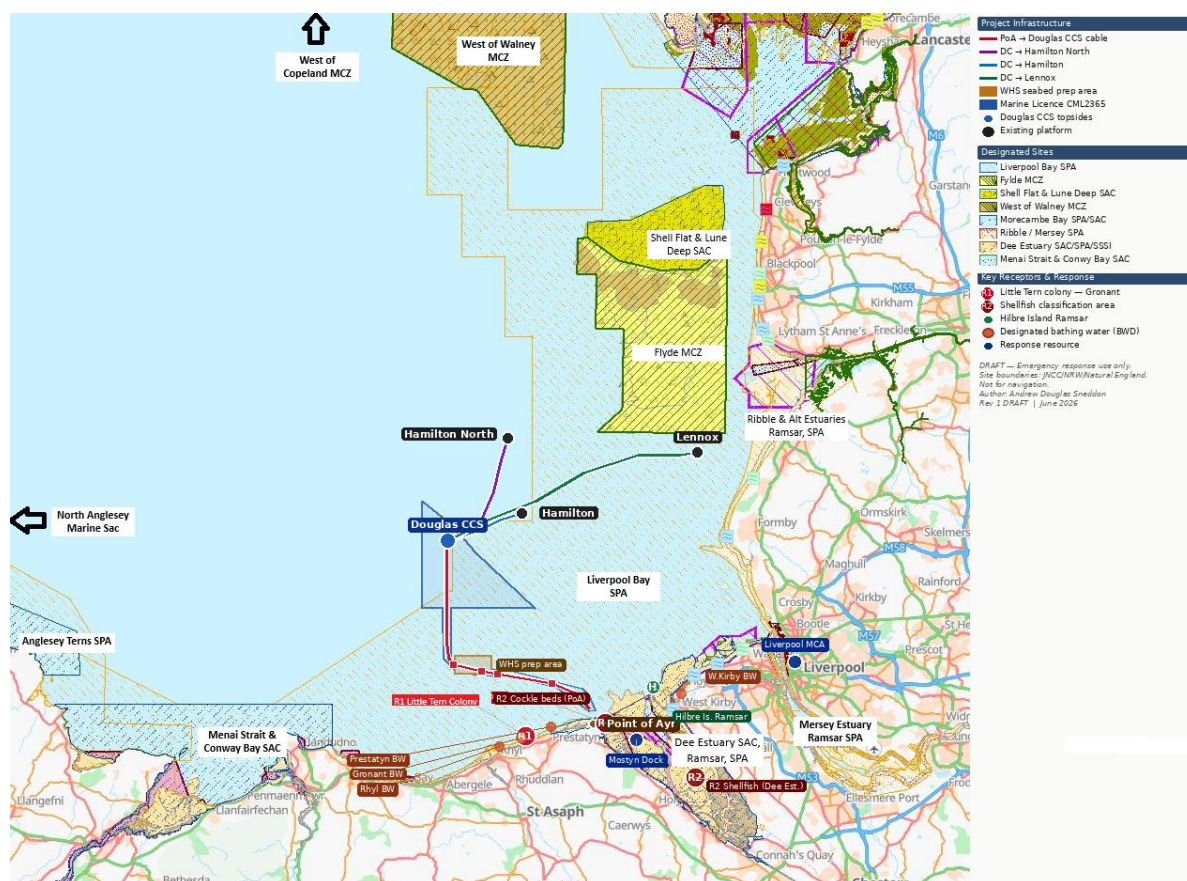


Figure 9.1: LBCCS Sensitive Receptors Mapping.

Relevant layers to activate in the event of a pollution incident: Special Protection Areas; Special Areas of Conservation; Ramsar sites; Sites of Special Scientific Interest; Marine Conservation Zones; Ancient Woodland (if onshore landfall works in scope); and shellfish classification areas (via Cefas/FSA layer where available).

For reference, the key sensitive receptors within the LBCCS project area are described in Appendix A and summarised in Appendix B (Receptor Prioritisation). The OSCAR worst-case modelled drift envelope (Lennox platform, 1,097.5 m³ marine diesel) is described in Appendix F and should be used to assess receptor exposure during an incident.

9.2 Receptor Summary Table

Designated Site / Receptor	Designation	Approx. Distance from Nearest Work Location	Pollution Pathway Exposure Route	Notes
Dee Estuary SAC	SAC (Habitats Regs)	~3 km from WHS work area	Surface tidal drift (flood tide sets S-SE toward estuary); wind drift under SW winds	Intertidal and subtidal habitats; supporting prey for SPA ornithology; HRN assessment receptor
Dee Estuary Ramsar	Ramsar / SSSI	~3 km from WHS	As above	Wetland of International Importance; overlaps SAC
Hilbre Island Ramsar	Ramsar / SSSI	~5 km from WHS	Tidal drift; intertidal exposure	Small tidal islands; intertidal bird roost
Liverpool Bay SPA	SPA (Habitats Regs)	Encompasses project area	Surface oiling of SPA waters; beaching on supporting coastline	Common scoter; red-throated diver; OSCAR modelling shows 40–50% probability of surface oil reaching SPA-associated Merseyside coast within 3–4 hours
Liverpool Bay MCZ	MCZ (MCAA 2009)	Partially overlaps project area	Surface and benthic impacts; sediment transport	Conservation features include subtidal habitats
Ribble Estuary SSSI	SSSI	~25–35 km NE of WHS	Surface drift; OSCAR shows 40–50%	Intertidal and estuarine habitats



Designated Site / Receptor	Designation	Approx. Distance from Nearest Work Location	Pollution Pathway Exposure Route	Notes
			probability, 12 hrs minimum	
Fylde MCZ	MCZ	~30 km N	Surface drift	Identified in OSCAR worst-case scenario
Designated bathing waters	BWD	West Kirby ~5 km; Gronant ~0.5 km (from PoA); Prestatyn ~3 km; Rhyl ~8 km	Tidal drift; shoreline oiling	Seasonal designation; operator and local authority notification required if oiling probable
Little tern colony (Wales largest) — Gronant/Talacre Beach	SSSI (Gronant Dunes and Talacre Warren)	~0.5 km from PoA terminal; colony at 53.338°N, 3.425°W on beach face	Shoreline oiling of beach nesting habitat; direct disturbance of foraging birds	Very high sensitivity during breeding season (May–August). Automatic Tier 2 if oiling of beach probable. NRW and RSPB Gronant Warden (01745 562988) to be notified immediately. Shown on Figure 9.1.
Inshore fisheries / shellfish waters	Various	Mersey (Wallasey): ~20 km NE; Dee (Thurstaston East): ~5 km E; Ribble Channel: ~50 km NE. FSA classification data (Recordset	Contamination of shellfish; fisheries closure	PON1 reporting triggers automatic alert to IFCA. FSA shellfish beds shown on Figure 9.1. Class A (harvestable) beds in Dee Estuary at

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Designated Site / Receptor	Designation	Approx. Distance from Nearest Work Location	Pollution Pathway Exposure Route	Notes
		12601) confirms Class A/B beds in Mersey and Dee.		Thurstaston East are within potential drift zone under flood tide conditions.

Table 9.1: Sensitive receptor summary. Distances are approximate and to be confirmed against GIS. OSCAR trajectory probabilities from Table 3.1 (Valaris Norway worst-case bounding scenario).

9.3 Prevailing Tidal Stream and Wind-Drift Direction

The principal tidal stream axis in Liverpool Bay runs broadly NW–SE. On the flood tide, currents set generally south-eastward in the outer bay, deflecting into both the Mersey and Dee approaches. On the ebb, the dominant surface flow is northwestward. The nearest sensitive intertidal receptors (Dee Estuary SAC, Hilbre Island Ramsar) are therefore most at risk on the flood tide, particularly under southwesterly or westerly wind conditions, which are the prevailing wind direction in this area throughout the year.

The OSCAR modelling results confirm Merseyside coast as the most frequently impacted shoreline under all seasonal scenarios (40–50% probability; 3–5 hours from Lennox). This aligns with the tidal and wind regime described above. For vessels operating at WHS (closer inshore than Lennox), transit time to the outer Dee Estuary is estimated at approximately 1–3 hours under spring flood conditions.

