



2022 Environmental Report


INEOS UK SNS LIMITED

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Title:

**INEOS UK SNS Limited
2022 Environmental Report**

Notes:

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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 2022 Environmental Report for INEOS UK SNS 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 2022.

This document is the eighth annual Environmental Report to be issued as a public statement by INEOS UK SNS Limited.

2 Scope of Activities

This Section summarises activities undertaken in 2022.

2.1 Overview of INEOS

INEOS is a global manufacturer of petrochemicals, speciality chemicals and oil products with sales of around \$60 billion. INEOS UK SNS Limited was operator of the Breagh and Clipper South gas production fields during 2022. It was also operator of the non-producing Cavendish, Windermere and Topaz fields which are awaiting full decommissioning.

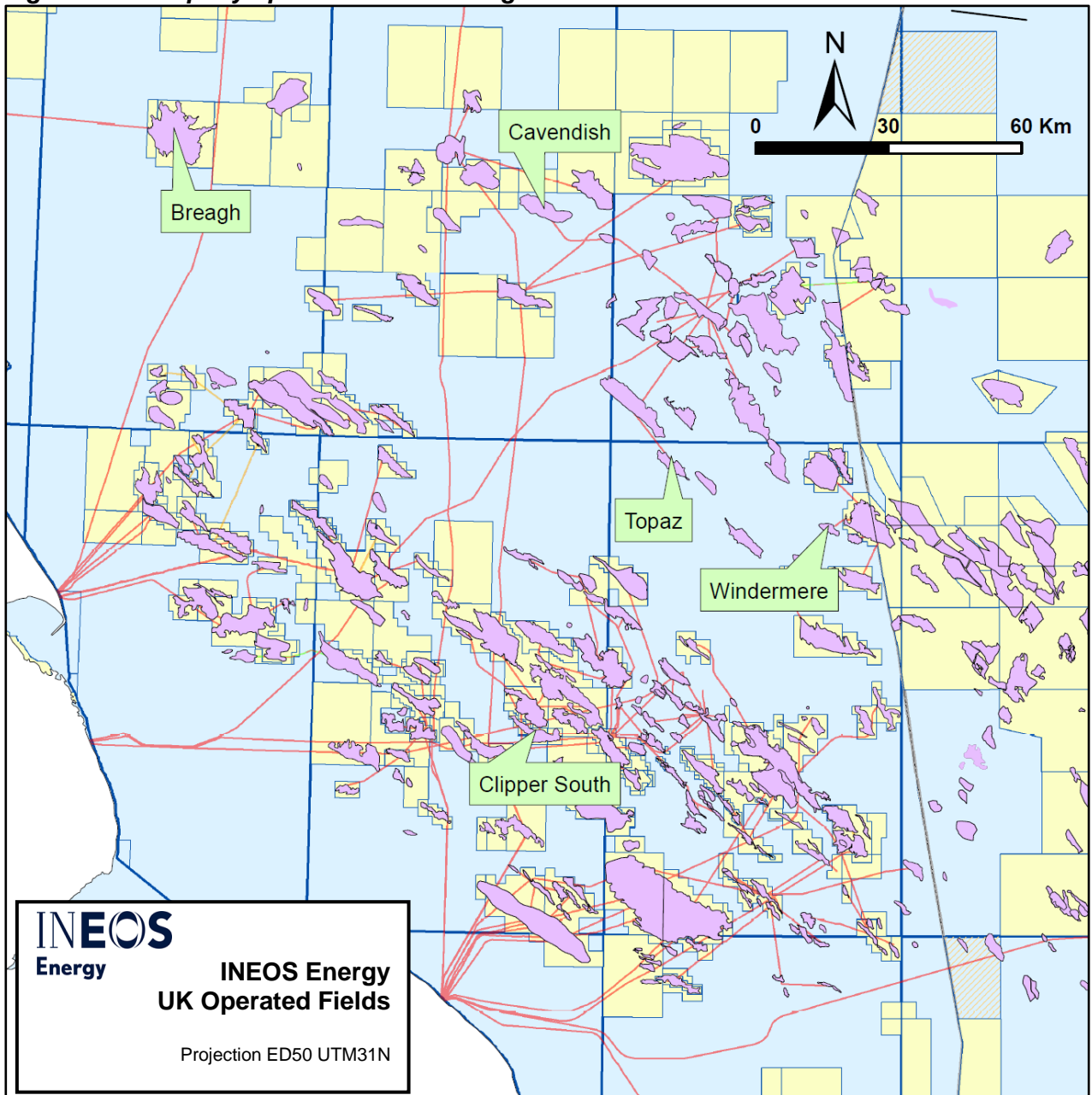
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2.2 Location of Offshore Activities during 2022

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

Figure 2-1 Company operated fields during 2022



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 2022 by INEOS.

