OSPAR Public Statement 2023

Environmental Performance

Issue Date: 10th May 2024

Contents

1. INTRODUCTION

Under Recommendation 2003/5 of the Oslo Paris Convention for the Protection of the Marine Environment of the North-East Atlantic [OSPAR], the Offshore Petroleum Regulator for Environment and Decommissioning [OPRED] requires that all companies operating in the United Kingdom Continental Shelf [UKCS] have systems and procedures in place to identify, monitor and control the environmental aspects associated with offshore activities.

This document details the 2023 OSPAR Public Statement for Bluewater Energy Services B.V. (hereinafter referred to as Bluewater) and reports the environmental performance of a) the Pierce Field operations and activities during 2023, and b) the Lancaster Field operations and activities during 2023, in line with the requirements of OSPAR Recommendation 2003/5. The scope focuses on the two offshore assets, the Hæwene Brim Floating Production Storage and Offloading (FPSO) and the Aoka Mizu FPSO for the period 1st January to the 31st December 2023.

2. OVERVIEW OF OPERATIONS

Pierce Field Offshore Activities

The Pierce development is located in Blocks 23/22a and 23/27a of the Central North Sea (CNS). The development is served by a FPSO facility, the Hæwene Brim (Figure 2-1). The Hæwene Brim FPSO is located at 57° 09' 38.834" N, 02° 17' 35.130" E which is 247.5 km from the United Kingdom (UK) coastline, 2.6 km from the UK/Norwegian median line and in a water depth of approximately 85 m. On behalf of Shell UK Limited, Enterprise Oil plc is the field operator in conjunction with joint venture partner Ithaca Energy UK Limited. Pierce Production Company Limited (PPCL) serve as the operator of the Hæwene Brim FPSO.

Figure 2-1 The Hæwene Brim FPSO

The Hæwene Brim FPSO's main functions are:

- Receipt of fluids from subsea wells;
- Control of the subsea wells;
- Processing of the incoming fluids for separation into crude, water and gas;
- Storage of the stabilised crude oil and maintaining it at the required temperature;
- Treatment of effluent for discharge of water to the sea;
- Chemical injection;
- Produced gas export;
- Offloading of crude into tandem moored shuttle tankers;
- Power generation for process, gas compression, offloading, utilities and ship systems; and
- Provide accommodation for operating and maintenance personnel.

In January 2023, the Hæwene Brim FPSO achieved first gas export from the Pierce following its extensive upgrades during dry-dock in Norway in 2022. Proactive shutdown took place on 24th Aug 2023 due to mooring integrity concerns and to allow repairs to take place.

Lancaster Field Offshore Activities

The Lancaster field is located in Blocks 205/21a of the CNS to the west of the Shetland Islands. The development is served by the Aoka Mizu FPSO (Figure 2-2).

The Aoka Mizu FPSO is located at 60° 10’ 49.82” N, 03° 52’ 5.16” W which is 98 km from the UK coastline, 54 km from the UK/Faroes median line and in a water depth of approximately 158 m. Prax Upstream Limited (hereinafter referred to as Prax) is the licence operator for the Lancaster field. Bluewater Lancaster Production (UK) Ltd are the formally approved Installation Operator of the Aoka Mizu FPSO.

Figure 2-2 The Aoka Mizu FPSO

The Aoka Mizu FPSO’s main functions are:

- Receipt of fluids from subsea wells;
- Control of the subsea wells;
- Processing of the incoming fluids for separation into crude, water and gas;
- Storage of the stabilised crude oil and maintaining it at the required temperature;
- Treatment of effluent for discharge of water to the sea;
- Chemical injection;
- Offloading of crude into tandem moored shuttle tankers;
- Power generation for process, gas compression, offloading, utilities and ship systems; and
- Provide accommodation for operating and maintenance personnel.

Operational activities during 2023 included normal production operations, maintenance and well optimisation work.

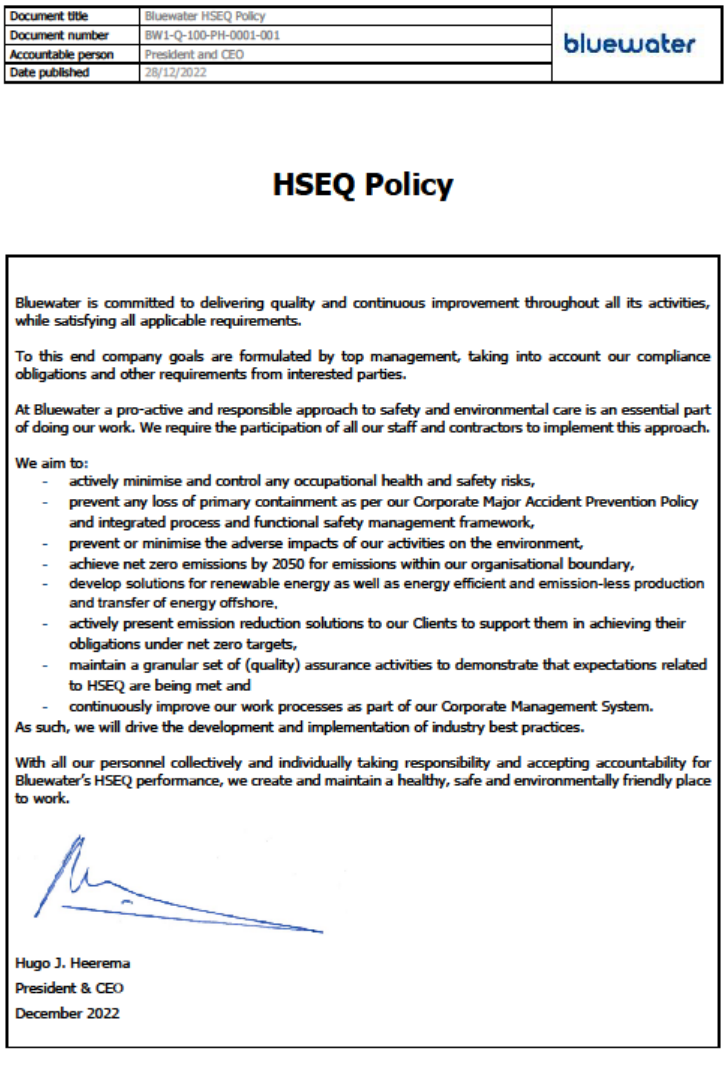
3. SAFETY AND ENVIRONMENTAL (SEMS) MANAGEMENT SYSTEM

Bluewater Health, Safety, Environmental and Quality (HSEQ) Policy

Bluewater Services (UK) Limited adopts the Bluewater HSEQ policy, which sets out the principles to which all the affiliates and the Hæwene Brim and Aoka Mizu FPSO activities comply with. These include:

- ✓ Promoting Health, Safety and Environmental (HSE) Protection;
- ✓ Seeking and achieving continual improvement;
- ✓ Working towards Net-Zero by 2050; and
- ✓ Compliance with all regulatory requirements.

The requirements of the policy are implemented through management systems, interface arrangements and operational management controls. The Bluewater policy is provided in Figure 3-1.



Document title	Bluewater HSEQ Policy
Document number	BW1-Q-100-PH-0001-001
Accountable person	President and CEO
Date published	28/12/2022

bluewater

HSEQ Policy

Bluewater is committed to delivering quality and continuous improvement throughout all its activities, while satisfying all applicable requirements.

To this end company goals are formulated by top management, taking into account our compliance obligations and other requirements from interested parties.

At Bluewater a pro-active and responsible approach to safety and environmental care is an essential part of doing our work. We require the participation of all our staff and contractors to implement this approach.

