



# **ENVIRONMENTAL STATEMENT**

**2022**

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## Letter from the Chief Executive Officer

**"We are a responsible operator whose purpose is to produce still much needed oil and gas to the UK, providing energy security and playing our part in the energy transition. We are acutely aware of the environmental impacts of our business and wider industry and so our commitment to ESG has never been more important."**

Serica Energy (UK) Limited (SEUK) is committed to an ongoing programme of short-cycle organic growth projects to continue our strategy of investment to improve production. In 2022 Serica has once again increased its baseline production from the Bruce, Keith and Rhum (BKR) fields, and this additional production has reduced the carbon intensity of the Company's overall hydrocarbon output and provided vital gas to the UK market at a time of increased concerns around national security of supply.

We are proud to make a huge contribution to the UK economy. In 2022/23 alone our industry will add at least £28bn to the UK economy. We provide 215,000 skilled jobs across the length and breadth of the UK. The industry is committed to delivering Net Zero by 2050, but alongside expanding into cleaner energy sources like wind and hydrogen, the UK will continue to need oil and gas. The Climate Change Committee outline that oil and gas will meet 50% of the UK's energy needs in the mid-2030s and in 2050 oil and gas will still provide 22% of the UK's energy needs.

40% of the UK's electricity comes today from gas fired power stations. In 2022, domestic gas production met 44% of the UK's total needs. This reduced our dependence on less environmentally friendly imports and played a part in inhibiting further price increases.

We are a responsible operator whose purpose is to produce still much needed oil and gas to the UK, providing energy security and playing our part in the energy transition. We are acutely aware of the environmental impacts of our business and wider industry and so our commitment to ESG has never been more important.

Our emissions reduction targets are set to align fully with those set out in North Sea Transition Deal, setting nearer-term emission reduction milestones to achieve net zero emissions by 2050. In line with this, we have developed an Emissions Reduction Plan and in 2022, we committed to funding future projects that will bring down our emissions and are commissioning studies into projects that make an impact further down the line.



Our environmental efforts are seen across the company, from sustainability suggestions made by our staff to the oversight of our environmental strategy and policy by the Board of Directors. I welcome the Board's decision to establish a Sustainability Sub-Committee, that will focus on our environmental strategy, performance, risks and reporting. We have continued to utilise environmental KPIs that are linked to all staff's remuneration, including my own. They have continued to help drive performance and increase organisational awareness on areas such as routine flaring, emissions reduction, and waste.

In accordance with OSPAR's Convention for the Protection of the Marine Environment of the Northeast Atlantic, this annual statement focuses on our operations on the UK Continental Shelf (UKCS), providing an overview of all the environmental aspects that are of material relevance to us and our stakeholders. The focus of the Environmental Statement (ES) is:

- Atmospheric emissions
- Chemical use and discharge
- Oil discharges to sea and
- Waste

**Mitch Flegg**  
Chief Executive Officer

## HSEQ Policy



### Our Commitment

Serica is committed to conducting its business activities in a manner that assures the **health, safety** and **well-being** of our staff and contractor personnel whilst also safeguarding the environment within which we operate.

## Principles

Serica's Operations Management System (OMS) provides an integrated and systematic approach to Health, Safety, Environmental and Quality (HSEQ) management and demonstrates how we:

- comply with all applicable legislation, industry standards and good practice
- promote a positive HSEQ culture through visible leadership commitment, personal accountability, communication and engagement with key stakeholders
- understand our risk profiles and apply a risk management process that reduces this risk to As Low As Reasonably Practicable (ALARP)
- ensure that HSEQ remains integral to the planning, design, construction, operation, maintenance and disposal of our assets
- promote environmental sustainability and the reduction of our carbon footprint
- provide staff with suitable information, instruction and training relevant to their duties and responsibilities

- maintain emergency response plans and the organisational capability to respond effectively to incidents and emergencies
- continually improve our HSEQ performance by defining performance objectives, monitoring and measuring results, and completing a programme of audit and assurance activities

Serica expects everyone involved in our activities to take responsibility and be accountable for compliance with this policy, our OMS, current legislation and all applicable regulatory requirements.

The Chief Executive Officer, supported by the Board of Directors, is accountable for the HSEQ performance of the company and shall ensure that sufficient resources are in place to implement this policy.

A handwritten signature in black ink, appearing to read 'Mitch Flegg', is written over a horizontal line.

**Mitch Flegg**  
Chief Executive Officer  
February 2023

## **Serica Energy (UK) Limited**

### **In 2022, Serica Energy (UK) Limited's (SEUK) core business was production from and development of its Northern North Sea (NNS) production asset, the Bruce Platform, and its tied back fields**

SEUK is the Duty Holder and Well Operator for the Bruce, Keith and Rhum (BKR) fields, Well Operator for the Columbus Field, and Well Operator for the North Eigg license as defined by the Offshore Installations (Offshore Safety Directive), (Safety Case etc.) Regulations 2015 (SCR 2015) and the Offshore Petroleum Licensing (Offshore Safety Directive) Regulations 2015.

SEUK prioritises an elevated level of environmental performance across all operations and sets measurable and meaningful HSE (Health, Safety and Environmental) Key Performance Indicators (KPIs) designed to both maintain existing high standards and drive continuous improvement. These include environmental KPIs which are linked to the Company's employee bonus scheme and are aligned with the North Sea Transition Deal (NSTD), Energy White Paper ambitions and the World Bank Zero Flaring Initiative.