10. SPILL KIT INVENTORY AND EQUIPMENT

The following minimum spill response equipment shall be available on each project vessel and at each construction compound prior to commencement of operations. Minimum quantities are confirmed against the Ndurance SOPEP (FMO-805q Rev 05) as the bounding vessel; vessel-level confirmation to be carried out at pre-mobilisation audit.

Equipment	Minimum Quantity per Vessel	Location	Notes
Absorbent pads (oil-selective)	600 (Ndurance SOPEP, FMO-805q Rev 05)	Deck spill kit cabinet	SOPEP-compliant minimum
Absorbent booms (oil-selective)	36 m (Ndurance SOPEP)	Deck, accessible without confined space entry	Length sufficient to encircle likely spill source
Absorbent granules	Not separately itemised — Ndurance SOPEP specifies pads, pillows, and snakes (see note)	Spill kit cabinet	
Hazardous waste disposal sacks (UN-rated)	20 (Ndurance SOPEP, FMO-805q Rev 05; UN-rated approved sacks)	Spill kit cabinet	For contaminated absorbents; disposal onshore
Boom (inflatable / hard; deployable over side)	Per vessel SOPEP minimum; confirm at pre-mobilisation vessel audit	Foredeck / stern	For rapid deployment at bunkering points
Personal protective equipment (PPE) for spill response	Per crew	Bridge / muster station	Chemical-resistant gloves, overalls
Oil dispersant (if approved for use in area)	Not held as standing provision. Deployment requires explicit prior NRW approval (Welsh waters) or OPRED approval (English waters); to be authorised on a case-by-case basis by LBCCS PMT at time of incident.	N/A — not held onboard	Use of dispersant in Welsh Waters requires prior NRW agreement

Table 10.1: Minimum spill kit inventory. Quantities confirmed against the Ndurance SOPEP (FMO-805q Rev 05, 21 July 2025) as the bounding vessel; equipment is based on an OPA 90 "7 barrel" oil spill kit standard (approximately 1,120 litres). Heerema DCV Balder spill kit provision confirmed separately in LBCCS-MPCP-INV-HMC-001. No dispersant is held as a standing onboard provision; deployment requires prior NRW/OPRED approval as noted in the dispersant row above.



Regular checks shall ensure spill kits are fully stocked and serviceable throughout the period of operations. Periodic spill drills shall be conducted and documented, with records maintained throughout the project.

APPENDIX A - ENVIRONMENTAL RECEPTOR REGISTER

Purpose: quick operational register of receptors to be considered if a spill or contaminant release has the potential to reach Liverpool Bay, the Dee Estuary, North Wales coast, Wirral/Mersey shoreline or shellfish/bathing water areas.

Receptor	Designation / source	Key sensitivity	Priority	MPCP relevance	Lead authority / stakeholder
Liverpool Bay / Bae Lerpwl	SPA / Offshore MPA	Large marine SPA overlapping the project setting in Liverpool Bay. Qualifying interest relates to seabirds and marine bird use of Liverpool Bay.	Very High	Surface oil, fuel sheen or floating debris may affect seabirds; dissolved chemicals may require ecological advice.	NRW / Natural England / JNCC, depending on location.
The Dee Estuary / Aber Dyfrdwy	SPA / SAC / Ramsar / SSSI	Estuary, intertidal flats, saltmarsh, waterbirds, waders and associated protected habitats. Cross-border Wales/England site.	Very High	High priority for shoreline surveillance, booming feasibility review and early regulator notification if drift forecast enters Dee approaches.	NRW and Natural England; local authorities; relevant conservation managers.
Gronant Dunes and Talacre Warren / Talacre-Gronant little tern colony	SSSI / LNR and breeding bird receptor	Project-provided indicative little tern colony point: 53.338 N, 3.425 W. Colony location may shift annually.	Critical seasonally	Any forecast shoreline oiling during breeding season requires immediate escalation, receptor-specific advice and contact with NRW/RSPB/local wardening arrangements.	NRW; RSPB Gronant Warden: 01745 562988 (confirmed, Table 7.1).
Mersey Narrows and North Wirral Foreshore	Ramsar / SPA-associated coastal receptor / SSSI components	Intertidal foreshore and bird interest on Wirral/Mersey frontage.	Very High	High priority if spill trajectory approaches Wirral shore, Mersey Narrows, Red Rocks, Hilbre/foreshore areas or New Brighton/Leasowe.	Natural England; Environment Agency; local authorities.
Mersey Estuary	Ramsar / SPA / SSSI	Estuarine/intertidal receptor with waterbird and mudflat/saltmarsh sensitivity.	Very High	Notify relevant authorities if plume or sheen approaches Mersey estuary or Mersey entrance.	Natural England; Environment Agency; local authorities; harbour/port authorities as relevant.
Shellfish production/classification areas	FSA/Cefas classification dataset; local authority official controls	Uploaded shellfish layer includes Dee, Mersey, Liverpool Bay-Wirral, Ribble, Lune, Conwy, Menai Strait and Morecambe records. Classification codes reproduced from FSA dataset (Recordset 12601). For current harvest status, contact FSA.	High to Critical	Potential contamination may require harvest controls, sampling and food safety notification. Do not infer harvest status from map alone.	FSA Food Incidents / Shellfish team; Local Authorities.
Bathing waters	NRW / Environment Agency designated bathing waters	Public health and amenity receptors on North Wales, Wirral, Mersey and adjacent coast. Designated bathing waters within the project area are identified in Table 9.1: West Kirby, Gronant, Prestatyn, and Rhyl.	High seasonally	Notify regulator/local authority if spill could reach designated bathing waters; consider warning signs, public communications and sampling.	NRW or Environment Agency; relevant local authority.



Receptor	Designation / source	Key sensitivity	Priority	MPCP relevance	Lead authority / stakeholder
Fylde MCZ	MCZ	Offshore/inshore conservation designation north of Liverpool Bay.	Moderate to High	Relevant where spill trajectory extends north-east/north-west into MCZ area.	Natural England / JNCC.
West of Walney MCZ	MCZ	Offshore marine conservation zone to north of project area.	Moderate to High	Relevant if wider spill trajectory extends north.	Natural England / JNCC.
West of Copeland MCZ	MCZ	Offshore MCZ to north-west.	Moderate	Likely only relevant to wider offshore trajectory scenarios.	JNCC / Natural England.
North Anglesey Marine / Gogledd Mon Forol	SAC	Marine SAC west/north-west of Liverpool Bay.	Moderate to High	Relevant if trajectory extends westwards; likely supporting figure rather than main operational priority unless modelling indicates pathway.	NRW / JNCC.
Menai Strait and Conwy Bay / Y Fenai a Bae Conwy	SAC	Coastal/marine SAC west of the main Liverpool Bay response area.	Moderate to High	Relevant for wider westward spill scenarios.	NRW.
Traeth Lafan / Lavan Sands, Conway Bay	SPA	Intertidal bird receptor on North Wales coast.	High	Relevant if spill trajectory extends west along North Wales coast.	NRW.

Appendix A1 - Shellfish Area Extract

The following entries are from the uploaded shellfish recordset. Classification codes are reproduced as recorded. Codes reproduced as supplied. For current harvest status, contact FSA Wales (wales.foodIncidents@food.gov.uk) or FSA England (foodincidents@food.gov.uk).

