



2023 Environmental Report

INEOS E&P (UK) LIMITED

INEOS
Energy



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INEOS E&P (UK) Limited
2023 Environmental Report

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Glossary

BMS	Business Management System
EMS	Environmental Management System
HSE	Health and Safety Executive
ISO	International Standards Organisation
NUI	Normally unattended installation
OCNS	Offshore Chemical Notification Scheme
OPEP	Oil Pollution Emergency Plan
OSPAR	Oslo Paris convention for the protection of the marine environment of the NE Atlantic
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning
PLONOR/ PLO	Poses Little or No Risk to the environment
PON1	Petroleum Operations Notice 1
PWT	Produced water treatment plant
SHE	Safety, health and environment
SHEMS	Safety, Health and Environment Management System
SNS	Southern North Sea
SUB	Chemical is a candidate for substitution
VOC	Volatile Organic Compounds

1 Introduction

This document is the 2023 Environmental Report for INEOS E&P (UK) Ltd ('INEOS') and describes offshore operations undertaken throughout the year.

This report is a public statement designed to:

- Describe the scope of the company's offshore activities;
- Provide a description of the INEOS Environmental Management System (EMS);
- State the company's environmental policy, goals, objectives and targets; and
- Provide a performance summary for 2023.

This document is the ninth annual Environmental Report to be issued as a public statement by INEOS E&P (UK) Limited.

2 Scope of Activities

This Section summarises activities undertaken in 2023.

2.1 Overview of INEOS

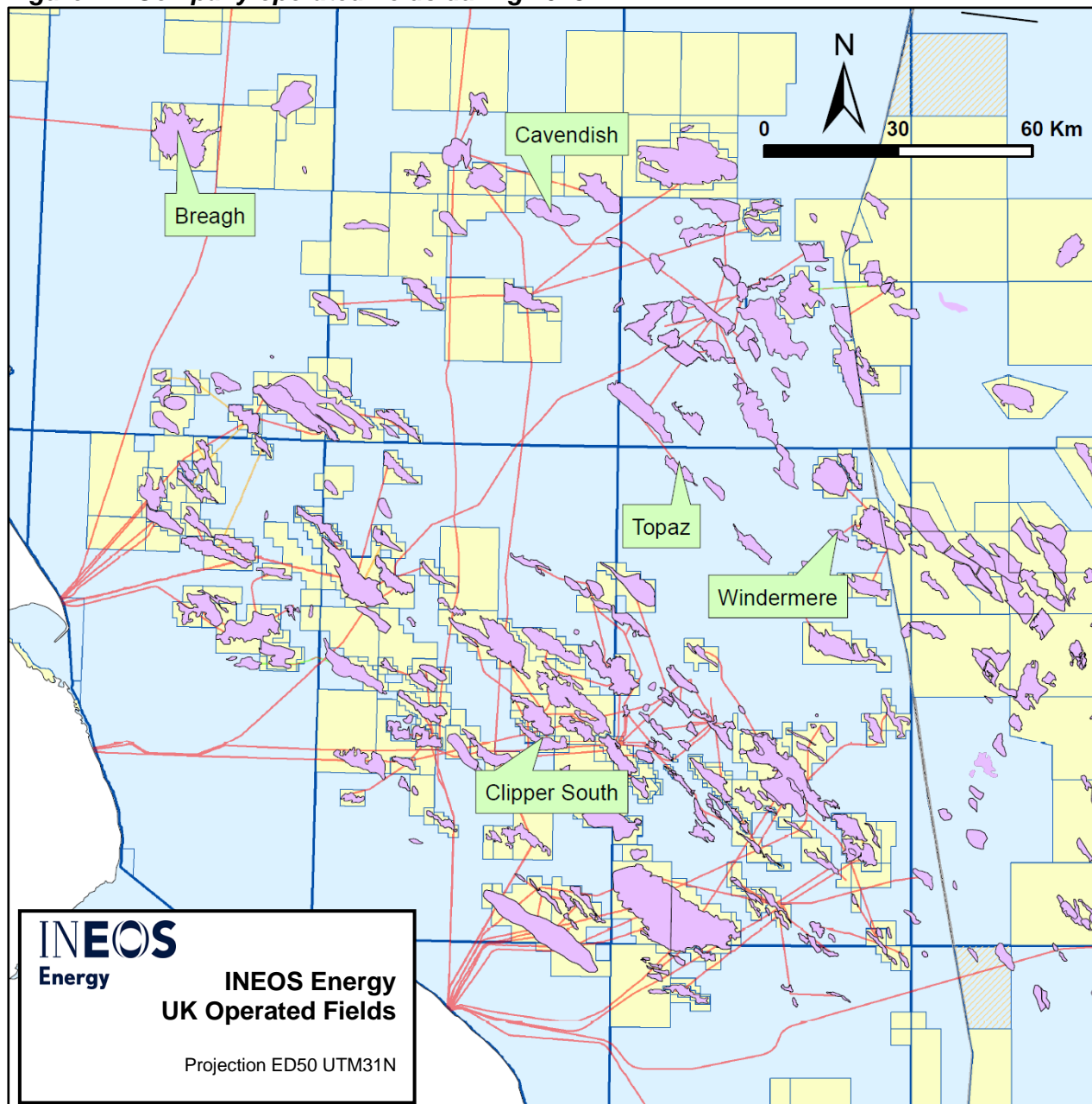
INEOS is a global manufacturer of petrochemicals, speciality chemicals and oil products with sales of around \$60 billion. INEOS was operator of the Breagh and Clipper South gas production fields during 2023. It was also operator of the non-producing Cavendish, Windermere and Topaz fields which are undergoing full decommissioning.