### **Environmental Management System (EMS)**

### **The SEUK Operations Management System (OMS) provides the framework for systematic management of HSEQ across the SEUK organisation and is designed to ensure the delivery of safe, environmentally responsible, and reliable operations in accordance with defined policies, practices, procedures, and standards**

The EMS, contained within the OMS, covers aspects of environmental management, such as chemical management, pollution prevention and control and emissions management, and is designed to achieve SEUK's corporate expectation to implement best practice above and beyond the requirements of the regulations.

The structure and content of the OMS recognises the principles of HSG65 (Managing for health and safety), ISO 45001 (Occupational Health and Safety Management Systems), ISO 14001 (Environmental Management Systems) and ensures that risks to Health and Safety of personnel and to the environment are reduced to As Low as Reasonably Practicable (ALARP). SEUK's EMS was successfully reverified against the requirements of OSPAR 2003/5 in May 2023 by LRQA.

## North Sea Operations

# OPERATED PRODUCTION

## The Bruce, Keith and Rhum Fields

The Bruce Platform is located on the United Kingdom's Continental Shelf (UKCS) 148 km East of Shetland and 17 km West of the UK and Norwegian median line in water depths of 122 meters in the NNS.

The Bruce facilities, operated by SEUK, consist of:

- The Bruce and adjacent Keith and Western Area Development (WAD) fields, located in UKCS Blocks 9/8a, 9/9a and 9/9b.
- The Rhum gas field (3/29a), situated 44km North of Bruce and tied back via a subsea manifold and pipeline.

Oil is exported via the Forties Pipeline System to Cruden Bay, near Peterhead, and to the Kinneil Terminal in Grangemouth and Gas is exported to St Fergus via the Frigg pipeline.

In 2022 BKR production averaged approx. 22,600 boe/d net to Serica.

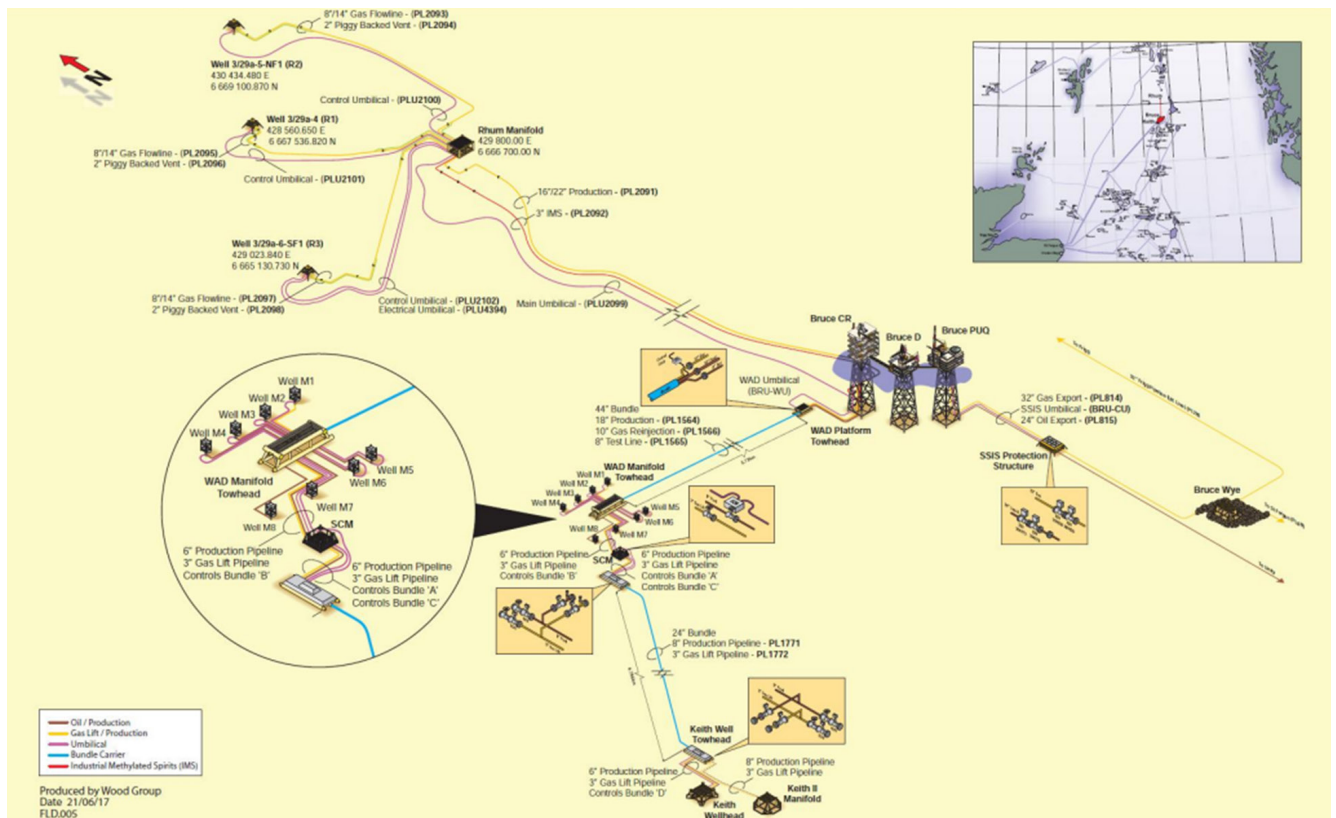


Figure 1 – BKR Fields, Pipeline and Platform Schematic

## North Sea Operations

### Columbus

The Columbus gas condensate field (23/16f) contains a single subsea production well that was successfully drilled in Q2 2021 and commenced production in November 2021. The pipeline and umbilical were installed and connected to a tie-in manifold structure on the Shell Arran pipeline that comingles and exports hydrocarbons to the Shell operated Shearwater Platform approximately 43 km southwest of the Columbus well.