Production area	Classified zone	Classification code	Species recorded	Area field	Seasonality field
Dee	Salisbury	1	Cockles; Mussels	27.1427	None recorded
Dee	Thurstaston East	4	Cockles; Ensis spp; M. mercenaria; M. varia; Mussels; N oysters; P oysters; S solida; Tapes spp	0.849705	None recorded
Dee	Caldy Blacks	5	Cockles; Mussels	2.06329	None recorded
Dee	Thurstaston	5	Cockles; Mussels	4.73967	None recorded
Dee	West Kirby	5	Cockles; Mussels	9.06144	None recorded
Mersey	Mersey (Wallasey)	4	Cockles; Ensis spp; M. mercenaria; M. varia; Mussels; N oysters; P oysters; S solida; Tapes spp	8.7493	None recorded
Liverpool Bay - Wirral	Leasowe and New Brighton	5	Cockles	13.3048	None recorded
Ribble	Ribble Channel	4	All species	1.54649	None recorded
Ribble	Penfold South	2	C. edule	16.4782	None recorded
Ribble	Penfold North	3	C. edule	5.36467	None recorded
Lune	Pilling Sands	2	Cockles	31.5832	1 December to 31 May
Conwy	Conwy Bridge	6	Mussels	0.308217	SNLB 1 October to 30 April
Conwy	Morfa, Gamlwys & Green Island	5	Mussels	1.65559	None recorded
Conwy	Scabs & Cae Conwy	5	Mussels	3.6137	None recorded
Menai Strait East/West	Multiple beds	5	Cockles; Mussels; P oysters	various	None recorded



APPENDIX B - RECEPTOR PRIORITISATION AND INITIAL RESPONSE ACTIONS

Priority	Receptor group	Trigger	Initial response actions	Caveats / verification
1 - Critical	Little tern colony / active breeding area	Any spill trajectory, sheen, stranded oil, debris or chemical release with potential to affect Talacre/Gronant during breeding season.	Immediately notify NRW incident route and project environmental lead; contact RSPB/warden if confirmed in current plan; avoid disturbance; request ecological advice before access; consider exclusion zones and shoreline protection feasibility.	Colony coordinate confirmed by project team. RSPB Gronant Warden contact confirmed: 01745 562988 (Table 7.1). Verify position at start of breeding season each year.
1 - Critical	Dee Estuary SPA/SAC/Ramsar/SSSI	Any forecast or observed entry into Dee approaches, intertidal flats, saltmarsh, mudflat or bird roost/feeding areas.	Escalate to regulator; activate shoreline surveillance; evaluate booming/access; initiate wildlife response advice; record tide/weather and shoreline contact points.	Cross-border Wales/England site; involve both NRW/Natural England where relevant.
1 - Critical	Shellfish classified areas	Any release that could contaminate shellfish production/classification areas or harvesting waters.	Notify FSA/local authority shellfish lead; record affected beds; consider sampling and harvesting advice; do not make harvest status statements without competent authority input.	Classification codes and local authority ownership to be verified.
2 - High	Liverpool Bay SPA / marine bird receptors	Offshore spill, sheen, slick, dispersed plume or surface contamination in Liverpool Bay.	Marine surveillance; wildlife observations; notify NRW/NE/JNCC as appropriate; avoid unnecessary vessel disturbance in sensitive areas.	Relevant throughout year, with heightened concern during periods of high bird use.
2 - High	Mersey Narrows, North Wirral Foreshore and Mersey Estuary	Spill forecast to approach Mersey/Wallsasey/New Brighton/Wirral foreshore or Mersey entrance.	Notify EA/Natural England/local authority; shoreline checks; public health and amenity coordination if beaches affected.	May require coordination with harbour/port authorities.
2 - High	Bathing waters	Forecast or observed shoreline impact during bathing-water season or public-use periods.	Notify NRW/EA and local authority; consider public information, warning signage and sampling; log location/time/photographs.	Specific bathing water list still to be inserted.
3 - Moderate/High	MCZs and offshore MPAs	Spill model or observations indicate contact with designated offshore habitats.	Consult NRW/NE/JNCC; monitor plume/slick; record overflight/vessel observations; consider sampling if advised.	Usually less immediate than shoreline/intertidal receptors unless modelling indicates exposure.
3 - Moderate	General coastal habitats not separately designated	Small localised release with no forecast contact with statutory or public-health receptors.	Contain/recover where practicable; monitor; document; notify according to MPCP reporting thresholds.	Escalate if trajectory changes.

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APPENDIX C - SENSITIVE SITE AND REGULATORY CONTACT DIRECTORY

Official regulatory and emergency service contacts are confirmed from public sources. Project-specific contacts are incorporated from the approved MPCP contact directory (Table 7.1).

Organisation	Purpose	Contact details	Source verification status /	Use in MPCP
Natural Resources Wales	Environmental incident reporting in Wales, including pollution incidents	0300 065 3000 - 24-hour service	Official NRW report-an-incident page, accessed 8 June 2026	Use for Welsh waters/shoreline incidents and NRW-regulated receptors.
HM Coastguard / MCA	Marine emergency and coastal emergency notification	999 and ask for the Coastguard in an emergency	GOV.UK MCA contact page, accessed 8 June 2026	For immediate marine/coastal emergency notification. Spill notification should follow the approved MPCP notification procedure.
Environment Agency	Environmental incidents in England	0800 80 70 60 - 24-hour incident hotline	GOV.UK environmental incident page, accessed 8 June 2026	Use for English shoreline/estuary incidents where EA jurisdiction applies.
Food Standards Agency - England	Food/shellfish incident notification	foodincidents@food.gov.uk; shellfish@food.gov.uk	FSA Local Action Group guidance for live bivalve molluscs	Use where classified shellfish harvesting areas in England may be affected.
Food Standards Agency - Wales	Food/shellfish incident notification	wales.foodIncidents@food.gov.uk; lasupportwales@food.gov.uk	FSA Local Action Group guidance for live bivalve molluscs	Use where classified shellfish harvesting areas in Wales may be affected.
Natural England	English protected sites / SSSI / SPA / Ramsar / MCZ advice	via JNCC or Natural England marine enquiries: 0300 060 3900	Confirmed from public sources / Table 7.1	Do not rely on generic public enquiries route for urgent incident response unless directed by MPCP.
JNCC	Offshore MPA advice	jncc.gov.uk/contact / 01224 655701	Confirmed from public sources / Table 7.1	Relevant for offshore MPAs and offshore portions of designations.
RSPB / Little tern warden	Talacre/Gronant little tern colony advice	01745 562988 (confirmed in MPCP Table 7.1)	Provided in project text; not independently verified here	Confirmed contact; verify warden availability at start of each breeding season (May–August).
Local authorities	Bathing waters, shoreline access, public warnings, shellfish official controls	Denbighshire: 01824 706000; Flintshire: 01352 752121; Wirral: 0151 606 2004; Sefton: 0345 140 0845	Confirmed from public sources / Table 7.1	Out-of-hours via main switchboard or Environment Agency 24hr hotline (0800 80 70 60) for English authorities.
Harbour / port authorities	Navigation, harbour operations, local response coordination	Port of Mostyn: 01745 560335 (24hr); Port of Liverpool: 0151 949 6112; Port of Heysham: 01524 868305	Confirmed from public sources / Table 7.1	Contacts confirmed from public sources and Table 7.1.
LBCCS / Eni duty contact	Operator emergency coordination	Dimitri Tito, LBCCS WP Project Manager: +44 (0) 7717715342 / dimitri.tito@eni.com (see Table 7.1)	Confirmed (see Table 7.1)	Status
Contractor vessel emergency contact	Initial source control and on-scene reporting	See Table 7.1: Ndurance bridge ndurance-bridge@boskalis.com / +31 78 808 0920; DCV Balder bridge radio@balder.hmc-heerema.com / +870 773 261 351	Confirmed (see Table 7.1)	Status

**APPENDIX D - SEASONAL SENSITIVITY CALENDAR**

Seasonality is provided for planning purposes. It should be checked against current site-specific data, the final HRA/EIA commitments, annual little tern wardening advice, and current shellfish/bathing-water classifications at the start of each field season.

Receptor / sensitivity driver	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Notes
Little tern colony - Talacre/Gronant	Low	Low	Low	High	Critical	Critical	Critical	High	Low	Low	Low	Low	Breeding season sensitivity. Exact dates and colony position may vary annually.
Wintering waterbirds - Dee Estuary / Mersey / Ribble / intertidal SPA/Ramsar sites	Critical	Critical	High	Moderate	Moderate	Low	Low	Moderate	High	Critical	Critical	Critical	Peak concern in winter and passage periods.
Passage / migratory birds	Moderate	Moderate	High	High	Moderate	Low	Low	Moderate	High	High	Moderate	Moderate	Spring and autumn passage periods require attention.
Marine birds - Liverpool Bay SPA	High	High	High	High	High	High	High	High	High	High	High	High	Year-round receptor; priority increases if spill overlaps high-use areas or vulnerable periods.
Shellfish classified areas	High	High	High	High	High	High	High	High	High	High	High	High	Treat as year-round food safety receptor unless competent authority confirms otherwise. Individual beds may have seasonal



Receptor / sensitivity driver	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Notes
													conditions.
Bathing waters / recreational beaches	Low	Low	Low	Moderate	High	High	High	High	High	Moderate	Low	Low	Bathing-water season and public amenity use typically drive priority. Confirm specific designations.
Saltmarsh / mudflat / intertidal habitats	High	High	High	High	High	High	High	High	High	High	High	High	Highly sensitive to persistent oiling; access and clean-up can cause secondary damage.
Dune systems / upper shore habitats	Moderate	Moderate	Moderate	High	High	High	High	High	Moderate	Moderate	Moderate	Moderate	Higher concern where nesting birds or public access are present.