We aim to:

- actively minimise and control any occupational health and safety risks,
- prevent any loss of primary containment as per our Corporate Major Accident Prevention Policy and integrated process and functional safety management framework,
- prevent or minimise the adverse impacts of our activities on the environment,
- achieve net zero emissions by 2050 for emissions within our organisational boundary,
- develop solutions for renewable energy as well as energy efficient and emission-less production and transfer of energy offshore,
- actively present emission reduction solutions to our Clients to support them in achieving their obligations under net zero targets,
- maintain a granular set of (quality) assurance activities to demonstrate that expectations related to HSEQ are being met and
- continuously improve our work processes as part of our Corporate Management System.

As such, we will drive the development and implementation of industry best practices.

With all our personnel collectively and individually taking responsibility and accepting accountability for Bluewater's HSEQ performance, we create and maintain a healthy, safe and environmentally friendly place to work.

Hugo J. Heerema
President & CEO
December 2022

A print of this CMS document is uncontrolled; the latest version is available on the Bluewater CMS intranet site. Page 1 of 1
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All rights reserved. o https://corporate.bluewater.corp/sites/cms/active/bluewater hseq policy.docx

Figure 3-1 Bluewater HSEQ Policy

Environmental Management

Bluewater is certified to ISO 14001:2015 standard (a copy of the certificate is presented below). Bluewater's Environmental Management System (EMS) sets out guiding principles and mechanisms for managing HSE risk, impact and compliance in accordance with the Bluewater HSEQ Policy.

LRQA

Current issue date: 7 November 2023
Expiry date: 6 November 2026
Certificate identity number: 10556899

Original approval(s):
ISO 14001 - 7 November 2008

Certificate of Approval

This is to certify that the Management System of:

Bluewater Energy Services B.V.

Taurusavenue 46, 2132 LS Hoofddorp, The Netherlands

has been approved by LRQA to the following standards:

ISO 14001:2015

Approval number(s): ISO 14001 – 0024489

This certificate is valid only in association with the certificate schedule bearing the same number on which the locations applicable to this approval are listed.

The scope of this approval is applicable to:
Design, engineering, procurement, management of subcontracted fabrication, installation, commissioning and aftersales of Single Point Mooring systems (SPM), offshore renewable energy systems and Floating Production Storage Offloading (FPSO) systems. Operation and management of FPSOs.

Paul Graaf

Area Operations Manager, Europe

Issued by: LRQA Limited

UKAS

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Figure 3-2 Copy of ISO14001:2015 Certificate

The Corporate Management System (CMS) describes how HSE performance is managed, taking into account all relevant elements, such as: legal requirements, stakeholders, risks / opportunities and company goals. The CMS is applicable to all employees and activities on all locations (onshore and installation and operational sites - offshore) and is based on the requirements of ISO 9001:2015 and ISO 14001:2015. Within the overall CMS, the Safety and Environmental Management System (SEMS) is the framework of policies, processes standards and procedures that ensures that the health, safety and environmental objectives can be achieved. The SEMS acts as the link between the policies and standards and local processes and procedures. The high-level structure of the CMS is shown in Figure 3-3.

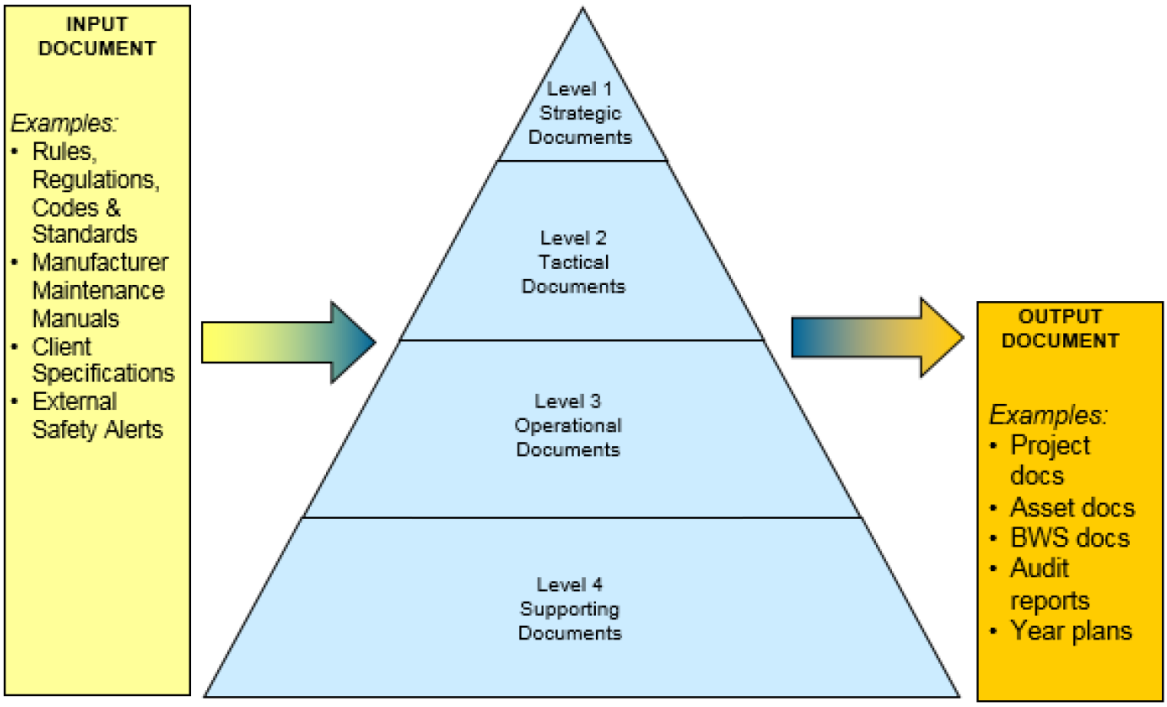

Figure 3-3 High Level Structure of the CMS

Key Environmental Management Activities in 2023

Bluewater's key environment related objectives and activities for 2023 were to ensure compliance with all environmental permits and relevant regulations and to progress a number of programmes to support continued improvement in performance, including:

- Offshore Environmental Compliance and Permit audits and inspections;
- Onshore Emergency Response exercises and Offshore Drills;
- Monitoring of asset performance and Environmental Key Performance Indicators [KPI] covering resource use and emissions to the environment;
- Maintenance of the assets' Environmental Aspects Registers.

4. ENVIRONMENTAL PERFORMANCE

Hæwene Brim FPSO Environmental Performance

Atmospheric Emissions

Atmospheric emissions arise from power generation, flaring and fugitive emissions. The Hæwene Brim FPSO holds an Offshore Combustion Installation (PPC) Permit under the Offshore Combustion Installations (Pollution Prevention and Control) Regulations 2023 (as amended) for the combustion equipment onboard. Shell UK Limited is the holder of the greenhouse gas emissions trading scheme (EUETS) permit, therefore certain emissions may be duplicated within their 2023 annual environmental statement.

Table 4.1 provides the Production related fuel combustion and flaring emissions as reported into the Environmental Emissions Monitoring System (EEMS) through the UK Energy Portal. This covers the period from the 1st January 2023 to 31st December 2023.

Table 4.1 Hæwene Brim Atmospheric Emissions (1st January 2023 to 31st December 2023)

Atmospheric Emissions	Unit	Fuel Gas	Diesel	Flaring	Totals
Fuel Use	Tonnes	7,872.23	17,458.99	4,407.02	**N/A**
CO_2	Tonnes	21,395.79	51,833.20	14,421.41	**87,650.40**
NO_X	Tonnes	308.29	697.20	5.29	**1,010.78**
SO_2	Tonnes	0.10	19.27	0.06	**19.43**
CO	Tonnes	47.23	149.92	29.53	**226.68**
CH_4	Tonnes	7.24	8.41	44.07	**59.72**
VOC	Tonnes	0.28	13.16	44.07	**57.51**

Water and Oil in Water Discharges

Liquid associated with the oil produced by the Pierce Field (oil and produced water) is processed through oil and water separation systems offshore with the cleaned produced water being discharged to sea. The Hæwene Brim FPSO holds a permit for produced water discharge under the Petroleum Operations (Oil Pollution Prevention and Control (OPPC)) Regulations. The Hæwene Brim FPSO has two discharge routes for produced water and the installations drainage systems, as follows:

- The primary route is via the produced water treatment system. All produced water from the separators is routed to designated hydrocyclones via inline coalescers. The in-line coalescers help improve the performance of the downstream hydrocyclones by increasing the oil droplet size in the feed stream.
- The secondary route is from the FPSO slops tanks. Liquids are processed through a centrifuge system before being discharged to sea.