During 2022 no drilling operations were undertaken. There was one well intervention operation in which two open-water¹ subsea wells were plugged and abandoned (wells 42/13-4 and 42/13-6) and the wellhead debris caps were recovered. Additionally, a rock dump was undertaken in preparation for the arrival of a rig at the Breagh platform in 2023.



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.



¹ Former exploration wells in the Breagh field.

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. A debris site survey was undertaken in 2022.



2.2.2.2 Windermere

The Windermere platform is a NUI located in SNS Block 49/09b. This is now operating in Lighthouse Mode (LHM), following the plugging and abandonment of the two platform wells in 2019. Maintenance visits occur when required by walk-to-work vessel. A debris site survey was undertaken in 2022.



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.

2.2.2.4 Other Activities

No additional operations were completed at INEOS assets in 2022.

3 EMS Summary

This Section provides a brief description of the company's EMS as it operated in 2022.

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 2022

The environmental management objectives and targets for the period between January and December 2022 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 2022 Environmental Performance Summary

Progress against the identified objectives and targets for 2022 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 2022, all objectives were achieved and the audit schedule continues throughout the year in order to ensure that progress against objectives and targets is maintained.

5.2.1 Production Activities

Production operations during 2022 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 2022.

5.2.1.2 Chemical use and discharge

During 2022, 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 in 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. No other chemicals were used or discharged.

Three products are used regularly for Clipper South operations: EC66721A (colour band White), Ethylene Glycol (OCNS category E) and SURFLO PLUS® SFPEC1610A (colour band Gold). These products inhibit the formation of hydrates and 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 that the contents of the pipework between the isolation valve of the tank and the dump valve must 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.

Table 5-1 below presents the quantities of chemicals used and discharged at Breagh and Clipper South during 2022 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	11605	0
Gold	-	1.05	1.05
Clipper South			
E	PLONOR	9976.8	0
Gold	-	59389.33	87.36
White	-	470.4	100.8
Total			
E	PLONOR	21581.8	0
Gold	-	59390.38	88.41
White	-	470.4	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 (m ³)	Average Oil in Water (mg/l)	Weight of Oil (t)
January	7627.00	29.67	0.226
February	3265.00	46.15	0.151
March	7829.57	43.17	0.338
April	6431.00	4.83	0.031
May	4715.00	13.79	0.065
June	7426.00	13.80	0.102
July	6049.00	7.85	0.047
August	6368.00	16.24	0.103
September	5622.00	10.00	0.056
October	2956.34	10.64	0.031
November	6104.00	9.90	0.060
December	5977.00	17.60	0.105
Total	70369.91	-	1.318

Clipper South experienced a solids handling issues originating from the C1 well leading to this well being shut in periodically until modifications are made to allow forward flow. Because of the solids handling issue, Clipper South has experienced PWT reliability issues during Q1 2022 producing a

number of high OiW readings. The primary reason for this solids handling issue was due to increased proppant production and water produced from C1. These have led to the PWT operating away from its design specification, leading to an increase above the forecasted average monthly concentration. The issue was resolved and the PWT returned to discharging below 30 ppm of oil in produced water.

Reports were sent to ORPED regarding the months of high oil in water concentration..

5.2.1.4 Waste

A total of 40.01 tonnes of waste was generated by Breagh and Clipper South during 2022, with Breagh producing 27.4 tonnes and Clipper South producing 12.6 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), 2022