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2.2 Location of Offshore Activities during 2023

The locations of INEOS operated fields are shown in Figure 2.1 below.

Figure 2-1 Company operated fields during 2023

2.2.1 Production Operations

2.2.1.1 Breagh

The Breagh A platform is located in SNS Block 42/13a in a water depth of 62m. The platform was installed in late 2011 and production commenced in October 2013. The platform is normally operated unmanned, typically for periods of 25-30 days in between maintenance visits.

The Breagh platform was controlled, operated and maintained for production purposes in 2023 by INEOS.

During 2023 the Noble Resilient rig attended the Breagh platform to perform well intervention and drilling operations. Velocity strings were installed in four of the Breagh wells, A4z, A5z, A8 and A9z to maintain production. A sidetrack was drilled on the A2 well, successfully forming the A12 well.



2.2.1.2 Clipper South

Production operations commenced at the Clipper South platform in August 2012. It is located in SNS Block 48/19, in a water depth of 23.5m. The platform is operated as a NUI and maintenance visits typically occur for approximately six days per month.

Clipper South originally exported gas via the ConocoPhillips owned LOGGS platform. This was taken out of service in October 2018 and a new pipeline between Clipper South and the Shell owned Clipper platform was installed. A produced water treatment plant was also installed in 2018 due to the liquids handling requirements at the Clipper platform.



2.2.2 Other Operations

2.2.2.1 Cavendish

The Cavendish platform is a fixed four-legged jacket that produced gas and condensate and is located in SNS Block 43/19a. The platform was tied back via a 47 kilometre long 10-inch pipeline to the ConocoPhillips operated Murdoch host platform however production ceased in 2018 and the wells were shut in. Work was undertaken in 2019 to put the platform into lighthouse mode, where no hydrocarbons are present. Access is via walk-to-work vessel only.

In 2023, decommissioning operations commenced on Cavendish. This included the cutting and removing of shallow buried and unburied sections of pipeline at each end of the Cavendish pipelines, and preparatory works on the topsides for the final cut and removal.



2.2.2.2 Windermere

The Windermere platform is a NUI located in SNS Block 49/09b. This was operating in Lighthouse Mode (LHM), following the plugging and abandonment of the two platform wells in 2019.

In 2023, decommissioning operations progressed with the cutting and removing of shallow buried and unburied sections of pipeline at each end of the Windermere pipelines, and the cutting and removal of the topsides. Temporary navigation aids were placed on the jacket structure for removal in 2024.