Table 4.2 provides the details for the produced water discharges as reported into the EEMS through the UK Energy Portal. This covers the period from the 1st January 2023 to 31st December 2023.

Table 4.2 Hæwene Brim Produced Water Discharge Data (1st January 2023 to 31st December 2023)

Month	Sample Point (Source	Produced Water Volume (m3)	Monthly Average Oil in Water (mg/l)	Calculated Weight of Oil (tonnes)
January	Hydrocyclones	-	-	-
	Slops Tanks	-	-	-
February	Hydrocyclones	-	-	-
	Slops Tanks	445.50	11.15	0.005
March	Hydrocyclones	-	-	-
	Slops Tanks	-	-	-
April	Hydrocyclones	-	-	-
	Slops Tanks	-	-	-
May	Hydrocyclones	-	-	-
	Slops Tanks	2,385.00	14.37	0.034
June	Hydrocyclones	-	-	-
	Slops Tanks	3,796.70	12.97	0.049
July	Hydrocyclones	-	-	-
	Slops Tanks	3,020.10	18.94	0.057
August	Hydrocyclones	-	-	-
	Slops Tanks	797.10	14.88	0.012
September	Hydrocyclones	-	-	-
	Slops Tanks	1,057.70	11.30	0.012
October	Hydrocyclones	-	-	-
	Slops Tanks	1,245.00	16.72	0.021
November	Hydrocyclones	-	-	-
	Slops Tanks	885.20	18.24	0.016
December	Hydrocyclones	-	-	-
	Slops Tanks	-	-	-
Totals	All sources	13,632.30	14.82	0.207

The total mass of oil discharged with the produced water during 2023 was 0.207 tonnes.

Figure 4-1 presents the oil in water average concentration from the secondary route. No produced water was discharged from the primary route in 2023. No breaches of the 30 mg/l monthly permit limit were observed for the period for the secondary disposal route.

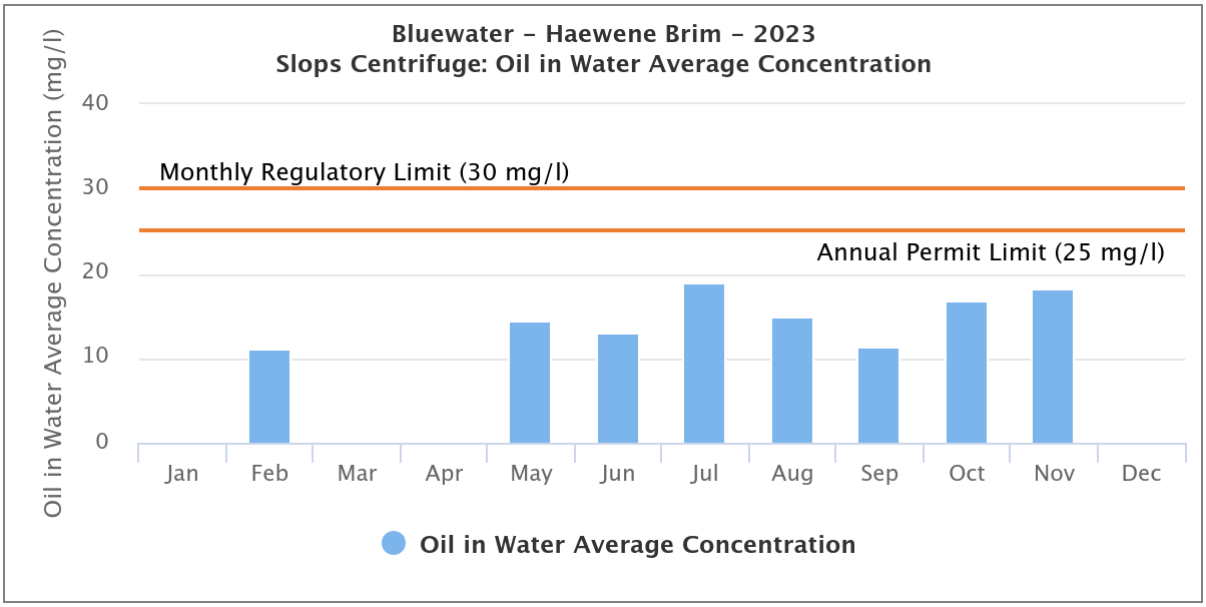

Figure 4-1 Slops Tanks: Oil in Water Average Concentration

Chemical Use and Discharge

Under the Offshore Chemical Regulations (OCR) 2002 (as amended), the Hæwene Brim FPSO holds a permit for the use and discharge of chemicals. During 2023, a total of 616.7 tonnes of production chemicals were used, and 616.4 tonnes were discharged to sea.

The Regulator has highlighted certain chemicals to be phased out by mean of substitution warning (SUB chemical warning). Three SUB chemicals were used during 2023, Castrol Transaqua HT2 – Hydraulic Fluid, EMBR13442C - Demulsifier and HSCV17370A – Hydrogen Sulphide Scavenger and AFMR19029A – an antifoam. A detailed breakdown of each chemical's tracked usage and discharge against the permitted quantities is presented in Figure 4-2 and Figure 4-3 respectively.