APPENDIX E - POLLUTION IMPACT PATHWAYS AND RECEPTOR LINKAGE

Spill source / scenario	Potential contaminant	Pathway	Sensitive receptors potentially affected	MPCP response linkage
Vessel fuel spill	Diesel / marine gas oil / bunkers	Surface slick, sheen, stranded oil, vapour/local fire risk depending substance	Seabirds; SPA/Ramsar intertidal sites; bathing waters; shellfish; beaches; harbour/port approaches	Immediate source control; notify; monitor drift; deploy containment if safe; shoreline protection priorities from Appendix B.
Hydraulic oil release	Hydraulic oil from vessel, ROV, deck equipment or installation plant	Localised surface sheen or subsurface dispersion; potential contact with seabed/intertidal habitats if nearshore	Marine birds if surface expression; shellfish/bathing waters if nearshore; designated habitats if contact occurs	Stop source; recover if practicable; notify if reportable; monitor and document visible sheen.
Grout / cementitious material release	Grout, wash water or cementitious residues	Localised elevated pH/turbidity; seabed deposition; potential water-column effects near discharge point	Benthic habitats; shellfish; fish; designated sites if release occurs near protected features	Cease operation if uncontrolled; isolate source; sample/monitor if advised; notify NRW/OPRED route as applicable.
Chemical release	Project chemicals, cleaning agents, additives or stored substances	Dissolved plume, local toxicity, secondary contamination of equipment or deck drainage	Shellfish waters; bathing waters; fish; protected sites depending pathway and toxicity	Identify substance/SDS; stop source; notify with product details; seek specialist advice; consider sampling.
Oily waste / bilge / deck drainage release	Oily water, contaminated drainage, small mixed contaminant release	Surface sheen and local water quality effect	Nearby marine birds, shellfish, bathing waters, intertidal receptors	Stop discharge; contain/recover; retain records and waste manifests; notify under MPCP thresholds.
Dropped object / debris with contamination	Contaminated debris, absorbents, packaging or equipment	Physical smothering/entanglement; local contamination if oily/chemical residues present	Birds, shoreline receptors, fishing/shellfish interests, navigation	Recover if safe; notify if contamination or navigational hazard; track and document recovery.
Firefighting water / foam run-off	Firewater, foam, mixed contaminants	Run-off to sea; dissolved chemicals; contaminated solids	Shellfish, bathing waters, fish, intertidal habitats	Contain where possible; notify authorities; obtain advice on sampling/disposal.
Worst-case modelled drift scenario	OSCAR/modelled spill envelope as available	Potential wider surface drift and shoreline contact	All mapped receptors within envelope; Dee/Mersey/Wales coast depending model output	Use model/forecast as planning input; prioritise receptors in Appendix B; update with actual metocean observations during incident.

Appendix E1 - Data Gaps and Finalisation Checks

Item	Current status	Status
Bathing water GIS layer	Addressed in Table 9.1 and Appendix D	Designated bathing waters within the OSCAR drift envelope are identified in Table 9.1 and Appendix D. West Kirby, Gronant, Prestatyn, and Rhyl are the priority sites.
Shellfish classification code definitions	FSA dataset (Recordset 12601) reproduced in Appendix A1; class descriptions per FSA/Cefas metadata	Classification codes reproduced as supplied in FSA dataset (Recordset 12601). For current harvest status contact FSA Wales: wales.foodIncidents@food.gov.uk.
OSCAR spill modelling	OSCAR figures incorporated in Appendix F from TOOPEP H-000-LZ-001 Rev 5	OSCAR modelling summary incorporated in Appendix F. Source: TOOPEP H-000-LZ-001 Rev 5 (Petrofac/Eni UK, February 2024).
Little tern colony location	Coordinate 53.338°N, 3.425°W confirmed; RSPB warden contact in Table 7.1	Colony coordinate 53.338°N, 3.425°W provided by LBCCS project team. RSPB warden contact 01745 562988 confirmed in Table 7.1. Verify colony position at start of each breeding season.
Project contacts	Confirmed in Table 7.1	All project contacts confirmed in Table 7.1.
Local authority contacts	Confirmed from public sources / Table 7.1	Local authority contacts confirmed in Appendix C.
Receptor distances from infrastructure	Not calculated in this draft	Receptor distances confirmed in Table 9.1. GIS distances to be verified against final construction coordinates at pre-mobilisation stage.

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SOURCE NOTES

- Uploaded GIS datasets reviewed: NRW MPA SAC; NRW MPA SPA; UK SPAs with marine components; Ramsar England; NRW SSSI; England SSSI; England MCZ; Offshore MPAs; shellfish recordset; project cable route shapefile; supporting NRW/UK marine datasets.
- Official public contact source: Natural Resources Wales report-an-incident page confirms 0300 065 3000 as 24-hour service, accessed 8 June 2026.
- Official public contact source: GOV.UK Maritime and Coastguard Agency page confirms 999 and ask for the Coastguard in an emergency, accessed 8 June 2026.
- Official public contact source: GOV.UK environmental incident page confirms Environment Agency incident hotline 0800 80 70 60, accessed 8 June 2026.
- FSA Local Action Group guidance for live bivalve molluscs identifies Food Incidents and shellfish email routes for England and Wales; routes confirmed above.
- Project-provided little tern point: 53.338 N, 3.425 W. Treat as indicative unless confirmed by current season warden/NRW/RSPB advice.

APPENDIX F — OIL SPILL TRAJECTORY MODELLING

LBCCS Marine Pollution Contingency Plan (LBCCS-MPCP-001) — CML2365 Condition 3.25.1(iii)

1. Source document

The stochastic oil spill trajectory modelling reproduced in this Appendix is taken from the **Eni UK Liverpool Bay Asset Well Abandonment Temporary Operations Oil Pollution Emergency Plan (TOOPEP)**, document reference H-000-LZ-001 Rev 5 (Petrofac/Eni UK, February 2024), Section 10.1.1, Scenario 1: Instantaneous Loss of Diesel.

The modelling was carried out using the SINTEF OSCAR (Oil Spill Contingency and Response) system. The scenario represents the worst-case instantaneous release of diesel fuel from a Mobile Offshore Drilling Unit (MODU) operating at the Lennox platform during the well abandonment campaign.

2. Scenario parameters

Source location	Lennox platform — 53°37'56.66"N, 003°09'42.49"W (ED50)
Release type	Instantaneous surface release
Substance	Marine diesel (Type II oil)
Volume	1,097.5 m³ (maximum MODU inventory — Valaris Norway)
Simulation period	10 days per trajectory
Number of simulations	40 per season (120 total over multi-year dataset)
Nearest coastline	Ainsdale (Southport), England — approximately 7 km south-east of source
Source document	TOOPEP H-000-LZ-001 Rev 5, s.10.1.1, Figures 10.1.1–1 and 10.1.1–2



3. Probability of surface oiling — seasonal output (Figure 10.1.1–1)

The figures below show the probability of surface oiling equal to or exceeding 1% at any location, based on 40 trajectory simulations per season. The colour scale indicates probability of oiling occurrence. The dominant tidal stream in Liverpool Bay is the flood tide running south-east into the bay; the ebb runs north-west. Seasonal wind patterns cause the drift envelope to vary significantly across the year.

