

# **Eni UK Limited - OSPAR Public Statement**

# **2023 Environmental Performance**

# Hewett Field and Liverpool Bay Area



## 1. Introduction

This is the Environmental Statement for Eni UK Limited (hereafter referred to as 'Eni'), for the period 1<sup>st</sup> January to 31<sup>st</sup> December 2023, (hereafter called the reporting period). This statement reports the environmental performance of offshore operations to our stakeholders, and to the public, in accordance with the 'Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) Guidance and Reporting Requirements', in relation to OSPAR Recommendation 2003/5. This statement covers all 2023 Eni UK offshore operational oil and gas activities, which are decommissioning operations in the Hewett Field and production operations in the Liverpool Bay area.

In 2023, Eni UK made significant strides in its decarbonisation efforts, focusing on carbon capture and storage (CCS), contributing to the HyNet North West hydrogen production project, and advancing electrification. Additionally, Eni UK continued to support ongoing efforts to reduce emissions from existing operations. Such projects are outside of the normal scope of an OSPAR public statement but are summarised in Section 6 below because of their relevance to Eni's energy transition in support of our net-zero emissions target.

### 2. HSE Management System

Eni UK maintains a HSE policy (below), the commitments within which are implemented through management systems and operational controls across all Eni UK operations. Eni UK is committed to minimising environmental impact via an environmental management system (EMS) which is certified to ISO 14001:2015 and ISO 50001:2018 by Lloyds Register Quality Assurance (LRQA), certificates below. These certifications involve annual surveillance audits.

The re-certification of the ISO 14001 is scheduled in 2024. Further ISO 50001 routine surveillance audits are scheduled for 2024, providing external verification that continual improvements are achieved in environmental, including energy management, performance to ensure best environmental practices and procedures are followed.

Appropriate interface arrangements are in place between Eni UK management systems and those of thirdparty service companies such as Petrofac, the Hewett Installation operator, and Valaris, the drilling contractor.



#### LRQA ISO 50001 Certificate

#### LRQA ISO 14001 Certificate



Eni UK HSE Policy

### 3. HSE Improvement Objectives

Eni UK maintains environmental improvement objectives, progress against which is monitored by the Health, Safety and Environment Team. These objectives are linked to the significant environmental aspects. 2023 focus areas were:

- Maintenance of ISO 14001 EMS certification.
- Environmental Compliance
- Completion of all planned audits, inspections and emergency response exercises.
- Chemical substitution to OSPAR schedule.
- Work with industry groups on greenhouse gas reduction opportunities.
- Eni Process Safety Fundamentals roll out.
- NET ZERO strategy.

### 4. Hewett Field Area

The Hewett Field infrastructure comprises six installations, 32 platform wells, and a further eight subsea wells tied back to the platforms, as well as a number of pipelines.

On 1<sup>st</sup> January 2018, the responsibility for the Hewett Field Installations, including related environmental management and regulatory requirements, was transferred to Petrofac Facilities Management Ltd. (Petrofac) through their appointment as the Hewett Field Installation Operator. Petrofac is responsible for reporting the environmental performance of the Hewett Field installations and their associated production operations. A documented HSE Management System Interface Plan is in place between Eni UK and Petrofac, to manage the implementation of Eni requirements.

Eni UK is the Hewett Field Well Operator. In Q3 2021 a change of Well Operatorship was completed from Eni Hewett Limited, (a wholly owned subsidiary of Eni UK) to Eni UK.

This statement therefore covers the environmental performance of Hewett Field Wells only.

The Hewett Field is located in the Southern North Sea, approx. 22km from the Norfolk coast, and 85km west of the UK/Netherlands median line, in Blocks 48/29, 48/30, 52/05, in a water depth between 20-40 meters. Hewett Field lies within and overlaps a network of offshore Marine Protected Areas (MPAs) and Eni UK is proactively addressing the challenges of decommissioning infrastructure within these protected sites.

# 4.1. Well Plug and Abandonment (P&A) and Pipeline Cutting Operations

The Hewett Field has come to the end of its productive life. Cessation of Production for 52/5A (2020) allowed for the well plug-and-abandonment (P&A) work on 52/5A to start in 2021 and completed in 2023 with all wells Plugged and Abandoned to AB3. At the completion of P&A at 52/5A, Eni UK continued to progress with its P&A activities and enabling activities at the Main Complex (48/29A). Eni UK has a contract with Valaris for its jack-up rig, Valaris 72 to carry out the well P&A work until all wells in the Hewett field are P&A'd (2024/2025). A contract between Eni UK and Boskalis is in place for carrying out supporting P&A with the Boksalis Diving and Support Vessel (DSV) and other support vessel fleet. To meet NSTA and

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HSE requirements, Eni UK will ensure all wells have been permanently abandoned by placing verified barriers to isolate formations that have flow potential from the surface.