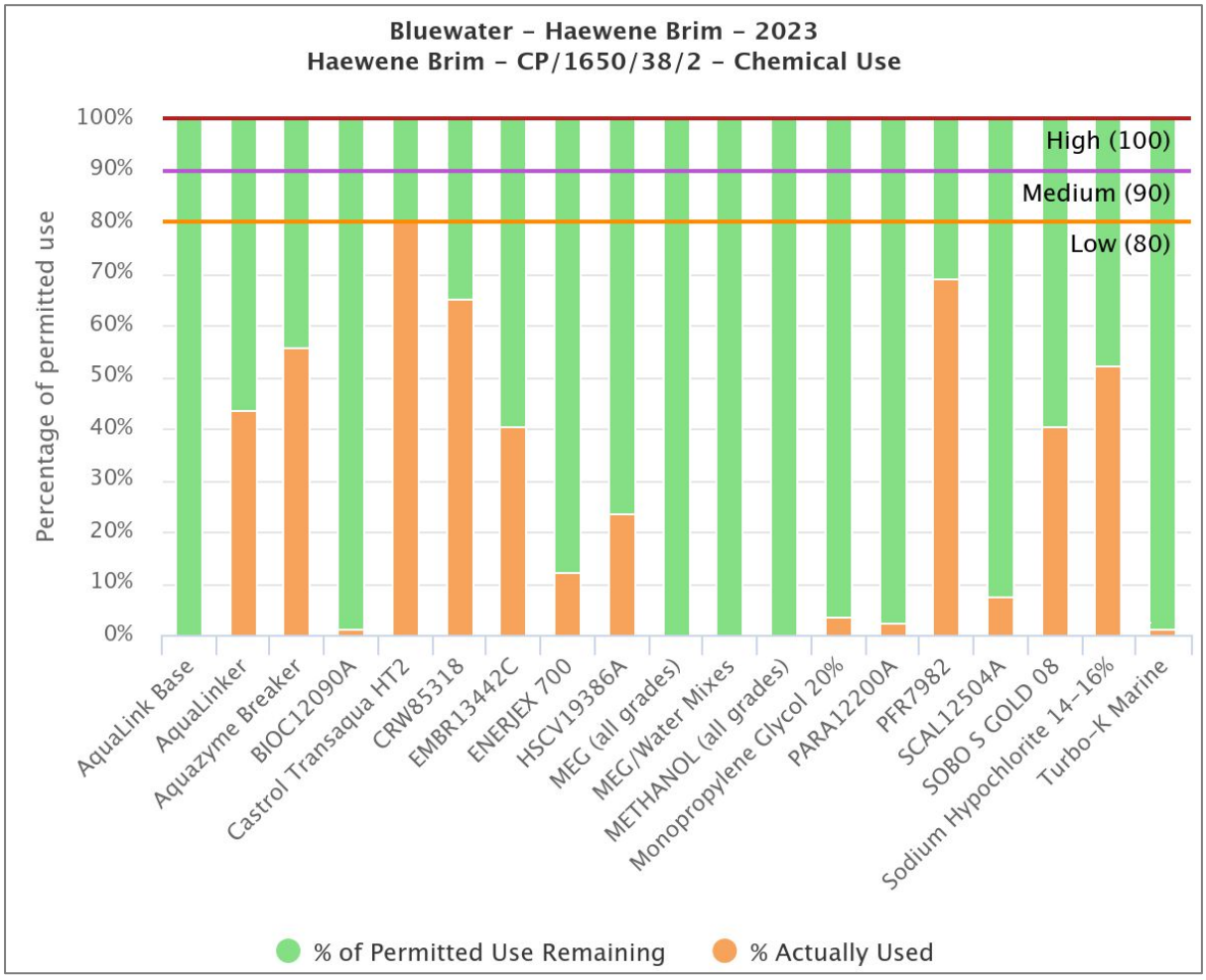

Figure 4-2 Hæwene Brim 2023 Chemical Use vs Permitted Quantities

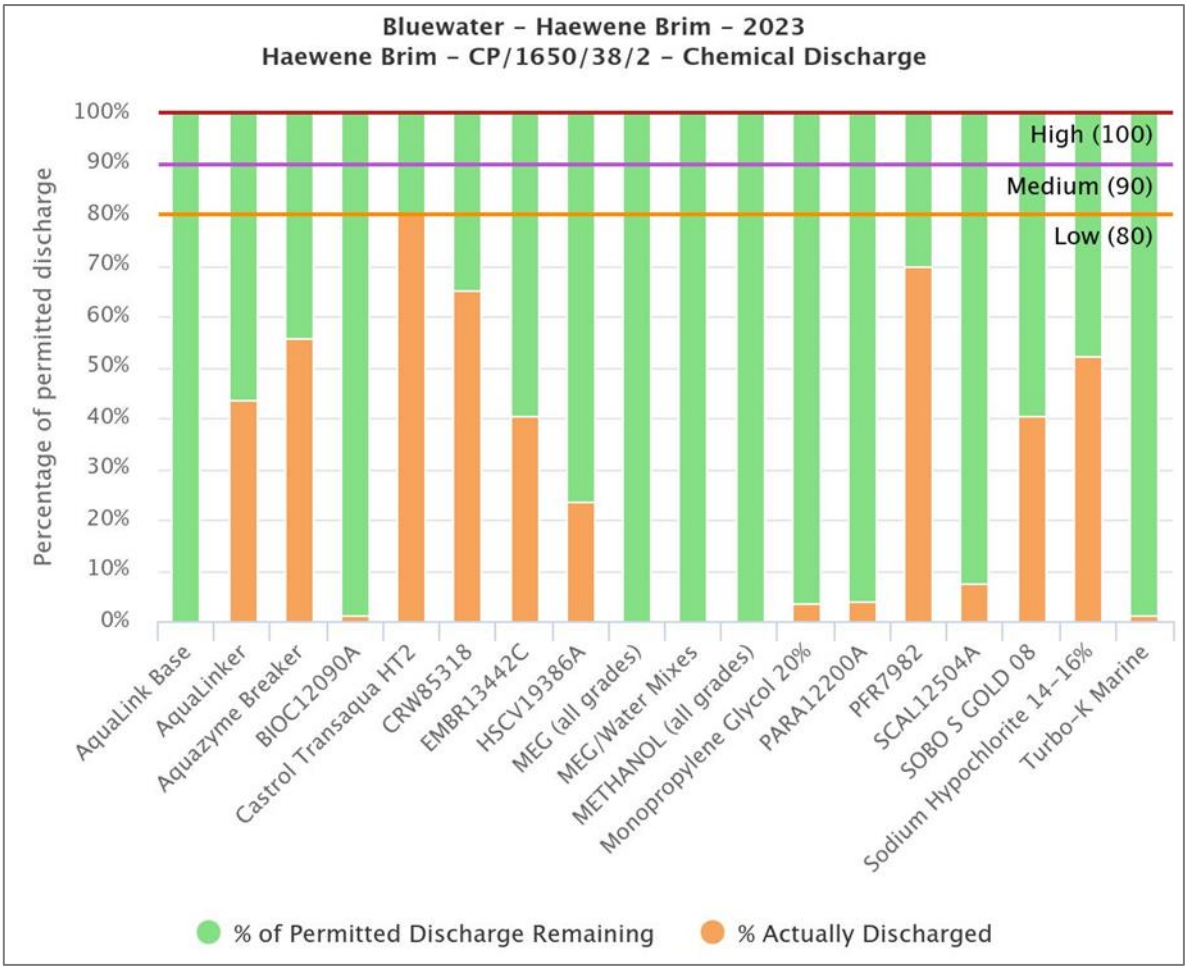

Figure 4-3 Hæwene Brim 2023 Chemical Discharge vs Permitted Quantities

Note that Aqualink Base, MEG/Water mixes and Methanol are PLONOR (Poses Little Or NO Risk) chemicals, therefore there are no permit limits for use.

The chemicals used, comprised water based hydraulic fluids, biocides, wax inhibitors, corrosion inhibitors, gas hydrate inhibitors, scale inhibitors, demulsifiers and pipeline chemicals. The majority of these chemicals were Hazard Quotient (HQ) Gold or Category 'E' or 'D' chemicals (the ratio of Predicted Effect Concentration against No Effect Concentration), thus have the least potential impact on the marine environment.

Chemicals are subject to continual review and Bluewater will continue to seek suitable alternatives, where appropriate to minimise impact on the marine environment.

Waste Management

Management and segregation of waste takes place on the installation prior to transfer to onshore facilities for recycling or disposal. Total waste arising during 2023 from the Hæwene Brim FPSO and the disposal routes is provided in Table 4.3.

Table 4.3 Hæwene Brim Waste Arising and Disposal Routes during 2023

Category	Reuse	Re-cycling	Waste to Energy	Incinerate	Landfill	Other	Total
	(t)	(t)	(t)	(t)	(t)	(t)	(t)
Group I – Special							
Chemicals/ Paints	-	-	1.070	20.931	-	40.781	62.782
Drums/ Containers	2.320	2.778	0.065	-	-	-	5.163
Oils	-	1.163	-	-	-	-	1.163
Miscellaneous Special Waste	-	5.290	5.465	0.005	0.970	-	11.730
Sludge's / Liquids / Washings	-	-	-	-	-	1.840	1.840
Sub-Total	**2.320**	**9.231**	**6.600**	**20.936**	**0.970**	**42.621**	**82.678**
Group II - General							
Chemicals/ Paints	-	0.135	-	0.135	-	5.168	5.438
Drums/ Containers	-	-	-	-	-	-	-
Scrap metal	-	25.100	-	-	-	-	25.100
Segregated Recyclables	-	28.460	-	-	-	-	28.460
General Waste	-	-	58.365	-	7.150	-	65.515
Sludge's / Liquids / Washings	-	-	-	-	-	-	-
Sub-Total	**-**	**53.695**	**58.365**	**0.135**	**7.150**	**5.168**	**124.513**
Group III - Other							
Asbestos	-	-	-	-	-	-	-
Radioactive Materials (exc NORM)	-	-	-	-	-	-	-
Clinical	-	-	-	0.065	-	-	0.065
Explosives	-	-	-	-	-	-	-
Sub-Total	-	-	-	**0.065**	-	-	**0.065**
Grand Total	**2.320**	**62.926**	**64.965**	**21.136**	**8.120**	**47.789**	**207.256**

Figure 4-4 overleaf shows that the Hæwene Brim FPSO recycled ~31% of the total waste produced. Waste disposed to landfill amounted to 4% of the total waste produced. All general waste from the Hæwene Brim is utilised for waste to energy, with waste no longer sent to landfill. In 2023, 31% of total waste was utilised as waste to energy. There was also ~48 tonnes of "other" waste, mostly chemicals / paints, equating to 23% of total waste. With the exception of 6.5 Kg of clinical waste, no Group III (Other Wastes) waste or Group IV (Back-loaded Cuttings) wastes were produced in 2023.