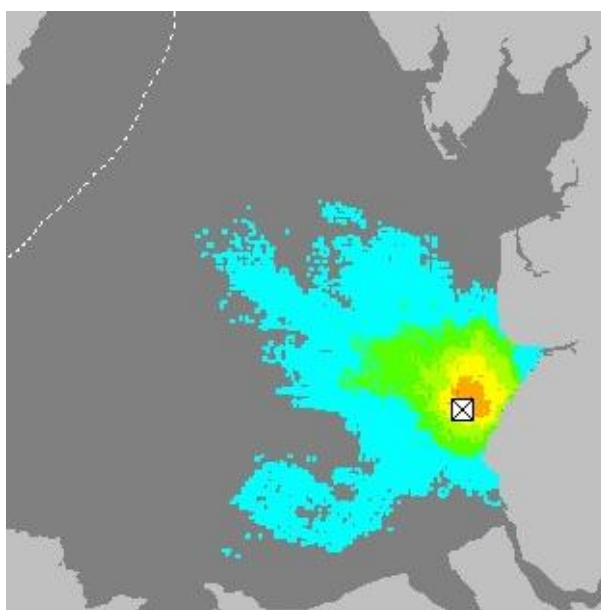
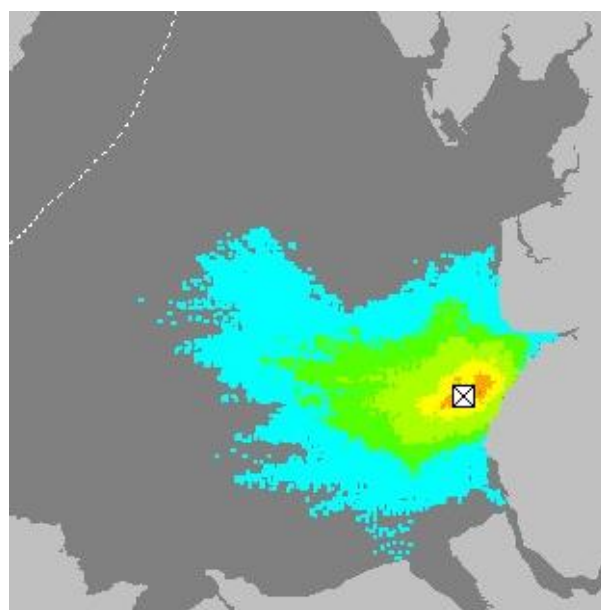
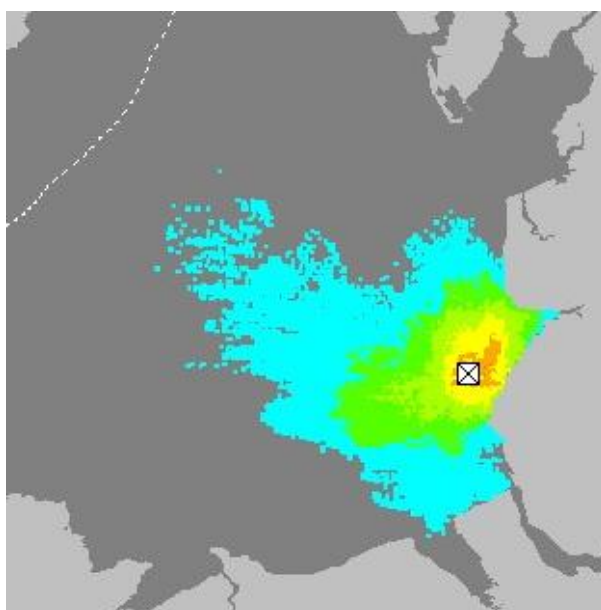
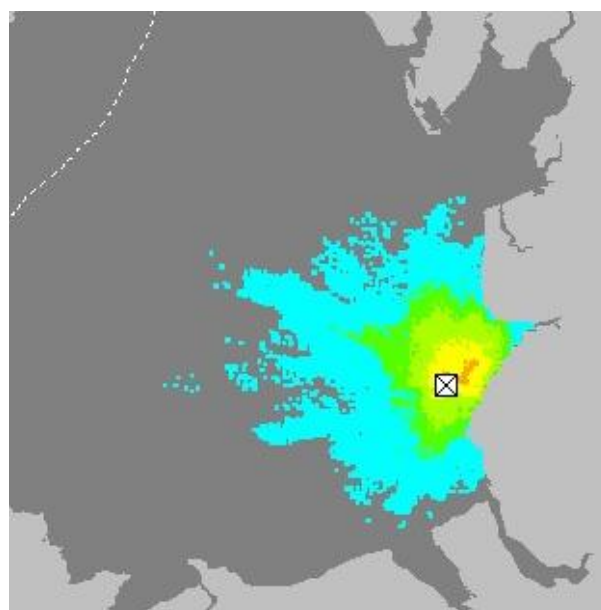
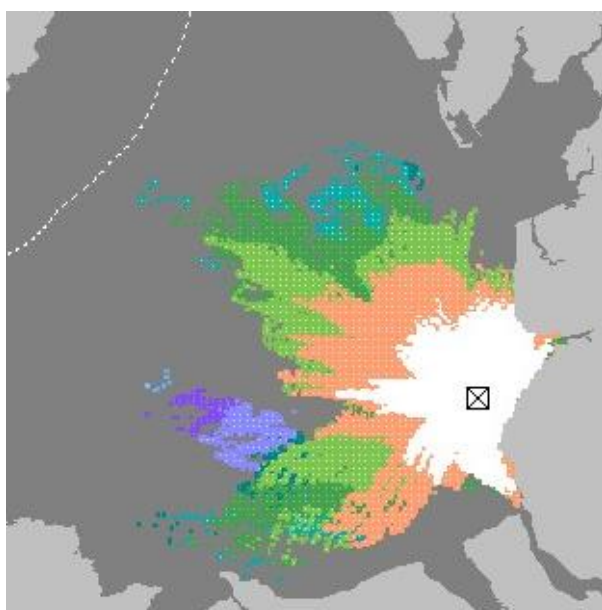
*Dec-Feb**Mar-May**Jun-Aug**Sep-Nov*

Figure AG-1: Probability of surface oiling ($\geq 1\%$) — Scenario 1 (instantaneous diesel loss, Lennox). Source: TOOPEP H-000-LZ-001 Rev 5, Figure 10.1.1–1.

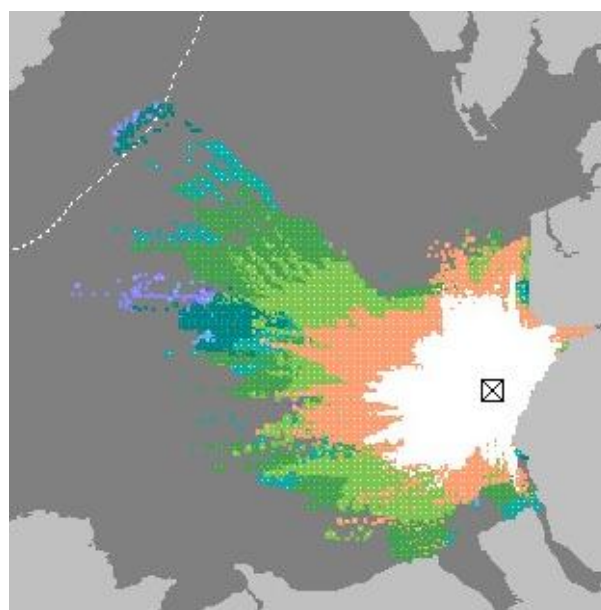


4. Arrival time of surface oil — seasonal output (Figure 10.1.1–2)

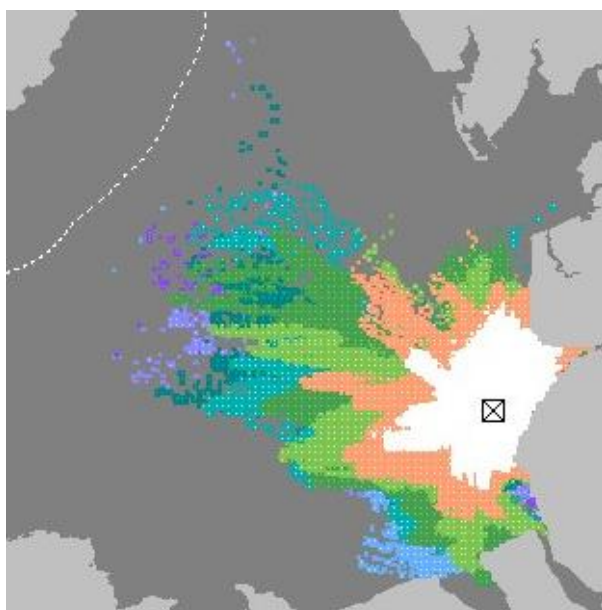
The figures below show the predicted arrival time of surface oil at shoreline locations. Arrival times are expressed in hours from release. Faster arrival times indicate higher immediate response priority.