Figure 1: Hewett Field Facilities Schematic showing 2023 P&A activities in colour.



Figure 2: Valaris 72 Jackup alongside 52/5-A Platform

#### 4.2. Decommissioning Programmes

Eni UK has received approval for its decommissioning programmes and environmental appraisals for Platform Installations (2021) and Subsea Installations (2022) and is working towards obtaining approvals for its Pipelines decommissioning programmes and environmental appraisals. The Hewett platforms will be transported to The Netherlands for recovery and disposal. The majority of the materials and components of the Hewett Field infrastructure and topsides will be recycled. The small proportion of

materials remaining after reuse and recycling will be disposed of appropriately in accordance with Eni UK policies and the relevant regulatory requirements, including waste management, environmental, health and safety expectations. There are no drill cuttings in the scope of these decommissioning programmes.

### 4.3. Hewett Field Decommissioning Environmental Performance

During 2023, well P&A work was performed at the following locations:

- 52/5-A platform all wells P&A'd to AB3.
- 48/29A platform commencement of P&A activities. To be completed in Q3 2024.

For more details, see Figure 1: Hewett Field Facilities Schematic showing 2023 P&A activities in colour.

#### 4.3.1. Chemicals

The use and discharge of chemicals is subject to rigorous control under 'The Offshore Chemicals Regulations 2002 (as amended)'. This requires regulatory approval following an assessment of the predicted environmental impacts of any proposed chemical discharges. In addition, only chemicals that have been registered by the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) may be used.

During the 2023 Hewett Field P&A campaign, the vast majority of the chemicals used were PLONOR (pose little or no risk to the environment). Figure 3 shows the use and discharge of Hewett well-related decommissioning operations. Eni UK makes best endeavours to limit fluid discharge by reinjection of fluids back to the reservoir as much as possible. Furthermore, chemicals used in well operations are subject to continual review and Eni UK will continue to pursue suitable alternatives, where appropriate.



Figure 3: Chemical Use and Discharge

#### 4.3.2. Oil in Water

Management of fluids associated with Hewett production operations (including produced and process water), and any related discharges, are reported within the scope of the Petrofac Facilities Management Ltd OSPAR Statement for the Hewett Field Installations.

Eni UK strives to re-inject most of its decommissioning-related fluids, however in 2023 an increased amount of cements and swarf was returned to shore for treatment due to having no donor wells (see Figure 4).

### 4.3.3. Reportable Incidents

During 2023, one Petroleum Operations Notice (IRS/2023/3279/PON2) was submitted to OPRED via the Integrated Reporting Service, for the loss of Ocean Bottom Nodes while surveying the Hewett Field. This incident has now been closed with no further action required.

### 4.3.4. Waste

The waste generated as part of the Hewett Field P&A campaign is presented in Figure 4, split by waste type. Eni UK continues to work with waste service companies to maximise recycling and treatment to minimise waste sent to landfill. The large proportions of treated waste were due to cements and swarf been returned to shore for treatment, as there were no donor wells available on 52/5A to re-inject these fluids from the 52/5A P&A works.



Figure 4: Well Abandonment Operations Waste Management

# 4.3.5. Atmospheric Emissions

During 2023, direct emissions associated with Hewett Field P&A well operations were limited to: diesel fuel used by Jackup rig and DSV vessel (see Table 4.3.5 1).

Source of emissions	Total (tonnes)	tCO2e
Valaris 72 - Diesel Usage	1,524	4,984
DSV vessel - Diesel Usage	982	3,211
Total	2,506	8,195

Table 4.3.5-1: Hewett Well Operations - Atmospheric Emissions

### 5. Liverpool Bay Asset

Eni UK is both the installation and well operator for the Liverpool Bay Field, which produces oil and gas (gas sales ended in June 2023).

### 5.1. Liverpool Bay Operations – Oil and Gas Production

Process plant on the offshore platforms separates oil, gas and water produced from the oil and gas reservoirs. Once the oil has been separated from the water, it is pumped to the Oil Storage Installation (OSI) via pipeline. Oil is periodically transferred from the OSI to export tankers, for shipment to customers.

Until end June 2023, produced gas was treated onshore at the Point of Ayr (POA) Gas Terminal, where it was dried and sweetened. A small portion of the gas produced was used to generate power, some of which was then exported to the national grid. The remaining gas processed was exported via onshore pipeline to Connah's Quay Power Station. Export of gas from Douglas to POA ended in June 2023, as part of the planned Liverpool Bay decommissioning programme, in preparation for POA becoming an operational hub for Liverpool Bay Carbon Capture and Storage (LB CCS).