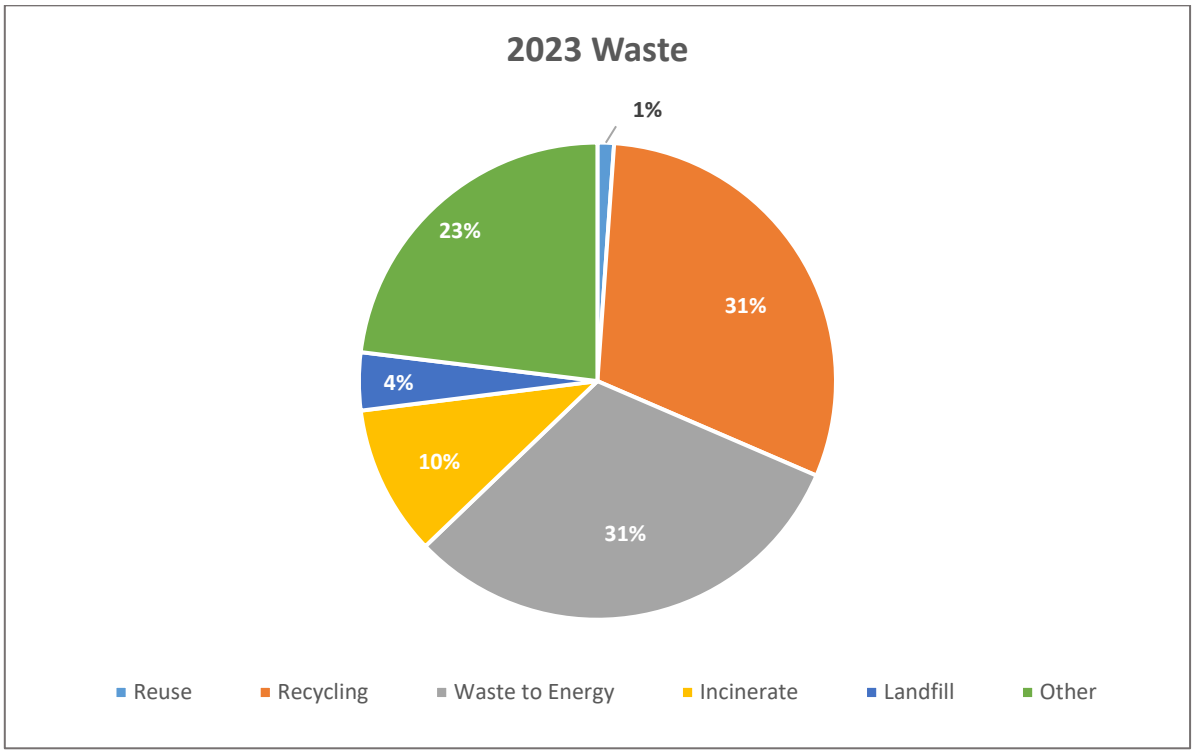

Figure 4-4 Hæwene Brim 2023 breakdown of generated waste

2024 Key Activities

The main offshore aims and objectives for the Hæwene Brim FPSO during 2024 are:

- ✓ Safe production restart following repair of mooring system;
- ✓ Ongoing maintenance and implementation of the EMS, including
  - Maintenance of 14001:2015 Standard;
  - Environmental data monitoring & reporting schedules;
  - Environmental KPIs;
  - Environmental Aspects Registers and Controls;
  - HSE Management System Interface documentation.
- ✓ Audit and review of Permits and Consents management and compliance associated with Environmental Management Systems and Processes;
- ✓ Continued management of asset integrity and process safety to minimise the risk of spills.

Aoka Mizu FPSO Environmental Performance

Atmospheric Emissions

Atmospheric emissions arise from power generation, flaring and fugitive emissions. The Aoka Mizu FPSO holds a PPC Permit under the Offshore Combustion Installations (PPC) Regulations 2023 (as amended) for the combustion equipment onboard. Prax holds the EU ETS GHG permit although Prax does not prepare an ES under OSPAR 2003/5.

Table 4.4 provides the Production related fuel combustion and flaring emissions as reported into EEMS through the UK Energy Portal. This covers the period from the 1st January 2023 to 31st December 2023.

Table 4.4 Aoka Mizu Atmospheric Emissions (1st January 2023 to 31st December 2023)

Atmospheric Emissions	Unit	Fuel Gas	Diesel	Flaring	Totals
Fuel Use	Tonnes	7,274.91	3,970.86	17,374.87	**N/A**
CO_2	Tonnes	19,817.25	12,667.06	46,841.08	**79,325.39**
NO_X	Tonnes	85.45	165.85	20.85	**272.15**
SO_2	Tonnes	0.09	7.95	0.22	**8.26**
CO	Tonnes	43.65	43.51	116.41	**203.57**
CH_4	Tonnes	6.69	0.50	173.75	**180.94**
VOC	Tonnes	0.26	5.48	173.75	**179.49**

Water and Oil in Water Discharges

Liquid associated with the oil produced by the Lancaster Field (oil and produced water) is processed through oil and water separation systems offshore with the cleaned produced water being discharged to sea. The Aoka Mizu FPSO holds a permit for produced water discharge under the OPPC Regulations.

All produced water from the installation was discharged overboard. This amounted to approximately 464,820 cubic metres for 2023. The Aoka Mizu FPSO has two discharge routes for produced water and the installations drainage systems, as follows:

- The FPSO's hydrocyclone units; and
- The FPSO's slops tanks.

Table 4.5 provides the details for the produced water discharges as reported into the EEMS through the UK Energy Portal. This covers the period from the 1st January 2023 to 31st December 2023.

Table 4.5 Aoka Mizu Produced Water Discharge Data (1st January 2023 to 31st December 2023)

Month	Sample Point (Source	Produced Water Volume (m3)	Monthly Average Oil in Water (mg/l)	Calculated Weight of Oil (tonnes)
January	Hydrocyclones	40,209.40	5.07	0.204
	Slops Tanks	51.00	11.20	0.001
February	Hydrocyclones	28,644.90	6.65	0.190
	Slops Tanks	1,369.00	16.19	0.022
March	Hydrocyclones	41,286.60	5.63	0.232
	Slops Tanks	-	-	-
April	Hydrocyclones	39,840.30	4.88	0.194
	Slops Tanks	1,052.00	11.14	0.012
May	Hydrocyclones	42,187.00	3.45	0.145
	Slops Tanks	-	-	-
June	Hydrocyclones	41,368.10	5.02	0.208
	Slops Tanks	-	-	-
July	Hydrocyclones	42,646.20	3.51	0.150
	Slops Tanks	1,266.00	13.08	0.017
August	Hydrocyclones	16,153.10	2.54	0.041
	Slops Tanks	-	-	-
September	Hydrocyclones	35,563.10	2.45	0.087
	Slops Tanks	1,746.00	18.77	0.033
October	Hydrocyclones	43,430.50	1.97	0.086
	Slops Tanks	-	-	-
November	Hydrocyclones	42,592.40	1.59	0.068
	Slops Tanks	1,823.00	20.56	0.037
December	Hydrocyclones	42,679.10	1.18	0.050
	Slops Tanks	912.00	21.00	0.019
Totals	All sources	464,819.60	6.49	1.796

The total mass of oil discharged with the produced water during 2023 was 1.796 tonnes.