2.2.2.3 Topaz

The Topaz subsea well head and protective structure was a gas producing seabed installation located in SNS Block 49/02a. The facility was tied back to the Schooner host platform via a 15.2 kilometre long 6-inch gas export line, with associated methanol feed line and control and communications cable. Due to low flow rates, the Topaz well has been shut in and production ceased on 31st October 2017. Operations were undertaken in 2019 to flush and flood the pipelines between Topaz and Schooner and to cut and remove a section of the pipeline at the Topaz wellhead end. In 2023, the shallow buried and unburied sections of pipeline at each end of the Topaz pipelines were removed.

2.2.2.4 Other Activities

As well as usual production activities, other activities included the velocity string and drilling operations at Breagh and the decommissioning operations at Cavendish, Windermere and Topaz (the cut and partial removal of the pipelines). The environmental performance of these activities are discussed in Section 5.2.2.

3 EMS Summary

This Section provides a brief description of the company's EMS as it operated in 2023.

3.1 Introduction

The EMS is a component of the overall Business Management System (BMS) that defines the organisational structure, planning activities, responsibilities, procedures, business processes and resources required for developing, implementing, achieving, reviewing and maintaining the environmental policy.

The EMS is a tool for identifying and managing the impact the business has on the environment. It works to reduce this impact by controlling the quantity of materials and energy used and the amount of waste produced. As well as facilitating the management of environmental impacts in a credible way, the EMS provides a practical tool to help evaluate and improve performance.

The following guiding principles and methodologies are incorporated into the OSPAR Strategy and integrated, as appropriate, into the EMS:

- the precautionary principle;
- the polluter pays principle;
- best available techniques and best environmental practice, including, where appropriate, clean technology;
- sustainable development;
- the application of an integrated ecosystem approach; and
- the waste management hierarchy of avoidance, reduction, re-use, recycling, recovery, and residue disposal.

3.2 Verification

The offshore operations undertaken by the business have had ISO 14001 certification since 2010, which was first obtained by previous owners of the business and has continued through into INEOS ownership. This covers the management of all the company's exploration, drilling, development and production operations. Recertification was achieved in December 2022.

3.3 Review

A formal review of SHEQ performance is conducted annually. This is an essential step required to assess the effectiveness of the SHEMS in achieving the aims of the company's policy and objectives and to achieve continuous improvement in the control system.

The review process enables the company to:

- review progress against existing objectives and targets;
- consider evidence of performance, such as audits and other reports;
- consider the sufficiency of the organisational structure, the available resources, the policy and the management system in general; and
- agree new objectives and targets.

Internal auditing is used to objectively investigate how each element of the management system is being applied. Internal audit reports provide input to management review, along with other performance indicators.

4 Environmental Policy

This Section provides a brief description of the company's environmental policy, including relevant environmental goals, objectives and targets set for significant environmental aspects and impacts.

4.1 Introduction

In line with the OSPAR Strategy, the company has established an environmental goal of protecting and conserving the maritime area against any potentially adverse effects resulting from its activities. To achieve this goal, programmes and measures to identify, prioritise, monitor and prevent/reduce/eliminate any emissions, discharges or losses of substances which could cause pollution, have been developed.

Non-polluting activities, that may have potentially adverse effects on the ecosystems and biological diversity of the maritime area, include exploration activities and the installation or decommissioning of structures, cables and pipelines.

4.2 SHE Policy Statement

The components of the SHE Policy Statement that relate to environmental management are stated in the remainder of this Section.

The Company recognises its moral and legal obligations to conduct all activities in a manner which protects the natural environment with the prevention of pollution. All employees are required to act responsibly so as to protect the environment.

In relation to environmental management, the company will:

- annually set SHEQ objectives, seeking to achieve continual improvement;
- ensure that a competent workforce is established and receives all necessary information, instruction and training and that all personnel have a clear understanding of their roles and responsibilities;
- provide all personnel with opportunities for participation in SHE decisions, risk assessments and aspects of SHE management as well as undertaking consultation and communication regarding SHE issues;
- monitor and record SHEQ performance and assess compliance through internal audits;
- annually conduct management review of performance against objectives, including review and development of the Policy and BMS and communicate the results of this review with the workforce;
- ensure that sufficient resources are provided to achieve its objectives.