Hydrocarbons (predominantly gas/gas condensate) from the Columbus Field are exported to shore from the Shearwater Platform, gas to St Fergus via the SEGAL pipeline and condensate/oil via the Forties pipeline to Cruden Bay.

Columbus production in 2022 was around 1,900 boe/d net to Serica.

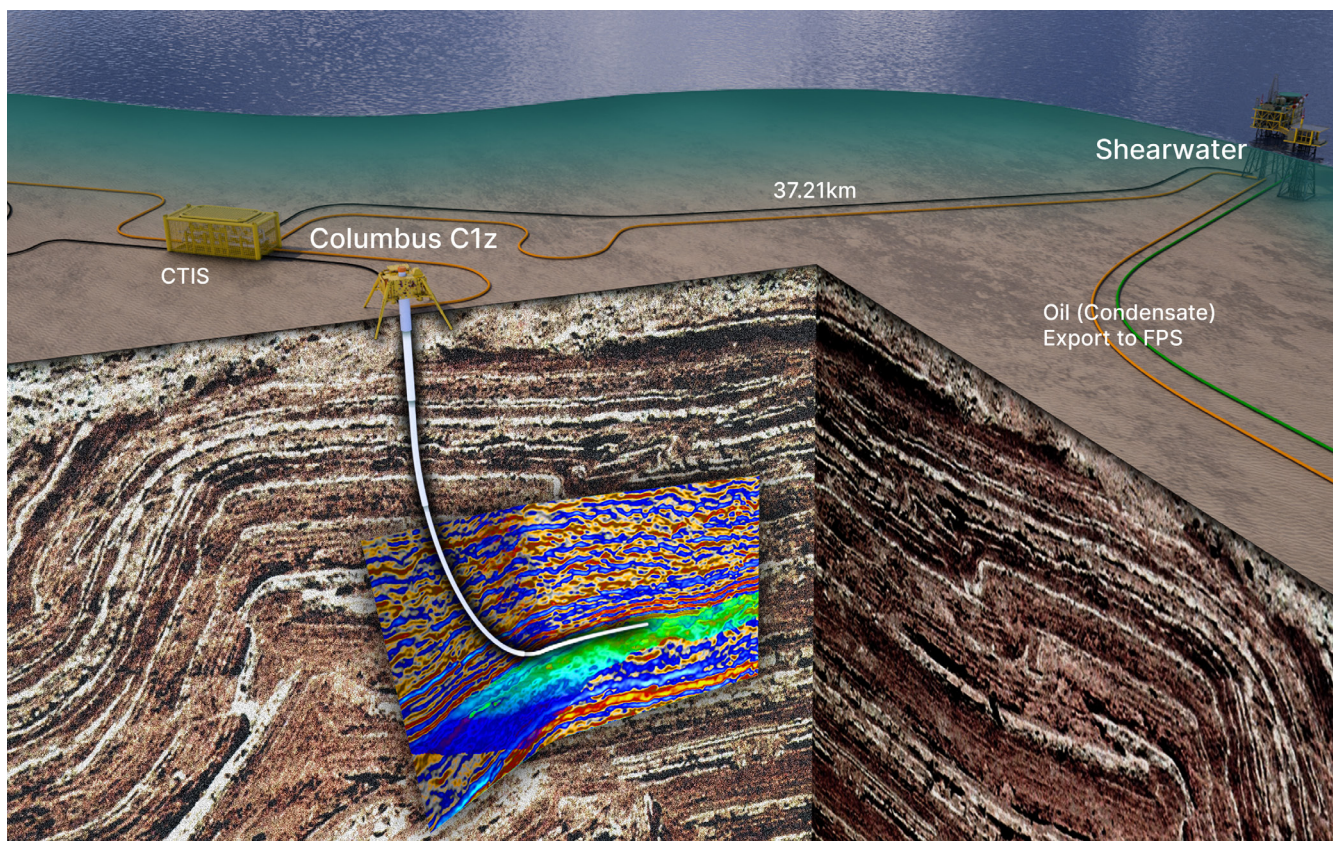


Figure 2 Columbus

## Non-Operated Assets and Exploration

# NON-OPERATED PRODUCTION

## Erskine

Serica holds an 18% non-operating interest in the Erskine gas condensate field, which is located in the Central North Sea (UK) and operated by Ithaca Energy.

The field is High Pressure High Temperature (HPHT) with the main reserves lying in three separate but overlying Jurassic sandstone producing horizons. It was originally discovered in 1981 and five wells have thus far been developed.

The production facilities comprise of a normally unattended installation located at the Erskine field with production handled and controlled from the Harbour Energy (32%) operated Lomond Platform. Erskine condensate is exported through the Forties Pipeline System via the Central Area Transmission System (known as CATS) riser platform at Everest and gas is exported via the CATS pipeline to the CATS terminal at Teesside. Erskine production levels in 2022 averaged over 1,680 boe/d.