Figure 4-5 and Figure 4-6 present the oil in water average concentration from the primary and secondary route, respectively. No breaches of the 20 mg/l monthly permit limit were observed for the period for the primary disposal route (Figure 4-5). No breaches of the 25 mg/l monthly permit limit were observed for the period for the secondary disposal route (Figure 4-6).

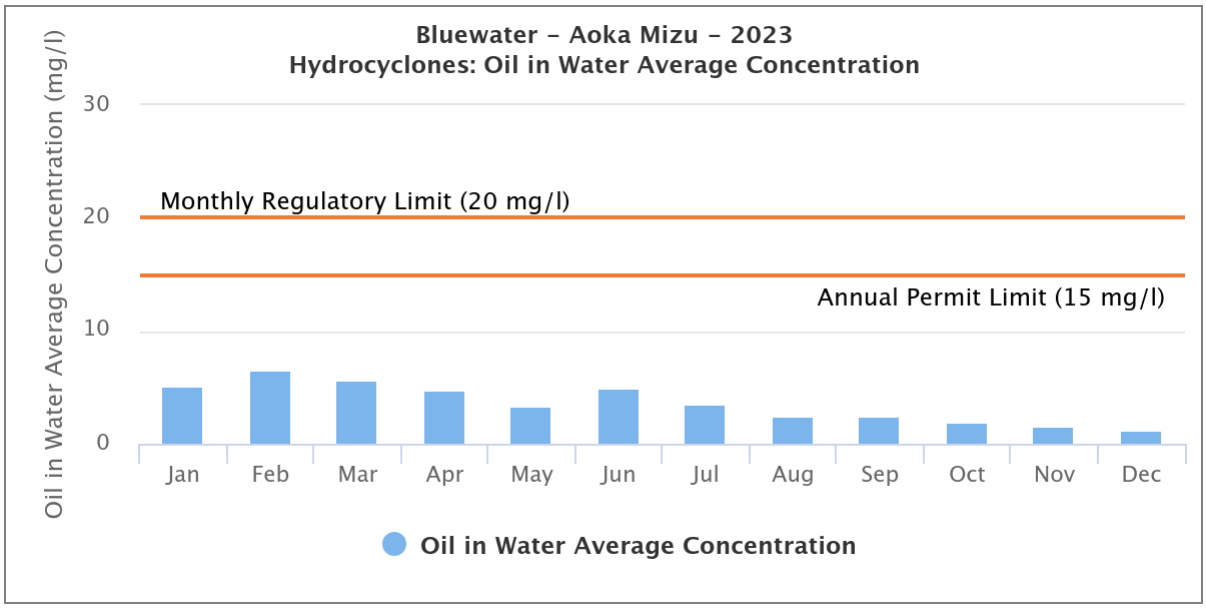

Figure 4-5 Hydrocyclones: Oil in Water Average Concentration

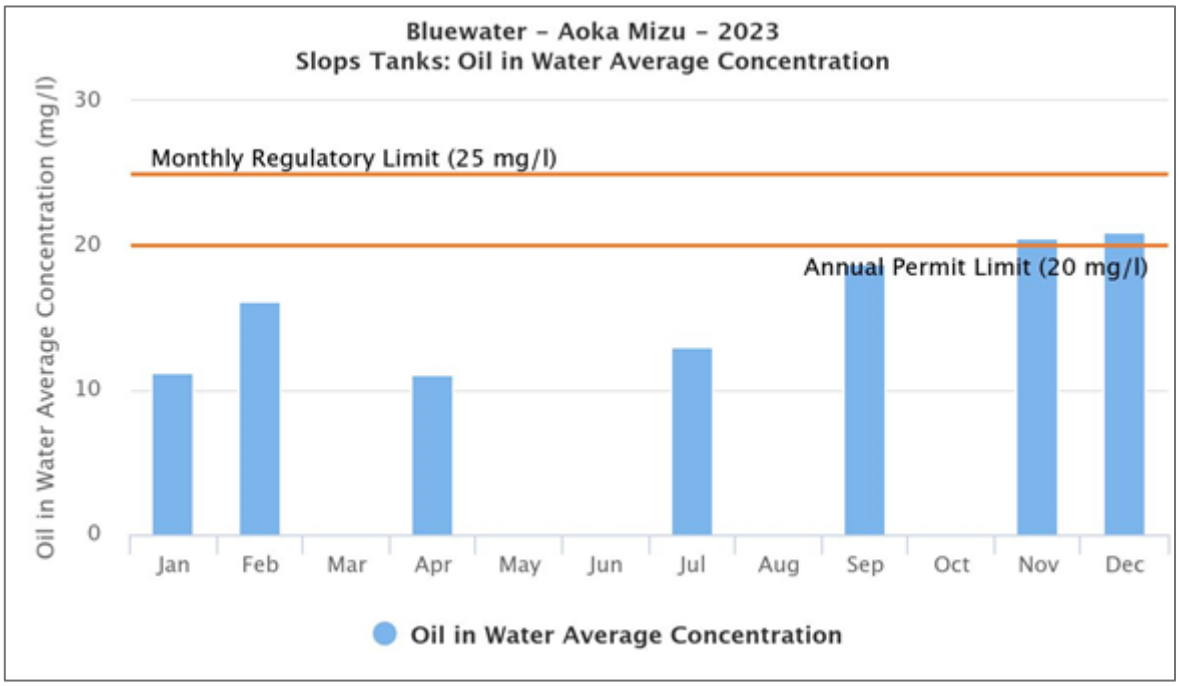

Figure 4-6 Slops Tanks: Oil in Water Average Concentration

Chemical Use and Discharge

Under the OCR 2002 (as amended), the Aoka Mizu FPSO holds a permit for the use and discharge of chemicals. During 2023 a total of ~63 tonnes of production chemicals were used. In total approximately 85% (53.8 tonnes) of the chemicals used were discharged to sea.

The Regulator has highlighted certain chemicals to be phased out by mean of substitution warning (SUB chemical warning). Three SUB chemicals EMBR18636A, Oceanic HW443 R and RX 7025 were used during 2023 with a total use of 0.76, 0.57 and 0.13 tonnes respectively. EMBR18636A was replaced by EMBR48636A, which is not a SUB chemical, in 2023.

A detailed breakdown of each chemical's tracked usage and discharge against the permitted quantities is presented in Figure 4-7 and Figure 4-8. Chemicals permitted, but not used are not included in the Figure 4-7 and Figure 4-8.