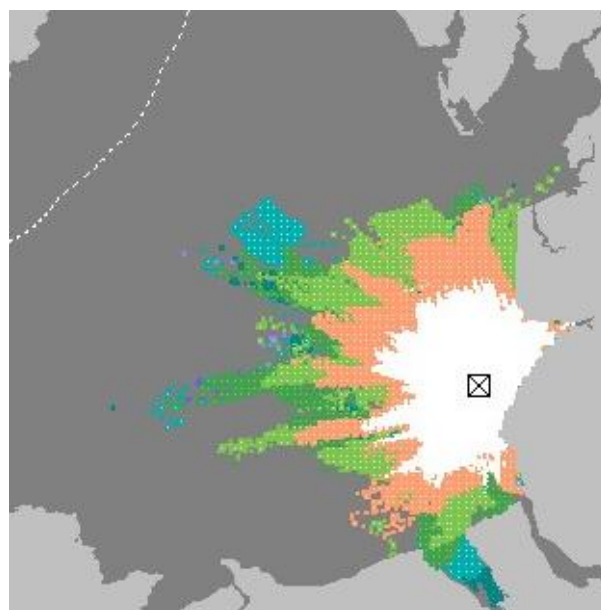
Dec-Feb



Mar-May



Jun-Aug



Sep-Nov

Figure AG-2: Arrival time of surface oil — Scenario 1 (instantaneous diesel loss, Lennox). Source: TOOPEP H-000-LZ-001 Rev 5, Figure 10.1.1–2.

5. Receptor cross-reference by season

Table AG-1 cross-references each seasonal scenario against the designated sites and biological receptors identified in Figure 9.1 (Sensitive Areas Plan, Section 9) and Appendix A (Response Priorities). Responders should use this table in conjunction with the TOOPEP probability maps to determine which receptors are at risk and which notification obligations apply.

Season	Dominant drift direction	Probability of shore contact	Priority receptors at risk
Dec–Feb	NW (dominant flood into bay)	Low to moderate	Liverpool Bay SPA (wintering common scoter, red-throated diver)
Mar–May	Variable NW/SE	Moderate	Liverpool Bay SPA; Little Tern colony at Gronant (birds arriving/establishing)
Jun–Aug	SE (toward Lancashire coast)	Higher (summer)	Little Tern colony Gronant (peak nesting); Dee Estuary shellfish; Liverpool Bay SPA (guillemot, razorbill)
Sep–Nov	SE/S	Moderate	Dee Estuary SAC/SPA (migratory birds); shellfish classification area; Liverpool Bay SPA (autumn passage)

Table AG-1: Seasonal receptor cross-reference — Scenario 1 (instantaneous diesel loss, Lennox MODU). Dominant drift directions are indicative based on TOOPEP seasonal outputs; actual trajectory depends on prevailing metocean conditions at time of incident.

6. Applicability note

The TOOPEP (H-000-LZ-001) was prepared for the **well abandonment campaign** and the Scenario 1 source is the MODU (Valaris Norway) rather than the permanent CCS infrastructure. The diesel inventory modelled (1,097.5 m³) represents the maximum MODU fuel load and is a conservative worst-case for a surface diesel release at the Lennox location.

For the purposes of the LBCCS MPCP, this scenario is considered representative of the most significant credible surface spill risk at the Lennox platform location during operations. The spatial extent of the probability envelopes shown above should be used to inform the notification triggers in Section 3 and the receptor protection priorities in Appendix A.

A separate OSCAR scenario (Scenario 3, Douglas Well Blowout — crude oil, 560 m³/day for 90 days) is also included in the TOOPEP at Section 10.1.3 and may be relevant to operational spill planning for the Douglas CCS platform. Reference should be made to TOOPEP Section 10.1.3 for those probability maps.

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APPENDIX G — VESSEL HYDROCARBON INVENTORIES

HEEREMA MARINE CONTRACTORS — DCV BALDER

SOPEP: The Shipboard Oil Pollution Emergency Plan for DCV Balder (330-100-0003 Rev B, February 2026) has been reviewed by LBCCS and is confirmed as vessel-specific, Panama flag-state approved, and compliant with MARPOL Annex I Regulation 37. The document is held on file. It is not appended to this MPCP; HMC have provided it on a strictly confidential basis for regulatory purposes only, subject to conditions confirmed by HMC (Frank de Groot, 15 June 2026) and accepted by LBCCS (Lamia Gherbi, 16 June 2026). If NRW require sight of the SOPEP, it may be submitted subject to those conditions.

Fuel inventory: Confirmed from Frank de Groot (HMC HSE Advisor), emails of 8, 16, and 18 June 2026. Total FO nameplate capacity is in the range 5,500–6,000 m³, distributed across primary storage tanks within the floater structure, settling tanks, and day tanks on the main deck. All settling and day tanks are located above the waterline; the largest single above-waterline tank is the SB FO settling tank at 166.3 m³, which represents the credible worst-case single-breach scenario and is well within the 1,097.5 m³ OSCAR modelled bound. Operational fuel quantity onboard at any time is indicatively in the range 1,000–4,700 m³, reflecting normal bunkering and consumption cycles. Full analysis is set out in the note following Table 3.2. Figures are presented as ranges at HMC's request, consistent with their conditional acceptance of inclusion of fuel inventory data in this MPCP (Frank de Groot, 18 June 2026).

HMC's consent to inclusion of the above fuel inventory data is provided strictly for the purpose of supporting this MPCP submission to NRW (and, where applicable, OPRED) and does not constitute general consent for wider use or distribution of vessel-specific data. HMC has confirmed it understands this MPCP may become subject to disclosure under Freedom of Information or Environmental Information Regulations as part of the regulatory process, and has consented on that basis (Frank de Groot, 18 June 2026).

Additional HMC vessels: Barge H-408 is a pontoon barge with no propulsion and no fuel of its own; it does not contribute to the hydrocarbon inventory for this MPCP. Tow tugs associated with the H-408 transit are expected to be North Sea-sourced vessels operating under their own flag-state approved SOPEPs. No separate SOPEP submission to LBCCS is required for transit-only vessels not undertaking CML2365 construction activities.

BOSKALIS SUBSEA CABLES — CLV FLEET

SOPEP: The Shipboard Oil Pollution Emergency Plan for the Ndurance (FMO-805q, Rev 05, 21 July 2025) has been received from Boskalis Subsea Cables and reviewed by LBCCS. The SOPEP is confirmed as vessel-specific, compliant with MARPOL Annex I Regulation 37, and prepared in accordance with IMO Guidelines MEPC.54(32) as amended by MEPC.86(44). The vessel is Cyprus-flagged (IMO 9632466, Port of Registry Limassol), classed Lloyd's Register. As with the Heerema SOPEP, the coastal state contacts appendix follows the standard IMO template and does not include an NRW-specific entry; this is consistent with international practice for a SOPEP intended for worldwide vessel operation. The document is held on file by LBCCS and is not appended to this MPCP. If NRW require sight of the SOPEP, it can be made available on request.

At-sea bunkering: Confirmed as not applicable for the CLV fleet — Boskalis CLVs are bunkered in port only (Paul Gibson, BSC Project Manager, 11 June 2026). This removes the bunkering hose failure scenario from the Table 2.1 CLV spill risk register.

Fuel inventory: Confirmed from LBCCS-MPCP-INV-BOS-001 (completed by Boskalis, 11 June 2026). Ndurance (IMO: 9632466, Cable Lay / Trenching Vessel): MGO max capacity

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2,263 m³; operational quantity approximately 500 m³. The operational quantity is well within the 1,097.5 m³ OSCAR modelled worst-case bound. The Ndurance is accepted as the bounding vessel for the Boskalis CLV fleet; dredging vessels (WID, TSHD, BHD) are expected to carry substantially lower inventories and are bounded by it. Full inventory data for the Ndurance (lubricants, hydraulics, chemicals) is recorded in LBCCS-MPCP-INV-BOS-001, held on file.