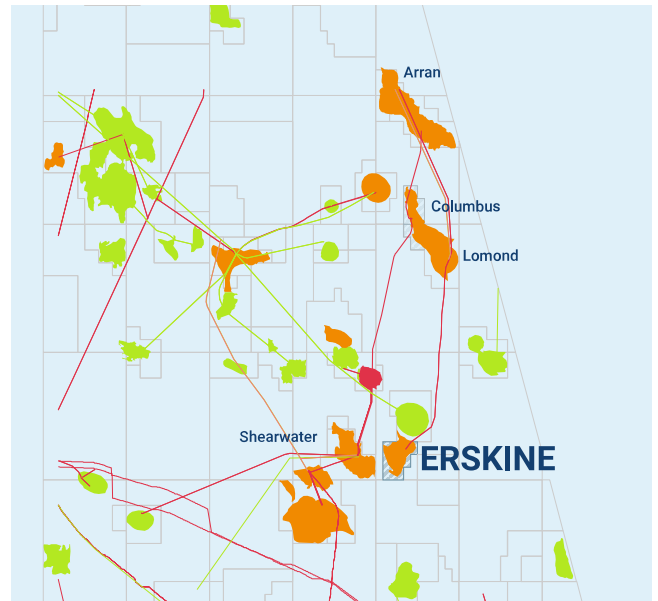


Figure 3 Erskine Location

# EXPLORATION

## North Eigg

Serica was awarded the P2501 License in December 2019, comprised of Blocks 3/24c and 3/29c which contained the North and South Eigg prospects. The prospects were assessed to be of high pressure and temperature (HPHT) and share similar geological characteristics to the adjacent Rhum Field.

SEUK drilled an exploration well in Block 3/24c North Eigg in Q4 2022. The well is currently suspended pending an investigation into the commercial viability of the reservoir and potential for drilling a side-track.

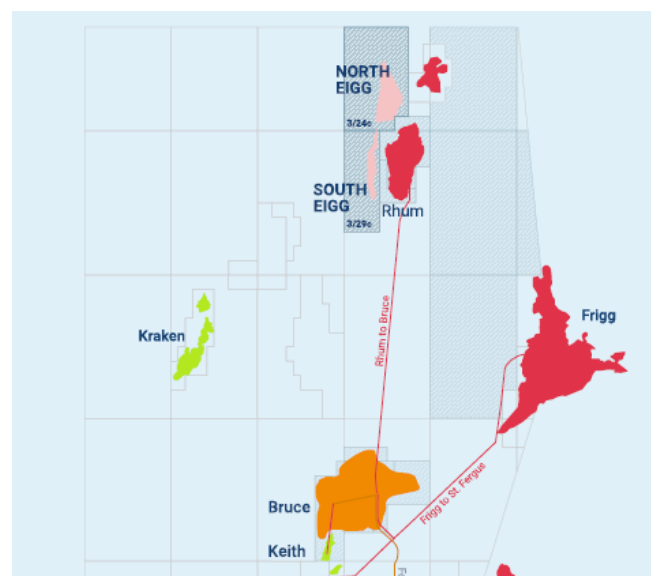


Figure 4 North Eigg Exploration Location



## Environmental Performance

SEUK has a strong focus on integrating environmental performance into everyday planning and operations. Key Performance Indicators (KPIs) are set on a yearly basis and primarily cover BKR operations.

In 2022 BKR KPI's included:

- Daily Category A flaring below 9.5 tonnes
- Scope 1 Carbon Intensity below 17kg CO<sub>2</sub>/boe
- Produced CO<sub>2</sub> below 210,000 tonnes
- Total flare below 5000 tonnes
- Develop a methane action plan
- Waste generated offshore (general waste and dry mixed recyclables) below 90 tonnes

All emissions related KPIs were designed to ensure SEUK progresses towards achieving the UK and industry climate change objectives as outlined in the NSTD and the Energy White Paper.

Emissions and discharges associated with Columbus and Erskine are not included in SEUK reporting as they are reported via other oil and gas operators.

## Atmospherics – BKR

The following GHG emissions reduction targets have been set in the NSTD against a 2018 baseline and include CO<sub>2</sub>, CH<sub>4</sub> and other GHG emissions. SEUK are aligned with the targets and support their delivery:

- 10% reduction by 2025
- 25% reduction by 2027
- 50% reduction by 2030
- Net zero by 2050

In 2022, CO<sub>2</sub> emissions as reported under the UK Emissions Trading Scheme, were 218,567 tonnes of CO<sub>2</sub>. This was 9,699 tonnes of CO<sub>2</sub> more than in 2021. This increase in CO<sub>2</sub> emissions was a result of having fewer days offline, some periods of plant instability and a fluctuating increase in export compressor loads resulting from 3rd party production entering the Frigg pipeline downstream of the Bruce Platform. 2022's CO<sub>2</sub> emissions reflect a 13.4% reduction relative to the 2018 baseline of 252,236 tonnes of CO<sub>2</sub>.