### 5.2. Offshore Facilities

The Douglas field contains low sulphur, 44° American Petroleum Institute (API) black oil with a low gas to oil ratio. The Douglas Complex is located approximately 23km off the North Wales and English coastlines and consists of an accommodation unit, a processing platform and a wellhead tower, all bridge linked.

The layout of the Douglas Complex is designed with the objective of separating the potentially hazardous production plant and well facilities from the living quarters and control centre. The three platforms are orientated to provide the smallest target to passing ship movements. Water depth at the location is 29 metres.

There are 4 unmanned satellite installations, the reservoir fluids from which are routed to the Douglas Complex for separation.

- Lennox lies 8 km off the Sefton coast in 7m water depth and produces both gas and condensate, together with formation water.
- The Hamilton and Hamilton North are (almost identical) platforms also producing both gas and condensate, together with formation water.
- Conwy is located 33 kilometres from the North Wales coast and produces oil which flows to the Douglas Complex via a 12 kilometre, 8 inch diameter subsea pipeline. Eni UK purchased the Conwy Field from Tailwind Mistral in July 2021.

The stabilised export crude oil from the Douglas Complex is piped 17km north to the Oil Storage Installation (OSI). The OSI is a purpose-built barge that is permanently moored in a location selected to avoid shipping lanes. The OSI is 207 metres long, 44.5 metres wide and has three deck levels and a helipad. The vessel has 10 oil compartments (plus two slop tanks) surrounded by 4.8 metre wide seawater ballast tanks. The cargo tanks have a total storage capacity of 146,290m<sup>3</sup>.



Douglas (left) and Lennox (right)



Hamilton (left) and Oil Storage Installation (right)



Hamilton North (left) and Conwy (right)

# 5.3. Liverpool Bay Assets – Environmental Performance

# 5.3.1. Chemicals

Chemical permits are in place for the offshore use/discharge of process chemicals in production and well workover operations. Offshore production chemical consumption and discharge for the reporting period is presented in

*Figure 5*. Approximately, 85% of chemicals used were PLONOR (poses little or no risk to the environment) chemical and hence the impact from this discharge was insignificant.



Figure 5: Offshore Production Operations Chemicals Use and Discharge

During 2023 Douglas, Hamilton and Hamilton North Well Intervention Operations, mostly Monoethylene Glycol was used for pressure testing activities and discharged to the marine environment. Figure 6 details 2023 LBA Operations Chemicals Use and Discharge.



Figure 6: LBA Well Operations Chemicals Use and Discharge

#### 5.3.2. Oil in Water

Permitted discharges of produced water containing low concentrations of oil and chemicals occur from offshore installations. These have the potential to negatively impact the marine environment.

*Figure 7* shows the amount of oil entrained in produced water discharged from Douglas and OSI during the reporting period.



Figure 7: Offshore Oil in Produced Water

#### 5.3.3. Reportable Incidents

During 2023, one Petroleum Operations Notice (IRS/2023/3274/PON1) was submitted to OPRED via the Integrated Reporting Service, for the maximum release of 0.000081 tonne of oil from the jack up rig (Irish Sea Pioneer) located alongside Douglas, see *Figure 8*. The cause of this release was the secondary gearbox seal which will be repaired when the vessel is in dock during 2024.



Figure 8: Releases to Sea (PON 1 Reports)

#### 5.3.4. Waste

Waste generated offshore fluctuates depending on the activities ongoing at sites. *Figure 9* shows offshore waste generated in 2023 as well as the fate of each waste type.



Figure 9: Liverpool Bay Offshore Waste Management

# 5.3.5. Atmospheric Emissions

Atmospheric emissions arise from power generation and flaring, demand for which is governed by production levels. *Figure 10* shows Carbon Dioxide (CO<sub>2</sub>) emissions arising from offshore power generation and flaring during the reporting period. The March and August peaks in flare CO2 emissions were due to offgas system maintenance. The flare higher CO2 emissions from September to December was due to limited availability of the gas injection wells.



Figure 10: Offshore CO2 Emissions

# 6. Energy Transition – Net Zero

Eni UK's strategy towards Net Zero is supported by an industrial transformation plan that encompasses the whole value chain, including an optimisation and enhancement of the upstream portfolio through progressive decarbonisation, combined with the expansion of bio, renewable and circular economy businesses and with the offer of new energy solutions and services.

Since 2014, Eni has been on a path of industrial transformation that has progressively enabled us to deliver both security of supplies and environmental sustainability.