Boskalis confirms its consent to the inclusion of the above vessel inventory data in this MPCP, provided strictly for the purpose of supporting this MPCP submission to NRW (and, where applicable, OPRED) and not constituting general consent for wider use or distribution of vessel-specific data (Paul Oliver, Boskalis Project SHE-Q Manager, 19 June 2026).

VESSEL INVENTORY SPREADSHEETS

Completed vessel inventory spreadsheets (LBCCS-MPCP-INV-BOS-001 covering the Ndurance, and LBCCS-MPCP-INV-HMC-001 covering DCV Balder) are held on file and are available for submission to NRW on request. The structural basis for the Balder worst-case assessment is set out in the note following Table 3.2 in Section 3.2.

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Heerema Balder Inventory

LIVERPOOL BAY CCS (LBCCS) — MARINE POLLUTION CONTINGENCY PLAN

VESSEL HYDROCARBON & HAZARDOUS SUBSTANCE INVENTORY

Vessel Name:		DCV Balder			Operator / Contractor:		Heerema Marine Contractors	
Vessel Role:		Heavy Lift / Installation Vessel — Douglas CCS platform T&I			Date Completed:		09-Jun-26	
Completed by:		Heerema Marine Contractors			Reviewed by:		Andrew Sneddon	
Substance / Product	Category	Unit	Max Capacity (total onboard)	Operational Quantity	Storage Location on Vessel	SDS Available (Y/N)	Spill Kit Provision	Notes / Comments
FUELS								
Marine Gas Oil (MGO)	Fuel	litres	5,500,000–6,000,000 (range)		Fuel Tanks Day tanks	y	SOPEP	Main propulsion & generators. Figure presented as a range at HMC's request (Frank de Groot, 18 June 2026). See MPCP Section 3.2 for credible worst-case single-breach assessment (166.3 m³).
Heavy Fuel Oil (HFO)	Fuel	litres	-					If applicable
Diesel (road/equipment)	Fuel	litres	-					Deck machinery / vehicles
LUBRICATING OILS								
Engine lubricating oil	Lubricant	litres	40000	35000	Main engines tanks	y	SOPEP	Main engines
Gearbox / thruster oil	Lubricant	litres	5000	2000	Main propulsion tanks	y	SOPEP	Azimuth / tunnel thrusters

**LIVERPOOL BAY CCS (LBCCS) — MARINE POLLUTION CONTINGENCY PLAN**

					Thrusters tanks			
Stern tube oil	Lubricant	litres	3800	1500	Header tanks Seal-oil tank		SOPEP	Propeller shaft
Deck machinery grease	Lubricant	kg			Vessel have multiple type of winches ranging from anchor winches, pendant winches, crane winches, traction winches, etc.		SOPEP	Winches, cranes, A-frames
HYDRAULIC FLUIDS								
Hydraulic oil — vessel systems	Hydraulic	litres	16500	10000	Main cranes Crawler Crane	y	SOPEP	Deck crane, anchor handling,
Hydraulic oil — subsea tools	Hydraulic	litres	1200	1000	ROV's	y	SOPEP	e.g. ROV
BILGE & BALLAST								
Bilge water (max accumulation)	Bilge	litres	26500		Bilge water tanks			Engine room bilge
Ballast water	Ballast	tonnes	61758		Ballast water tanks			Maximum ballast capacity
CHEMICALS & SUBSTANCES								
Hydraulic fluid (bio)	Chemical	litres	1500	1200		y	SOPEP	If biodegradable type used

**LIVERPOOL BAY CCS (LBCCS) — MARINE POLLUTION CONTINGENCY PLAN**

Antifreeze / coolant	Chemical	litres		800		y	IMDG code	Engine cooling circuits
Battery acid	Chemical	litres					IMDG code	Emergency batteries
Fire suppression agent	Chemical	kg	57 cylinder CO2 700 ltr - Foam			y		CO ₂ / Halon / FM200 system
Sewage / grey water	Effluent	litres	16900					Holding tank max capacity
PAINTS & COATINGS								
Topside paint — stock carried	Paint	litres	general stock	4400	paint locker	y	IMDG code	Maintenance stock
Anti-corrosion coating	Paint	litres	general stock	1600	paint locker	y	IMDG code	Weld/joint coating — note volume for field joint painting if applicable
Solvent / thinner	Chemical	litres	general stock	3500	paint locker	y	IMDG code	Associated with paint operations
MISCELLANEOUS								
Transformer oil	Electrical	litres						If applicable
Refrigerant gas	Chemical	kg	640 kg		Galley HVAC	y		HVAC / refrigeration
Welding gases	Gas	cylinders	30Acy rackc 60 Ox racks 3 Ar racks					Acetylene, oxygen, argon

**Boskalis Ndurance Inventory****LIVERPOOL BAY CCS (LBCCS) — MARINE POLLUTION CONTINGENCY PLAN****VESSEL HYDROCARBON & HAZARDOUS SUBSTANCE INVENTORY**

Vessel Name:		NDURANCE (IMO: 9632466)			Operator / Contractor:		Boskalis Subsea Cables	
Vessel Role:		Cable Lay / Trenching Vessel			Date Completed:		11/06/2026	
Completed by:		Boskalis			Reviewed by:		Andrew Sneddon	
Substance / Product	Category	Unit	Max Capacity (total onboard)	Operational Quantity	Storage Location on Vessel	SDS Available (Y/N)	Spill Kit Provision	Notes / Comments
FUELS								
Marine Gas Oil (MGO)	Fuel	m3	2263 m3	± 500 m3	Bunker/Storage Tanks	Y	SOPEP / Drip tray	Main propulsion & generators
Heavy Fuel Oil (HFO)	Fuel	litres	N/A	N/A	N/A	N/A	N/A	If applicable
Diesel (road/equipment)	Fuel	litres	N/A	N/A	N/A	N/A	N/A	Deck machinery / vehicles
LUBRICATING OILS								
Engine lubricating oil	Lubricant	litres	8202 litres	± 500m3 (TBC)	PS/SB Engine Room	Y	Inside machinery space / Tank / Drip Tray	Main engines
Gearbox / thruster oil	Lubricant	litres	1700 litres	± 1200 litres	Respective Thruster Room	Y	Inside machinery space /	Azimuth thrusters / tunnel

**LIVERPOOL BAY CCS (LBCCS) — MARINE POLLUTION CONTINGENCY PLAN**

							Tank / Drip Tray	
Stern tube oil	Lubricant	litres	N/A	N/A	N/A	N/A	N/A	Propeller shaft
Deck machinery grease	Lubricant	kg	416 kg	± 416 kg	Oil Store	Y	Inside machinery space / Drip tray	Winches, cranes, A-frames
HYDRAULIC FLUIDS								
Hydraulic oil — vessel systems	Hydraulic	litres	1500 litres	± 750 litres	Respective Thruster Room	Y	Inside machinery space / Tank / Drip Tray	Deck crane, anchor handling, ROV
Hydraulic oil — subsea tools	Hydraulic	litres	500 litres	± 400 litres (TBC)	Main Deck	Y	Contained within HPU / SOPEP	e.g. trenching tool, plough
BILGE & BALLAST								
Bilge water (max accumulation)	Bilge	m3	12.74 m3	± 4 m3	SB Engine Room	Y	Inside machinery space / Tank / Drip Tray	Engine room bilge
Ballast water	Ballast	tonnes			Ballast Tanks	N/A	N/A	Maximum ballast capacity
CHEMICALS & SUBSTANCES								
Hydraulic fluid (bio)	Chemical	litres	2375 litres	± 1200 litres	Oil Store / Tank	Y	Inside machinery space /	If biodegradable type used