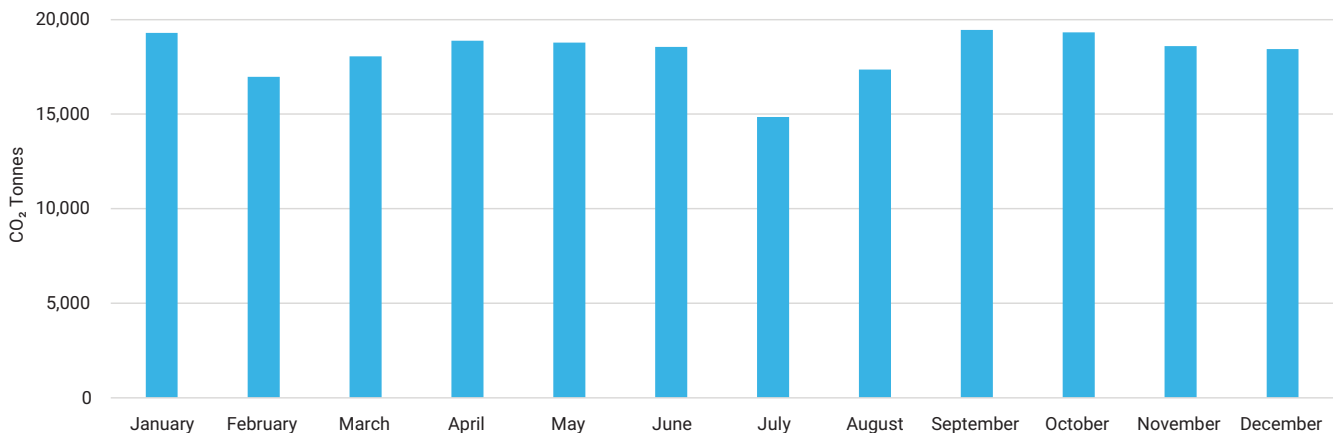


Figure 5 Monthly CO<sub>2</sub> emissions from Bruce Platform (UK-ETS 2022)

## Environmental Performance continued

In 2022, SEUK achieved a reduction in the carbon intensity of its oil and gas production. The 2022 carbon intensity was 16.4kg CO<sub>2</sub>/boe. This is 5.6kg CO<sub>2</sub>/boe lower than the 2020 NSTA platform definition for Bruce for small platform assets >25 years old\* and 1.4kg of CO<sub>2</sub>/boe lower than the 2021 SEUK carbon intensity value.

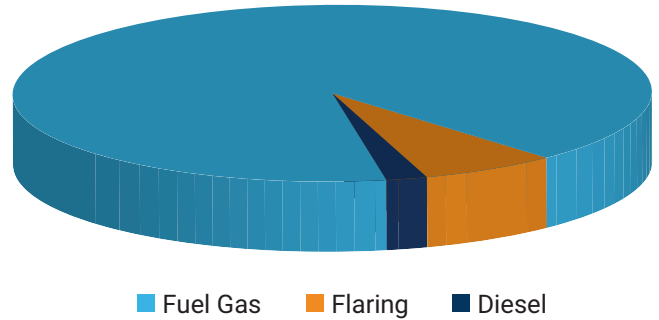


Figure 6 Total CO<sub>2</sub> emissions by source (UK-ETS 2022)

## Fuel Gas Consumption

In 2022 the combustion of BKR fuel gas for the compression train and power generation accounted for >90% of the Bruce Platform's overall CO<sub>2</sub> emissions. Total CO<sub>2</sub> emissions from the combustion of fuel gas on the Bruce Platform totalled 198,959 tonnes of CO<sub>2</sub> (UK-ETS). Total CH<sub>4</sub> from fuel gas consumption in the platform's Open Cycle Gas Turbines (OCGT) equalled 72.83 tonnes (EEMS) with NO<sub>x</sub> emissions totalling 897.87 tonnes (EEMS).

Stack Sampling completed in November 2021 and reported in 2022 demonstrated that when operating at loads above 70% the Alpha MPEX was compliant with NO<sub>x</sub> concentration emission limits. Sampling also provided site-specific Emissions Factors (EF) for NO<sub>x</sub> and CO which SEUK utilised for EEMS reporting in 2022.

Table 1 Breakdown of Emissions from Fuel Gas Consumption on OCGTs (EEMS 2022)

	Total Use (tonnes)	CO <sub>2</sub> (tonnes)	NO <sub>x</sub> (tonnes)	N <sub>2</sub> O (tonnes)	SO <sub>2</sub> (tonnes)	CO (tonnes)	CH <sub>4</sub> (tonnes)	VOC (tonnes)
Turbines	79,166	198,959	897.9	17.4	8.5	60.3	72.8	2.9

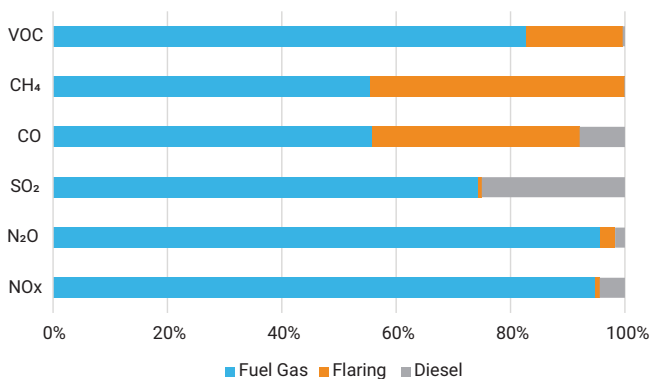


Figure 7 % GHG Emissions by source (EEMS 2022)

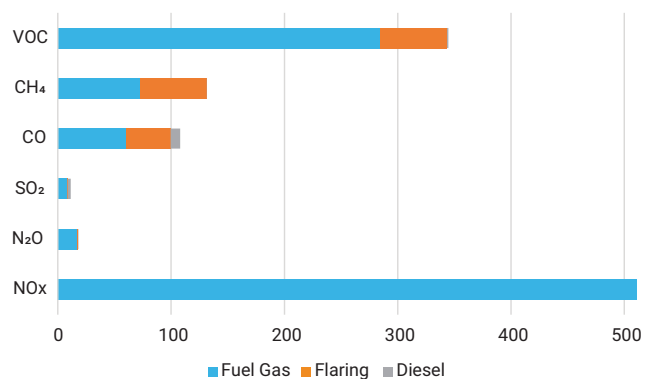


Figure 8 Total GHG Emissions by source (tonnes) (EEMS 2022)

\* Carbon Intensity Reference, NSTA 2020 <https://app.powerbi.com/view?r=eyJrjoiZjZjYjA3NWQ0NTU2OC00NDZiLTgwMTItNDVIODVINzdkMTNmliwidCl6ImU-20DFJNTiKLTg2OGUtNDg4Ny04MGZlLWNNIMzZmMWYyMWwZiJ9>

## Environmental Performance continued

### Diesel Consumption

Diesel is used to fuel the power generators when the plant is offline and fuel gas is unavailable. Diesel is also used to fuel smaller pieces of equipment such as lifeboats, fire pumps, and temporary equipment such as air compressors etc. When the plant is down for significant periods of time, such as during a prolonged period of maintenance, diesel consumption can increase.