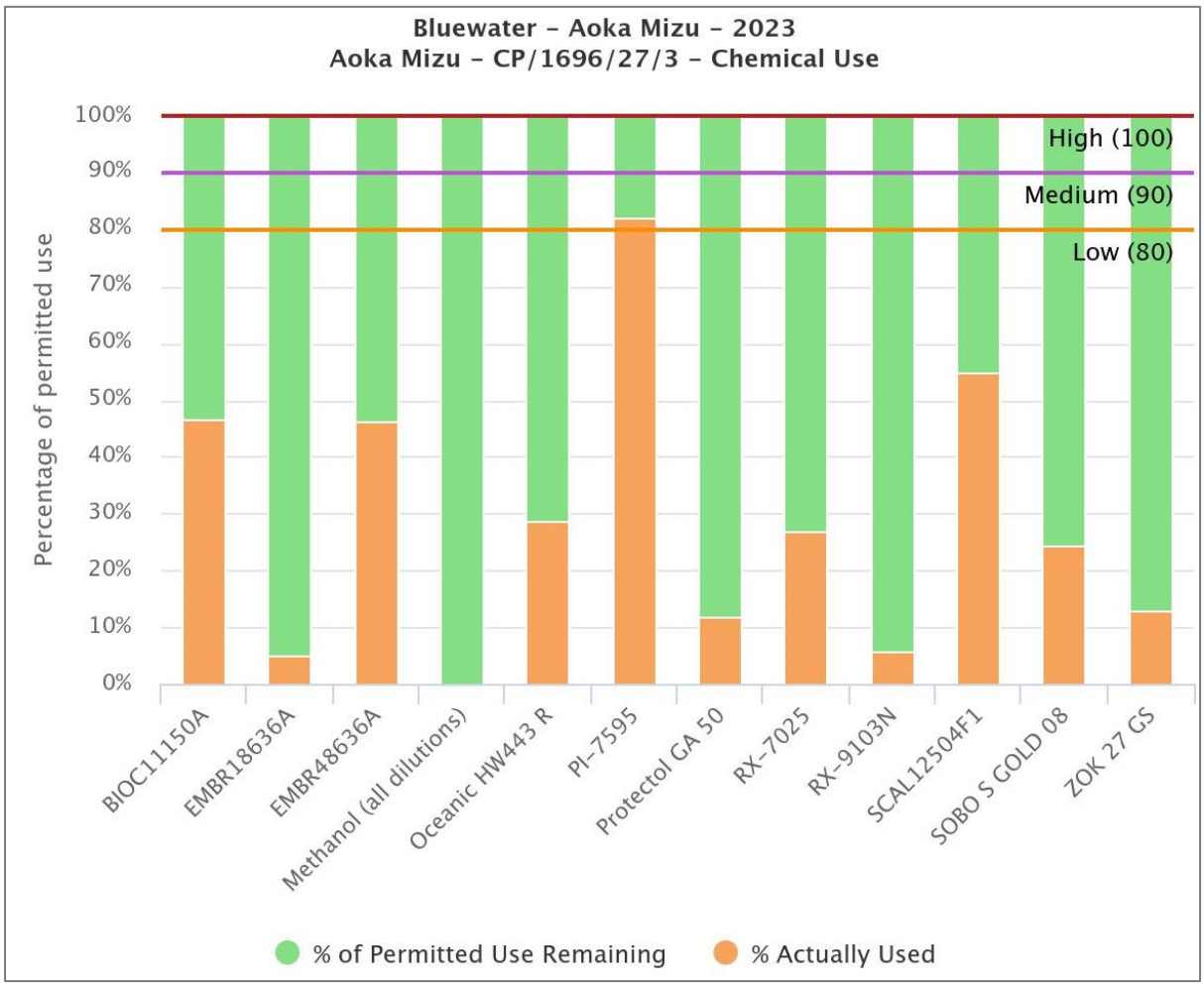

Figure 4-7 Aoka Mizu 2023 Chemical Use vs Permitted Quantities

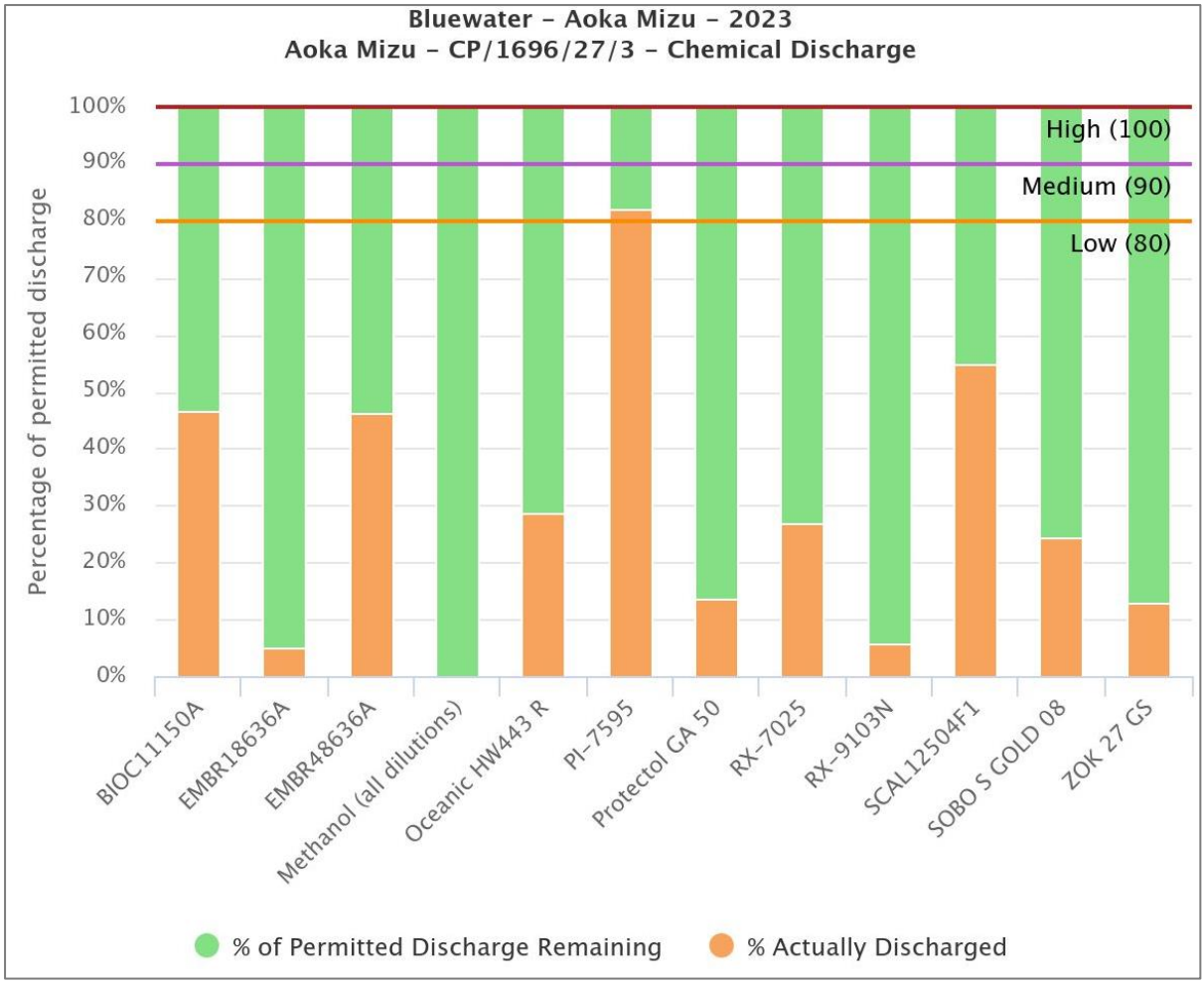

Figure 4-8 Aoka Mizu 2023 Chemical Discharge vs Permitted Quantities

Note that MEG and Methanol are PLONOR (Poses Little Or NO Risk) chemicals, therefore there are no permit limits for use

The chemicals used, comprised biocides, demulsifiers, water based hydraulic fluids, asphaltene inhibitors, wax inhibitors, corrosion inhibitors, scale inhibitors, hydrogen sulphide scavengers, hydrate inhibitors, antifoams and cleaning fluids utilised during routine production operations. The majority of these chemicals were Hazard Quotient [HQ] Gold or Category 'E' or 'D' chemicals (the ratio of Predicted Effect Concentration against No Effect Concentration), thus have the least potential impact on the marine environment.

Chemicals are subject to continual review and Bluewater will continue to seek suitable alternatives, where appropriate to minimise impact on the marine environment.

Waste Management

Management and segregation of wastes takes place on the installation prior to transfer to onshore facilities for recycling or disposal. Total waste arising during 2023 from the Aoka Mizu FPSO and the disposal routes are provided in Table 4.6.