For all business activities and projects, the company will:

- comply, as a minimum, with all SHE legislation applicable in the UK, to discharge its Duty of Care, applying best industry practice and undertaking steps to improve safety or environmental protection levels where appropriate;
- ensure that systematic hazard identification, assessment of risk and incorporation of measures to minimise and control risks are central to all our activities;
- apply all necessary control measures in the design, construction and operation of offshore facilities to prevent the occurrence of major accident events;
- select competent contractors with regard to their SHEQ management capability and provide them with all necessary information, including definition of INEOS's SHEQ requirements;
- monitor and audit contractors as necessary to ensure satisfactory quality assurance and SHE performance; and
- maintain emergency and contingency plans.

The company requires each of its contractors and suppliers to:

- operate effective SHEQ management systems; and
- comply with INEOS's SHEQ requirements including appropriate SHEQ planning, hazard identification, risk control, performance monitoring and reporting.

4.3 Objectives and targets for 2023

The environmental management objectives and targets for the period between January and December 2023 were determined in order to progressively achieve the commitments set out in the SHEQ Policy Statement. Section 5.2 provides further detail.

5 Performance Summary

This Section provides a summary of performance in relation to compliance with relevant legislative requirements and compliance with the environmental policy, goals, objectives and targets. A summary of offshore environmental aspects, and their associated emissions and impacts, is also provided.

5.1 Introduction

The company's internal and external auditing processes enabled reporting on the areas of environmental performance defined in Section 4, i.e. the extent to which the environmental goals listed below have been achieved:

- compliance with legislation;
- progress made in achieving environmental goals; and
- continual improvement in environmental performance.

5.2 2023 Environmental Performance Summary

Progress against the identified objectives and targets for 2023 is considered in the annual Management Review. Key objectives and targets are related to incidents, BMS development and certification, competence, emergency preparedness and response, audit and review and the offices. In 2023, all objectives were achieved and the audit schedule continued throughout the year in order to ensure that progress against objectives and targets is maintained.

5.2.1 Production Activities

Production operations during 2023 were undertaken at Breagh and Clipper South. Section 5.2.2 provides information concerning other activities.

5.2.1.1 PON1 Incidents

No PON1 incidents occurred during 2023.

5.2.1.2 Chemical use and discharge

During 2023, Breagh production operations used methanol gas-hydrate inhibitor in order to undertake well start-up operations. The methanol remained within the production system and therefore was not discharged to sea at the platform. MEG is also supplied to the platform via a 3" pipeline and is used within a closed loop system, which is therefore not required to be permitted. SOBO S GOLD 08 (colour band Gold) rigwash detergent was also used on Breagh for platform cleaning.

Three products are used regularly for Clipper South operations: Monoethylene Glycol (OCNS category E), Ethylene Glycol (OCNS category E) and CORR13610A (colour band Gold). These products prevent corrosion in the pipeline between Clipper South and Clipper and must be added to ensure pipeline integrity. These products are not discharged during normal operations. Once a year, the Emergency Shutdown (ESD) dump valves must be tested, requiring the contents of the pipework between the isolation valve of the tank and the dump valve to be discharged to the water discharge caisson. Therefore, a batch of chemicals is discharged. This discharge has been risk-assessed and CHARM modelling has been undertaken where appropriate which generates an RQ of less than 1, evidencing that this discharge will not have a significant effect on the environment. A gas hydrate inhibitor, EC6671A (colour band white) is also included in this discharge due to being present in the production pipework. SOBO S GOLD 08 (colour band Gold) rigwash detergent was also used on Clipper South for platform cleaning.

Table 5-1 below presents the quantities of chemicals used and discharged at Breagh and Clipper South during 2023 based on label and ranking categories.

Table 5.1 Summary of Chemical Types Used and Discharged during normal platform operations

OCNS category or colour band ranking	Additional Label	Quantity (kg)	
		Use	Discharge
Breagh			
E	PLONOR	11564	0
Gold	-	21	0
Clipper South			
E	PLONOR	14077	0
Gold	-	22912.41	105.36
White	-	0	100.8
Total			
E	PLONOR	25641	0
Gold	-	22933.41	105.36
White	-	0	100.8

5.2.1.3 Produced water discharges

The Breagh platform utilises a closed production system and there are no separation facilities or disposal caissons; therefore there are no discharges of produced water.