Diesel use emits more CO<sub>2</sub> than fuel gas (by approximately 1 tonne of CO<sub>2</sub> per tonne of fuel) and results in higher NO<sub>x</sub>, SO<sub>2</sub> and VOC emissions. This is why SEUK tries to keep its usage as low as reasonably practicable. SEUK is currently exploring opportunities to reduce emissions from diesel by using biofuels and/or fitting a smaller more efficient diesel generation unit to reduce emissions during periods of production downtime. 2022 saw 34.8% less diesel consumed on the Bruce Platform compared to 2021.

**Table 2 – Breakdown of Emissions from Diesel Consumption (EEMS 2022) Flaring**

	Total Use (tonnes)	CO <sub>2</sub> (tonnes)	NO <sub>x</sub> (tonnes)	N <sub>2</sub> O (tonnes)	SO <sub>2</sub> (tonnes)	CO (tonnes)	CH <sub>4</sub> (tonnes)	VOC (tonnes)
Turbines	935.64	2,994.05	12.63	0.21	1.87	0.86	0.03	0.28
Engines	488.36	1562.75	29.01	0.11	0.98	7.67	0.09	0.98

### Flaring

Reducing flaring from our operations is a priority for SEUK; however, in 2022 our flaring volume increased by 1,074 tonnes compared to 2021. This increase was largely attributed to four days of disruption involving a plant shutdown in September. The total flared hydrocarbon mass in 2022 was 5,852 tonnes (EEMS). In 2022, the total CO<sub>2</sub> emissions from High Pressure (HP) flaring was 11,001 tonnes and 4,072 tonnes from the Low Pressure (LP) flare. SEUK continues to set ambitious flare reduction targets in 2023 to strive for continuous improvement.

**Table 3 Flaring Volume per month (EEMS 2022)**

Month	HP Flaring: Flare Gas: Gross	LP Flaring: Flare Gas: Gross	Monthly Total
	(tonnes)	(tonnes)	
January	194.31	108.87	303.18
February	199.72	92.43	292.14
March	657.613	97.426	755.04
April	297.17	94.09	391.26
May	181.69	99.59	281.27
June	156.90	118.50	275.40
July	201.97	107.40	309.37
August	685.16	102.59	787.75
September	1,232.66	119.97	1,352.63
October	286.88	145.71	432.59
November	218.707	152.354	371.06
December	148.952	151.169	300.12
<b>Totals</b>	<b>4,461.74</b>	<b>1,390.08</b>	<b>5,851.82</b>

## Environmental Performance continued

### Chemical Use and Discharge

The use and discharge of chemicals offshore is regulated by the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED). This is managed through the Offshore Chemical Regulations (OCR) (2002) (as amended). Most chemicals used offshore are regulated, requiring a risk assessment and approval for their use and discharge. All chemicals that are regulated under OCR have been tested to evaluate their toxicity, bio accumulation and bio degradation, and are ranked according to their potential to cause harm to the receiving environment. The most hazardous chemicals carry a substitution (SUB) warning label, and Operators are required to strive to reduce their usage of SUB chemicals. It is hoped that the Bruce platform will eradicate the use of SUB chemicals in the coming years, and our goal is to reduce chemical usage wherever possible.

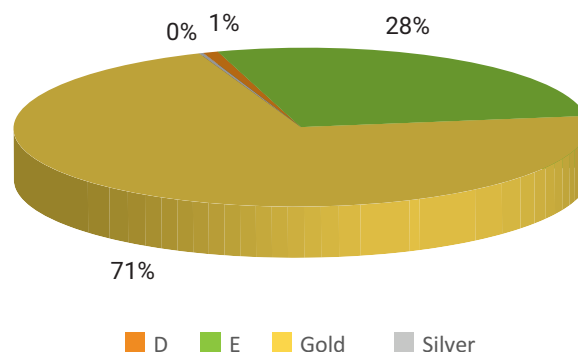
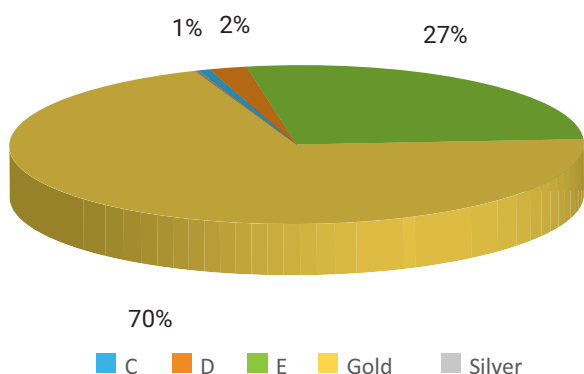
**Table 4** Initial OCNS groupings (cefas.co.uk)

Initial grouping	A	B	C	D	E
Result for aquatic-toxicity data (ppm)	<1	>1-10	>10-100	>100-1,000	>1,000
Result for sediment-toxicity data (ppm)	<10	>10-100	>100-1,000	>1,000-10,000	>10,000

**Table 5** OCNS HQ and Colour Bands

Minimum HQ value	Maximum HQ value	Colour banding	
>0	<1	Gold	Lowest hazard  Highest hazard
≥1	<30	Silver	
≥30	<100	White	
≥100	<300	Blue	
≥300	<1,000	Orange	
≥1,000		Purple	

Figures 9 and 10 below present chemical use and discharge by ranking. As can be seen no OCNS group A or B chemicals were used or discharged in 2022.