Group	Type	Reuse	Re-cycling	Waste to Energy	Incinerate	Landfill	Other	Total	Comments
Group I	Chemicals / Paints	0	0.060	0	0	0	0	0.060	
	Drums / Containers	0	0.059	0	0	0	0	0.059	
	Oils	0	0.010	0	0	0	0	0.010	
	Misc	0	0.340	0.400	0	0	0.010	0.750	Treatment
	Sludges/ Liquids/ Washings	0	0	0	0	0	0	0	
Group II	Chemicals / Paints	0	0.010	0	0	0	0	0.010	
	Drums / Containers	0	0.070	0	0	0	0	0.070	
	Scrap Metal	0	7.039	0	0	0	0	7.039	
	Segregated recyclables	0	5.430	0	0	0	0	5.430	
	General	0	2.274	5.096	0	0	0	7.370	
	Sludges/ Liquids/ Washings	0	0.69	2.77	0	0	0	6.580	Treatment
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	15.98	8.27	0	0	0.01	27.38	

Table 5.4 Summary of Waste from Production Operations from Clipper South (tonnes), 2022

Group	Type	Reuse	Re-cycling	Waste to Energy	Incinerate	Landfill	Other	Total	Comments
Group I	Chemicals / Paints	0	0.380	0	0	0	0	0.380	

Group	Type	Reuse	Re-cycling	Waste to Energy	Incinerate	Landfill	Other	Total	Comments
	Drums / Containers	0	0.235	0	0	0	0	0.235	
	Oils	0	0	0	0	0	0	0	
	Misc	0	0.495	0.180	0	0	0.100	0.775	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	0	0	0	0	0	
	Scrap Metal	0	0.520	0	0	0	0	0.520	
	Segregated recyclables	0	3.325	0	0	0	0	3.325	
	General	0	1.575	5.820	0	0	0	7.395	
	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	6.53	6	0	0	0.1	12.63	

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 to power generators is summarised in Table 5.5 below.

Table 5.5 Emissions to Air from Breagh and Clipper South, 2022

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	67.7	217	4.0	0.01	0.27	1.06	0.01	0.14	221
Clipper South	133.2	426	7.9	0.03	0.53	2.09	0.02	0.27	435

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

Atmospheric emissions relating to production operations at Breagh and Clipper South were also generated as a result of the combustion of fuel on board 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 2022 from maintenance venting are shown in Table 5.6.

Table 5.6 Gas vented in 2022

Asset	Gas vented (t)	CO ₂ e*
Breagh	1.80	40.1
Clipper South	1.16	29.1

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 2022. 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

As previously described, several additional activities were undertaken during 2022, including debris surveys at Windermere and Cavendish, and well intervention (plug and abandonment) operations at Breagh.

5.2.2.1 PON1s

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

5.2.2.2 Chemical Use

Two chemical permits were obtained in 2022. Firstly, for the plug and abandonment well intervention operations at Breagh (CP/2894). A summary of the chemicals used and discharged during these operations are shown in Table 5.7 below. The second chemical permit obtained was for planned velocity string works at Breagh in 2022 and 2023 (CP/2974). This permit was applied for velocity string operations at Breagh with the earliest commencement date of December 15th 2022. However, the work did not commence until February 2023. The permit contained no SUB chemicals and the majority of chemicals on the permit are labelled OCNS E or Gold. The final use of discharge of the operations will be included in the next annual Environmental Report due to the operations taking place wholly within 2023.

Table 5.7 Chemicals Used and Discharged During the Olympic Challenger Well Intervention Operations

OCNS category or colour band ranking	Additional Label	Quantity (kg)	
		Use	Discharge
E	PLONOR	19,030	0
Gold	-	20	0

5.2.2.3 Discharge of Water

No discharges of oil or water occurred in 2022 due to additional operations.

5.2.2.4 Waste

The Olympic Challenger Vessel was used to carry out the plug and abandonment at the Breagh wells. A total of 14 tonnes of waste was generated. All waste was recycled (Table 5.8). No waste was associated with the survey works at Cavendish and Windermere.

Table 5.8 Summary of Waste from Well Intervention Operations from Olympic Challenger (tonnes), 2022

Group	Type	Reuse	Re-cycling	Waste to Energy	Incinerate	Landfill	Other	Total	Comments
Group I	Chemicals / Paints	0	0	0	0	0	0	0	
	Drums / Containers	0	0	0	0	0	0	0	
	Oils	0	0	0	0	0	0	0	
	Misc	0	0	0	0	0	0	0	
	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	0	0	0	0	0	
	Scrap Metal	0	14.0	0	0	0	0	0	
	Segregated recyclables	0	0	0	0	0	0	0	
	General	0	0	0	0	0	0	0	
	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	6.53	6	0	0	0.1	12.63	