Clipper South has a produced water treatment (PWT) plant to remove produced water prior to export to Clipper. Table 5-2 below presents the volume of water that was processed by the PWT plant and the results of the sampling of the water that is discharged once treated.

Table 5.2 Clipper South PWT Discharge Results

Month	Total Volume of Water (m³)	Average Oil in Water (mg/l)	Weight of Oil (t)
January	9217.00	10.87	0.100
February	9245.00	5.54	0.051
March	10991.00	6.87	0.076
April	10784.00	6.32	0.068
May	9190.46	6.50	0.060
June	8444.00	6.45	0.055
July	4387.00	6.65	0.029
August	7976.40	9.29	0.074
September	10184.00	7.40	0.075
October	11038.00	9.11	0.101
November	8008.58	11.32	0.091
December	9643.84	15.49	0.149
Total	109109.28	8.48	0.929

5.2.1.4 Waste

A total of 30.2 tonnes of waste was generated by Breagh and Clipper South during 2023, with Breagh producing 10.1 tonnes and Clipper South producing 20.1 tonnes. A summary is provided in Table 5.3 and

Table 5.4 below. The majority of waste from both platforms was recycled, with no waste directed to landfill.

Table 5.3 Summary of Waste from Production Operations from Breagh (tonnes), 2023

Group	Type	Reuse	Re-cycling	Waste to Energy	Incinerate	Landfill	Other	Total	Comments
Group I	Chemicals / Paints	0	0.562	0	0	0	0	0.562	
	Drums / Containers	0	0.073	0	0	0	0	0.073	
	Oils	0	0	0	0	0	0	0	
	Misc	0	1.151	0.120	0	0	0.200	1.471	Treatment
	Sludges/ Liquids/ Washings	0	0	0	0	0	0	0	
Group II	Chemicals / Paints	0	0	0	0	0	0	0	
	Drums / Containers	0	0.020	0	0	0	0	0.020	
	Scrap Metal	0	0.840	0	0	0	0	0.840	
	Segregated recyclables	0	3.410	0	0	0	0	3.410	
	General	0	1.320	2.400	0	0	0	3.720	
	Sludges/ Liquids/ Washings	0	0	0	0	0	0	0	
Group III	Asbestos	0	0	0	0	0	0	0	
	Radioactive materials (exc. NORM)	0	0	0	0	0	0	0	
	Clinical	0	0	0	0	0	0	0	
	Explosives	0	0	0	0	0	0	0	
Total		0	7.376	2.520	0	0	0.200	10.096	

Table 5.4 Summary of Waste from Production Operations from Clipper South (tonnes), 2023

Group	Type	Reuse	Re-cycling	Waste to Energy	Incinerate	Landfill	Other	Total	Comments
Group I	Chemicals / Paints	0	0.145	0	0	0	0	0.145	
	Drums / Containers	0	0.210	0	0	0	0	0.210	
	Oils	0	0	0	0	0	0	0	
	Misc	0	2.650	0.170	0	0	0.100	2.920	Treatment
	Sludges/ Liquids/ Washings	0	0	0	0	0	0	0	
Group II	Chemicals / Paints	0	0.028	0	0	0	0	0.028	
	Drums / Containers	0	0.006	0	0	0	0	0.006	
	Scrap Metal	0	1.340	0	0	0	0	1.340	
	Segregated recyclables	0	5.154	0	0	0	0	5.154	
	General	0	2.584	7.696	0	0	0	10.280	
	Sludges/ Liquids/ Washings	0	0	0	0	0	0	0	
Group III	Asbestos	0	0	0	0	0	0	0	
	Radioactive materials (exc. NORM)	0	0	0	0	0	0	0	
	Clinical	0	0	0	0.023	0	0	0.023	
	Explosives	0	0	0	0	0	0	0	
Total		0	12.117	7.866	0.023	0	0.100	20.106	

In addition to the above wastes, the liquid waste generated at the Breagh platform during routine maintenance visits was limited to small volumes of wastewater, from the sink and shower, as well as sewage from the toilets, which was discharged to sea. The Clipper South platform has a macerator for all black waste. The small amounts of domestic waste generated during NUI visits is bagged and returned onshore. Company policy states that no garbage, including plastic, is to be disposed of overboard.