**Figure 9** % Used by Ranking (EEMS 2022)

**Figure 10** % Discharged by Ranking (EEMS 2022)

## Environmental Performance continued

### BKR Operations

2022 BKR offshore operations used a total of 288,581kg of chemicals. This is reduced from the 2020 figure of 446,884 kg and 2021 figure of 303,910 kg. The reduction in chemical usage can be attributed to improved chemical management and also to the fact that during most of 2021 and 2022 produced water reinjection (PWRI) was not operational. The 2022 figure can be further broken down to 281,131kg being discharged to sea including 36,958kg of which is considered to Pose Little or No Risk to the Environment (PLONOR) (13%). The most used chemical in 2022 was HSCV10610A (173,027 kg). This is an H<sub>2</sub>S scavenger required to remove H<sub>2</sub>S from the gas phase. This helps reduce the overall safety and corrosion risk. There is a plan to commence PWRI in 2023 following the successful clean-up of a water disposal well (C5), and to reduce or eliminate the use of the PWRI chemicals. This will be achieved by removing the practice of uplifting large volumes of seawater to comingle with produced water, negating the need for these chemicals in such large volumes

SEUK had one Offshore Chemical Non-Compliance Report (NCR) on the Bruce Platform in 2022. This related to the use of 228.9 kg of an unpermitted corrosion inhibitor.

### Projects – North Eigg

Whilst drilling the North Eigg well, 43,564 kg of surplus Water-based mud (WBM) was discharged to sea . This resulted in an OCR Non-Compliance being submitted because the discharge was not in line with the terms and conditions of the North Eigg chemical permit.

## Discharges to Sea

BKR wells produce a mixture of crude oil, water, condensate, and gas. Following separation, produced water is either re-injected underground via a dedicated well or cleaned to permitted oil in water concentrations using a deoiling package and discharged overboard. Historic issues with the Produced Water Re-injection Pump and availability of a disposal well, resulted in produced water being de-oiled and discharged overboard throughout 2022. However, as mentioned above, work is in progress to resume produced water reinjection in 2023.

Routine discharge and re-injection of produced water is closely monitored and monthly concentrations of oil in produced water (OiPW), and mass of dispersed oil discharged are recorded, and reported to OPRED, as per the conditions of the Oil Discharge Permit under the Offshore Petroleum Activities (Oil Pollution Prevention and Control) Regulations 2005 (as amended) (OPPC permit).

In 2022 a total of 62,298 m<sup>3</sup> of produced water was discharged overboard after treatment by the deoiling package. A total of 0.88 tonnes of oil was discharged to sea at an average oil in produced water concentration of 14.2 mg/l.

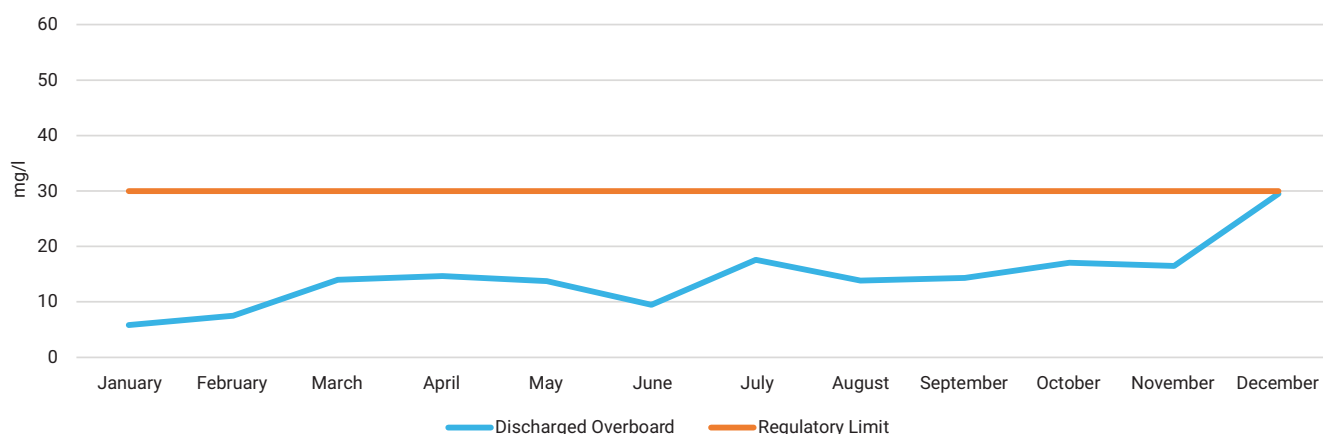


Figure 11 Monthly OiW Concentration (EEMS 2022)