**LIVERPOOL BAY CCS (LBCCS) — MARINE POLLUTION CONTINGENCY PLAN**

							Tank / Drip Tray	
Antifreeze / coolant	Chemical	litres	208 litres	± 208 litres	Platform Deck	Y	Inside machinery space / Drip tray	Engine cooling circuits
Battery acid	Chemical	litres	100 litres	± 100 litres	Respective Battery Location	Y	Inside machiner space / Battery Boxes	Emergency batteries
Fire suppression agent	Chemical	kg	545 kg	545 kg	CO2 Room / Galley / Paint Store*	Y	N/A	CO ₂ / Halon / FM200 system
Sewage / grey water	Effluent	m3	134 m3	± 25 m3	Auxiliary Machinery Space	Y	Tank	Holding tank max capacity
PAINTS & COATINGS								
Topside paint — stock carried	Paint	litres	2027 litres	± 100 litres	Paint Store	Y	SOPEP	Maintenance stock
Anti-corrosion coating	Paint	litres	158 litres	± 50 litres	Paint Store	Y	SOPEP	Weld/joint coating — note volume for field joint painting if applicable
Solvent / thinner	Chemical	litres	185 litres	± 40 litres	Paint Store	Y	SOPEP	Associated with paint operations
MISCELLANEOUS								
Transformer oil	Electrical	litres	N/A	N/A	N/A	N/A	N/A	If applicable
Refrigerant gas	Chemical	kg	320 kg	± 320 kg	PS/SB Chiller Room	Y	N/A	HVAC / refrigeration
Welding gases	Gas	cylinders	6 bottles	2 bottles	Main Deck	Y	N/A	Acetylene, oxygen, argon

 liverpool bay ccs	Date 18/06/2026	Doc. N° LBCCS-MPCP-001	Page 54 of 58
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APPENDIX H — PON1 AND PON2 NOTIFICATION FORMS

The following pages reproduce, in full, the current official DESNZ/OPRED notification forms referenced in Sections 8.1 and 8.2: the PON1 email template (Rev 2, March 2024) and the PON2 reporting pro-forma (March 2024). A blank copy of each is held on file and on each project vessel. The PON1 email template is a fallback route, for use only when the Integrated Reporting Service (IRS) on the UK Energy Portal is unavailable; the PON2 pro-forma is forwarded directly to the listed recipients within 6 hours of a loss or dumping incident. Both forms list their own statutory notification recipients in full, including email addresses. In addition to the recipients shown on each form, Marine Licence CML2365 requires LBCCS to separately notify Natural Resources Wales for any reportable release or loss in Welsh waters: 24hr hotline 0300 065 3000, written confirmation to ICC@naturalresourceswales.gov.uk (see Section 8). The LBCCS WP Project Manager (Dimitri Tito — dimitri.tito@eni.com / +44 (0) 7717715342) should also be informed internally ahead of, or in parallel with, external notification.



H.1 PON1 — Oil or Chemical Discharge to Sea

Reproduced below: DESNZ/OPRED PON1 email template, Rev 2, March 2024.



Offshore Petroleum Regulator
for Environment & Decommissioning

Petroleum Operations Notice No.1

This PON1 email template must only be used to report a release of oil/offshore chemical(s) from an offshore installation when the Integrated Reporting Service (IRS) as located on the UK Energy Portal is unavailable.

In the event IRS is unavailable this PON1 email template must be completed and sent to the following recipients:

DESNZ/OPRED – opred@energysecurity.gov.uk

HM Coastguard – oilandgas@hmcg.gov.uk

JNCC – Pollution.Advice@jncc.gov.uk

Marine Directorate – md.spillresponse@gov.scot and/or

MMO – dispersants@marinemanagement.org.uk (based on the latitudes included within the OPEP Guidance)

Additional organisations – must be included as per the relevant approved OPEP

In addition all required telephone notifications must be made as per relevant approved OPEP and Section 3.2 of the PON1 Guidance.

Reporter Details	
Full Name:	
Company:	
Job Title:	
Contact Telephone Number:	
Email Address:	
Notification Details	
Offshore installation identified as the source of the release	
Time & Date release identified	
Details of substance(s) released	
Quantity released	
Is the release ongoing?	
Source, Cause and Response	
Brief details of the location of the release on the offshore installation	
Brief details of the cause(s) of the release	
Brief details of the actions taken in response to the release	

H.2 PON2 — Loss or Deposition of Materials to Sea

Reproduced below: OPRED PON2 reporting pro-forma, March 2024 (2 pages).



PETROLEUM OPERATIONS NOTICE No.2

OPRED Notification pro-forma for reporting the loss or dumping of synthetic materials and other refuse at sea

Forward to, within 6 hours of loss or dumping incident:

BEIS OPRED Aberdeen: e-mail: opred@energysecurity.gov.uk
Scottish Fisherman's Federation PON2@sff.co.uk
National Federation of Fisherman's Organisations nffo@nffo.org.uk
Maritime & Coastguard Agency oilandgas@hmcg.gov.uk
Kingfisher at Seafish kingfisher@seafish.co.uk

Date of Report:			
Identity of Reporter			
Full Name:		Position/Title:	
Contact Telephone No:		Contact E-Mail:	
Operator/Organisation/Company 			
Responsible for Incident:			
Details of the installation/vessel at the time of the loss or dumping			
Name of Installation or Vessel responsible for the loss or dumping of the material			
Quad and Block Number:			
Latitude:		Longitude:	
Date of Loss/Dumping:		Time (24hours):	
Weather conditions at time of loss/dumping			
Wind Direction (0-360 degree):		Wind Speed (knots):	
Beaufort Scale:		Wave Height (metres):	
Materials lost or dumped			
Full description of materials lost			
If the materials are resting on the seabed, are they lying wholly within the 500M Safety Zone?		☐ Yes ☐ No	

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Are the materials likely to float on sea surface or in water column?	☐ Yes ☐ No
If the answer to question above is YES - are materials likely to reach shore or cross a median line? - please specify	
Reasons the loss or dumping (if Force Majeure is invoked please clearly state this): -	
Are there plans to recover the materials? – if yes, specify details including anticipated timescales for the recovery operation. If there are no plans to recover the materials the reason for this must be clearly specified.	
What are considered to be the risks and dangers to other users of the sea as a result of the lost or dumped materials not being recovered?	
Any further information that may be useful:	

For Internal OPRED use only

Close off's received from

SFF	
NFFO	
MCA	
Kingfisher	

**DOCUMENT VERSION CONTROL**

Rev	Date	Author	Status	Description of Changes
0	June 2026	Andrew Douglas Sneddon	DRAFT — For Review	Initial draft through iterative development, June 2026. Key confirmations incorporated: Heerema SOPEP (330-100-0003 Rev B) reviewed and confirmed MARPOL compliant; DCV Balder FO inventory confirmed (5,500–6,000 m³ nameplate range; credible worst-case 166.3 m³); Ndurance (Boskalis CLV) inventory confirmed (MGO max 2,263 m³, operational ~500 m³); at-sea bunkering confirmed not applicable for CLV fleet; MCC replaced throughout with LBCCS WP Project Manager (Dimitri Tito, +44 (0) 7717715342); ER Scheme incorporated into Table 7.1; appendices relettered A–G. v19: Boskalis Ndurance SOPEP (FMO-805q Rev 05, 21 July 2025) received and reviewed — confirmed MARPOL Annex I Regulation 37 compliant, Cyprus-flagged, Lloyd's Register classed. Appendix G updated accordingly. Table 10.1 spill kit inventory populated from confirmed Ndurance SOPEP equipment list. v20: Heerema fuel inventory figures revised to ranges/indicative values at HMC's request (Frank de Groot, 18 June 2026), consistent with HMC's conditional acceptance of inclusion of fuel inventory data in this MPCP. All substantive pre-submission items now closed. v21 (23 June 2026): Pre-submission completeness review. Section 6.5 rewritten — no separate ER Bridging Documents required; interface confirmed via contractor SOPEPs, Table 7.1 notification chain, and Section 4 escalation triggers. Table 10.1 TBCs closed: boom row confirmed per vessel SOPEP minimum; dispersant confirmed as not held as standing provision (requires NRW/OPRED approval at time of incident). Appendix C and E1 workspace drafting artefacts removed; all contacts and status fields confirmed. Minor drafting improvements throughout (pending/outstanding language removed or resolved). This Plan is considered ready for submission to NRW.