5.2.1.5 Atmospheric emissions

The Breagh and Clipper South platforms have self-sufficient power supplies in the form of standalone diesel generators. Operational emissions to air from combustion of diesel fuel to power generators is summarised in Table 5.5 below.

Table 5.5 Emissions to Air from Breagh and Clipper South, 2023

Asset	Diesel used (t)	Emissions to Air (tonnes)							
		CO ₂	NO _x	N ₂ O	SO ₂	CO	CH ₄	VOC	CO ₂ e*
Breagh	74.0	237	4.4	0.02	0.30	1.16	0.01	0.15	241
Clipper South	126.5	405	7.5	0.03	0.51	1.99	0.02	0.25	413

* CO₂e value shown is a combination of the CO₂, N₂O and CH₄ emissions.

Additional atmospheric emissions relating to the production operations at Breagh and Clipper South were also generated as a result of the combustion of fuel by the helicopters and supply/standby vessels utilised during planned maintenance visits.

In addition to the above, emissions to air from operational facilities emanated from the manual venting of produced gas for maintenance purposes. The calculated emissions of direct gas from operational facilities in 2023 from maintenance venting are shown in Table 5.6.

Table 5.6 Gas vented in 2023

Asset	Gas vented (t)	CO ₂ e*
Breagh	2.10	46.5
Clipper South	0.72	18.1

5.2.1.6 Oil spills

Oil Pollution Emergency Plans (OPEPs) were in place to cover all operations at Breagh, Clipper South, Cavendish and Windermere during 2023. Each OPEP lists the required offshore and onshore actions and responses, defines roles and responsibilities in the event of an oil spill and provides a risk assessment.

5.2.2 Other activities

The section below details any additional activities outside of production. Several additional activities were undertaken during 2023, including a well intervention operation to install velocity strings in the Breagh wells and drilling a sidetrack at Breagh, and decommissioning activities at Cavendish, Windermere and Topaz which included the cut and partial removal of the Cavendish, Windermere and Topaz pipelines, and the removal of the Windermere topsides.

5.2.2.1 PON1s

There were no PON1s submitted in association with any additional activities.

5.2.2.2 Chemical Use

For the Breagh well intervention and drilling campaign, project specific chemicals were used throughout including drilling, cementing and completion chemicals. These were majority OCNS E chemicals or HQ colour Gold. Some SUB chemicals were present when necessary, however, these were kept to a minimum and used only when necessary and no alternatives were available.

No new chemical permits were obtained in 2023. Ongoing chemical permits included CP/2974 for velocity string works at Breagh in 2022 and 2023, and CP/3050 for drilling operations at Breagh in 2023. Both of these permits were originally obtained in 2022. The permit contained majority OCNS E and Gold chemicals. The final use of discharge of the operations is shown below.

Table 5.7 Chemicals Used and Discharged During the Breagh Velocity String Well Intervention Operations and the Breagh Drilling Operations

OCNS category or colour band ranking	Additional Label	Quantity (kg)	
		Use	Discharge
Velocity Strings (CP/2974)			
E	PLONOR	35,376.78	35,376.78
D	-	500	50
Gold	-	1,010	0
Drilling (CP/3050)			

E	PLONOR	654,399.09	141,868.70
E	-	181,447.94	1,846.60
Gold	-	19,590.58	1,542.78
D	-	80	8
B	SUB	4,940.20	0.00
A	SUB	12,019.70	0.00

5.2.2.3 Discharge of Water

An oil discharge permit was obtained for both the velocity string and drilling operations at Breagh. These were covered under OTP/1308 and OTP/1330 respectively.

The total amount of fluid discharged during the velocity string operations at Breagh (OTP/1308) was 4m³ of produced water, with an average concentration of 12.50 mg/l. This equated to a total of 0.00005 tonnes of oil to be discharged.