In 2023, Eni reconfirmed its decarbonization strategy, including emissions targets. Eni's path to Carbon Neutrality by 2050 is made up of a series of intermediate targets that involve first of all achieving net zero emissions (Scope 1+2) from the Upstream business by 2030 and from Eni in its entirety by 2035, and then achieving net zero by 2050 from all GHG Scope 1, 2 and 3 emissions associated with Eni's entire value chain, both in absolute terms and in terms of intensity. This strategy is aligned to UK NSTA requirements.

# 6.1. Eni UK Carbon Capture and Storage (CCS)

#### 6.1.1. Liverpool Bay

As described above, Eni UK operates a number of gas fields in Liverpool Bay, which are approaching the end of their productive lives. These fields have an estimated carbon dioxide (CO<sub>2</sub>) storage capacity of around 200 million tonnes, and a 2016 study by the Energy Technologies Institute cited one of these fields, the Hamilton Gas Field, as the lowest cost UK CCS option, based on the overall project life.

Eni's CCS plans foresee the reutilisation of three of the Liverpool Bay depleted gas fields as CO<sub>2</sub> reservoirs for injection and storage (the Hamilton, Hamilton North and Lennox Gas Fields). This proposed CCS development will be an integral part of the wider HyNet North West energy project, designed to put the North West England and North Wales region at the forefront of the UK's journey to a Net Zero future. It

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will use a combination of hydrogen energy, in place of fossil fuel gas, and CCS to meet the challenge of reducing emissions of greenhouse gases from industry, homes and transport by 2050, starting in the mid-2020s.

In October 2020, Eni UK was awarded a CO<sub>2</sub> appraisal and storage license in Liverpool Bay to develop a CO<sub>2</sub> storage site. In October 2021 the HyNet North West Cluster was selected by the UK Government as one of the two priority projects (Track 1 projects) out of five competing in the CCUS Cluster Sequencing Process.

In February 2022, Eni UK announced that a number of companies were interested in the opportunity to have their emissions captured, transported and stored in Eni UK's depleted hydrocarbon reservoirs as part of the HyNet North West project. A total of 19 companies had signed agreements at this stage, demonstrating the outstanding interest that UK industry has shown for the decarbonisation potential offered by the project. HyNet will benefit from the expertise and ideal location of Eni UK's infrastructure for transportation and storage.

This project will provide important support to the UK's decarbonisation process by contributing between a third and a half of the UK's storage capacity target of 20-30 million tonnes of  $CO_2$  captured per year by 2030, and 40% of the UK Government's 2030 low carbon hydrogen production target.

The agreements signed to date include hard-to-abate sectors and will play a crucial role enabling decarbonisation initiatives in the North West of England and North Wales industrial cluster.

In October 2023, Eni reached an agreement in principle with the UK Government's Department for Energy Security and Net Zero (DESNZ) on the key terms and conditions for the economic, regulatory and governance model for the transportation and storage of carbon dioxide at the HyNet North West industrial CCS cluster.

The agreement is an important step towards HyNet North West becoming fully operational as the world's first asset based regulated CCS business, providing carbon transportation and storage for companies in the North West of England and North Wales.

Eni believes CCS is crucial in the energy transition strategy, becoming a significant business for the company moving forward. Eni has established a leading position in the UK where it is the CO2 transport and storage operator serving the HyNet Industrial Cluster.

The HyNet North West project will transform one of the UK's most energy intensive industrial districts into one of the world's first low-carbon industrial clusters. Providing local jobs in the area, the project will support the decarbonisation of cement, energy, and chemicals, as well as attracting investment into a new industry. HyNet is expected to be operational by the middle of the current decade, with a storage capacity of approximately 4.5 million tonnes of CO2 per year in the first phase. The HyNet North West project will make a major contribution to the UK's target of storing 20-30 million tonnes of CO2 each year by 2030.

# 6.1.2. Hewett

The reuse of the Hewett Field platforms and infrastructure, including pipelines, has been considered for a future carbon capture and storage (CCS) project. Cement used for well decommissioning on the main

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reservoir is  $CO_2$  resistant, facilitating the reservoir's use as part of a potential CCS project in the future. As such, a Carbon Storage Licence Application was submitted to the NSTA in September 2022.

In Sept 2023, Eni was awarded a Carbon Dioxide Appraisal and Storage Licence by NSTA in relation to the depleted Hewett gas field in the Southern North Sea. Therefore, it is planning a second UK CCS hub to decarbonise the Bacton Energy Hub and the Thames Estuary region.

Together, HyNet North West and Bacton have the capacity to store 500 million tonnes of CO2.



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