Table 4.6 Aoka Mizu Waste Arising and Disposal Routes during 2023

Category	Reuse	Re-cycling	Waste to Energy	Incinerate	Landfill	Other	Total
	(t)	(t)	(t)	(t)	(t)	(t)	(t)
Group I – Special							
Chemicals/ Paints	-	-	1.005	-	-	4.170	5.175
Drums/ Containers	-	1.709	-	-	-	-	1.709
Oils	-	1.230	-	-	-	-	1.230
Miscellaneous Special Waste	-	8.693	1.250	-	1.490	-	11.433
Sludge's / Liquids / Washings	-	-	-	-	-	5.000	5.000
Sub-Total	**-**	**11.632**	**2.255**	**-**	**1.490**	**9.170**	**24.547**
Group II - General							
Chemicals/ Paints	-	-	-	-	-	-	-
Drums/ Containers	-	-	-	-	-	-	-
Scrap metal	-	17.620	-	-	-	-	17.620
Segregated Recyclables	-	47.085	26.610	-	-	-	73.695
General Waste	-	16.764	-	-	26.746	-	43.510
Sludge's / Liquids / Washings	-	-	-	-	-	-	
Sub-Total	-	**81.469**	**26.610**	**-**	**26.746**	**-**	**134.825**
Group III - Other							
Asbestos	-	-	-	-	-	-	-
Radioactive Materials (exc NORM)	-	-	-	-	-	-	-
Clinical	-	-	-	-	-	-	-
Explosives	-	-	-	-	-	-	-
Sub-Total	-	-	-	-	-	-	-
Grand Total	**-**	**93.101**	**28.865**	**-**	**28.236**	**9.170**	**159.372**

Figure 4-9 overleaf shows that the Offshore Installation recycled 58% of the total waste produced. Waste disposed to landfill and Waste to Energy both amounted to 18% of the waste produced each. There was also approximately 9 tonnes of "Other" waste, mostly comprising of sludges, liquids, paints and chemicals equating to 6% of total waste (Table 4.6). No Group III (Other Wastes) or Group IV (Back-loaded Cuttings) wastes were produced in 2023.

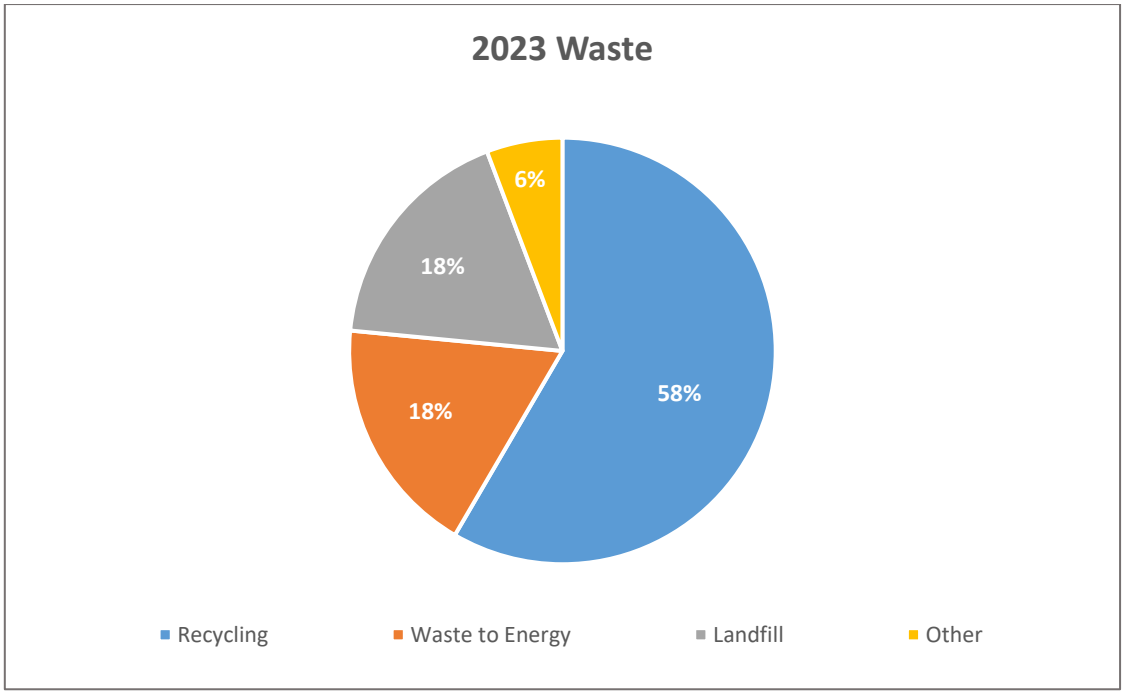

Figure 4-9 Aoka Mizu 2023 breakdown of generated waste

2024 Key Activities

The main offshore aims and objectives for the Aoka Mizu FPSO during 2024 are:

- ✓ Ongoing maintenance and implementation of the EMS, including
  - Maintenance of 14001:2015 Standard;
  - Environmental data monitoring & reporting schedules;
  - Environmental KPIs;
  - Environmental Aspects Registers and Controls; and
  - HSE Management System Interface documentation.
- ✓ Audit and review of Permits and Consents management and compliance associated with Environmental Management Systems and Processes;
- ✓ Maintaining normal and steady production.
- ✓ Continued management of asset integrity and process safety to minimise the risk of spills; and
- ✓ Duty of Care audit of waste management processes and contractor.

5. INCIDENTS

Under UK legislation any unplanned / unpermitted releases of oil and chemicals discharged to the marine environment are required to be reported to OPRED via the Petroleum Operations Notice No.1 (PON 1) reporting system. These, as well as other reportable incidents / operations notices that occurred during 2023 for the assets are detailed in Table 5.1 (11 in total).

Table 5.1 2023 reportable incidents

Date	Asset	Non-Conformance Type	Description
21st March 2023	Aoka Mizu	PON 1	Diesel drips released when replacing diesel bunkering hose. After the hose was replaced a small sheen was observed.
15th May 2023	Haewene Brim	OPPC Non-compliance	Oil in water (OIW) concentration of produced water discharged exceeded that of the permit limit. Approximately 6 m3 of produced water was discharged with an OIW concentration of 127.4 mg/l, equating to 0.76 kg of oil discharged.
10th of April 2023	Haewene Brim	OCR Non-compliance	Excessive use of subsea hydraulic fluid – suspected passing subsea valve. SCM (Subsea Control Module) isolated.
13th of January 2023	Haewene Brim	OCR Non-compliance	Leak from Methanol pumps topsides resulting in methanol discharge via drains route. Methanol pump has now been repaired to prevent further leaks.
4th December 2023	Aoka Mizu	OCR- Non-compliance	A drum of CRW85838 which was being prepared for backload was found to be leaking which was discharged through the drains.

6. APPENDICES

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Abbreviations

CH_4	Methane
CMS	Corporate Management System
CNS	Central North Sea
CO	Carbon Monoxide
CO_2	Carbon Dioxide
EEMS	Environmental Emissions Monitoring System
EMS	Environmental Management System
FPSO	Floating Production Storage and Offloading
HQ	Hazard Quotient
HSE	Health Safety & Environmental
HSEQ	Health, Safety, Environmental and Quality
KPI	Key Performance Indicators
mg/l	Milligrams per Litre
NO_x	Nitrous Oxides
OCR	Offshore Chemical Regulations
OIW	Oil in Water
OPPC	Oil Pollution Prevention and Control
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning
OSPAR	Oslo Paris Convention for the Protection of the Marine Environment of the North-East Atlantic
PPC	Production Prevention and Control
PPCL	Pierce Production Company Limited
SEMS	Safety and Environmental Management System
SO_x	Sulphur Oxides
SUB	Chemicals Rated for Substitution
UK	United Kingdom
UKCS	United Kingdom Continental Shelf
VOCs	Volatile Organic Compounds