The total amount of fluid discharged during the drilling operations at Breagh (OTP/1330) was 58m³ of produced water, with an average concentration of 12.41 mg/l. This equated to a total of 0.00072 tonnes of oil to be discharged.

5.2.2.4 Waste

The Noble Resilient rig was used to carry out the operations at Breagh. A total of 577.2 tonnes of waste was generated.

Table 5.8 Summary of Waste from Well Intervention and Drilling Operations from the Noble Resilient (tonnes), 2023

Group	Type	Reuse	Re-cycling	Waste to Energy	Incinerate	Landfill	Other	Total	Comments
Group I	Chemicals / Paints	0	7.822	3.320	0	17.470	0.050	28.662	Treatment
	Drums / Containers	0	1.517	0	0	0	0	1.517	
	Oils	0	2.200	0	0	0	0	2.200	
	Misc	0	1.600	3.645	0.040	0	87.170	92.455	Treatment
	Sludges/ Liquids/ Washings	0.440	14.360	16.200	0	0	334.080	365.080	Treatment
Group II	Chemicals / Paints	0	0.001	0	0	5.890	0	5.891	
	Drums / Containers	0	0.337	0	0	0	0	0.337	
	Scrap Metal	0	40.365	0	0	0	0	40.365	
	Segregated recyclables	0	14.090	0	0	0	0	14.090	
	General	0	5.572	20.548	0	0.490	0	26.610	
	Sludges/ Liquids/ Washings	0	0	0	0	0	0	0	
Group III	Asbestos	0	0	0	0	0	0	0	
	Radioactive materials (exc. NORM)	0	0	0	0	0	0	0	
	Clinical	0	0	0	0.025	0	0	0.025	



Group	Type	Reuse	Re-cycling	Waste to Energy	Incinerate	Landfill	Other	Total	Comments
	Explosives	0	0	0	0	0	0	0	
Total		0.440	87.864	43.713	0.065	23.850	421.300	577.232	

During the decommissioning operations, pipeline waste was returned to shore and processed. In 2023, the Windermere topsides were also removed in Q4, however, the topsides were not fully processed in 2023. The waste associated with the topsides will be included in the 2024 Environmental Report, which will capture the waste from all platform removal activities. The pipeline waste for the three assets, Cavendish, Windermere, and Topaz is shown below.

Table 5.9 Summary of Waste from Cavendish Decommissioning Operations in 2023

Material/Waste	Total Weight (t)	Tonnage In situ	Tonnage to shore	Disposal Method
Steel – Production Trees, Tubing strings, well casing, Conductor	140	0	140	Repurposed or recycled
Steel (API 5L X65) – from removed sections of both PL2285 and PL2284	6886	6793	0.3	Repurposed or recycled
Fibre optic cable and polyurethane sheath – from removed sections of PLU4612	15	13	0.1	Repurposed or recycled
Concrete mattresses	710	0	710	Recycled
Grout bags	0	0	0	Landfill
TOTAL	7,751	6,806	945	

Table 5.10 Summary of Waste from Windermere Decommissioning Operations in 2023

Material/Waste	Total Weight (t)	Tonnage In situ	Tonnage to shore	Disposal Method
Steel – Production Trees and Completion Tubing	20.5	0	20.5	Repurposed or recycled
Steel (API 5L X65) – from removed sections of Pipeline	818	780	38	Repurposed or recycled
Fibre optic cable and polyurethane sheath – from removed sections of Umbilical	105	98	7	Repurposed or recycled
Concrete mattresses	250	0	250	Recycled
Grout bags	21	0	21	Landfill
TOTAL	1215	878	337	

Table 5.11 Summary of Waste from Topaz Decommissioning Operations in 2023

Material/Waste	Total Weight (t)	Tonnage In situ	Tonnage to shore	Disposal Method
Steel (ASTM A694 F65) – from removed sections of both PL2631	854	815	39	Repurposed or recycled
Armoured hoses and wire umbilical – from removed sections of PLU2632	206	131	75	Repurposed or recycled
Concrete mattresses	572	0	572	Recycled
Grout bags	0.2	0	0.2	Landfill
TOTAL	1632	946	686	