## Environmental Performance continued

**Table 6 – Monthly OiW (EEMS 2022)**

Month	Oil Discharged	Water Discharged	Avg. Oil in Water	Days on Stream	Avg. Discharge Rate
	(tonnes)	(m3)	(mg/l)		(m3/day)
January	0.039688	6,791.948	5.8434	31	219.10
February	0.038094	5,073.419	7.5085	28	181.19
March	0.051685	3,689.774	14.0076	31	119.02
April	0.07731	5,275.900	14.6534	30	175.86
May	0.080151	5,829.396	13.7495	31	188.05
June	0.059955	6,335.765	9.4629	30	211.19
July	0.076756	4,360.087	17.6042	27	161.48
August	0.056564	4,081.80	13.8576	24	170.08
September	0.070064	4,889.158	14.3305	28	174.61
October	0.08915	5,226.227	17.0582	31	168.59
November	0.093317	5,661.222	16.484	30	188.71
December	0.149981	5,083.493	29.5	31	163.98
<b>Total</b>	<b>0.882715</b>	<b>62,298.19</b>	<b>14.20</b>	<b>352</b>	<b>192.90</b>

SEUK reported four OPPC Non-Compliance Reports (NCRs) in 2022, all of which were 100mg/l exceedances and resulted in a calculated 0.1 tonnes of oil being discharged to sea.

SEUK submitted two Petroleum Operation Notifications 1s (PON1s) in 2022 relating to the Bruce Platform. In total, 0.002 tonnes of oil were released from the Bruce Platform in the form of PON1s.

SEUK inherited an ongoing release of hydraulic fluid (Oceanic HW443ND), which was first observed in June 2018 from Oil and Gas Subsea Isolation Valves (SSIV) when in the closed position. Work was undertaken during 2022 and further works are planned for 2023. The chemical is a Gold band hydraulic fluid and therefore of low hazard to the environment. The quantity released in 2022 was ~2,740 kg.

## Projects

SEUK submitted 2 PON1s during our North Eigg drilling operations for the loss of:

1. 932.5kg of water-based mud to sea. This was as a result of an open valve on a subsea pump outlet manifold on the riserless mud recovery system.
2. 1kg of hydraulic fluid to sea. During a period of adverse weather, one of the control lines on the marine riser tensioner ring hydraulic control umbilical, in the moonpool area, failed due to wave impact.

During well abandonment operations on Columbus, a PON1 was submitted for 409.15kg of oil-based mud being lost to sea when the debris cap was removed during normal well abandonment operations.

During vessel based diving operations at Bruce, 0.51kg of hydraulic oil was lost to sea due to a hose failure. This resulted in a PON1 being submitted to OPRED.

## Environmental Performance continued

### Waste

Waste is generated offshore during oil and gas production operations. This waste can be categorised as either liquid or solid waste. Liquid waste streams include produced water and chemical residues which are either injected down-hole or discharged to sea. These waste streams are strictly regulated and covered separately under permits for authorised chemical disposal.

Solid waste streams require shipping onshore for appropriate treatment, recycling, or disposal, in line with The Merchant Shipping (Prevention of Pollution by Sewage and Garbage from Ships) Regulations 2008 which prohibit the disposal of solid waste at sea. These waste items include scrap metal, barrels, wood, plastics, cardboard, aluminium cans, medical waste and WEEE (Waste Electrical and Electronic Equipment).

The volume of waste generated, and its type, is entirely dependent on the activities being conducted. SEUK has robust arrangements in place for the management and segregation of waste materials generated by its BKR operations, through application of its Waste Management procedures. SEUK's waste policy is that where possible, waste should be eliminated and minimised according to the waste hierarchy.

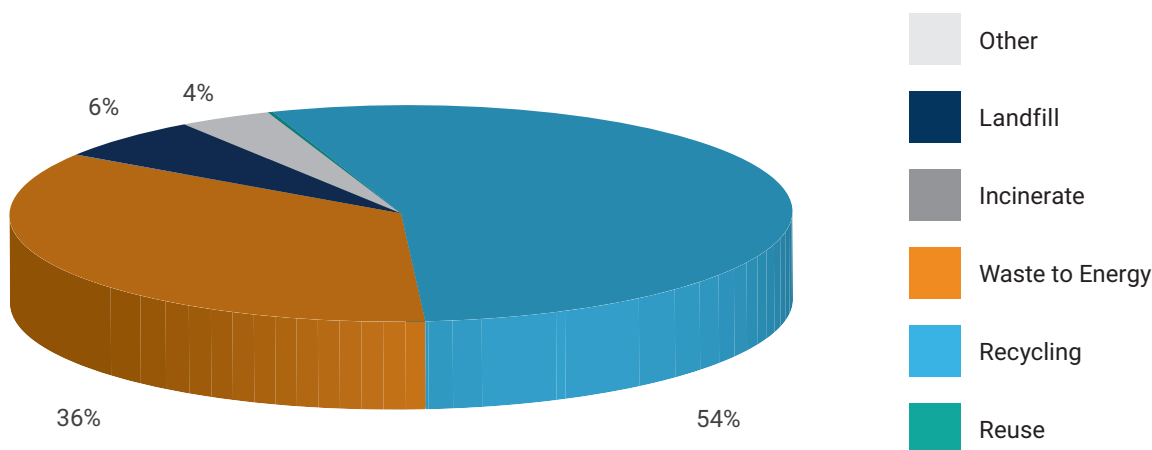


Figure 12 % of Waste by Method of Disposal (EEMS 2022)

In 2022, Bruce generated 263 tonnes of solid waste. SEUK saw an increase in the overall volume of waste from the platform which was due to a return to pre-pandemic levels of operation. SEUK did however continue to reduce waste going to landfill by a further 10 tonnes, down to 2.5 tonnes from 12.4 tonnes in 2021.

In 2023, SEUK will continue to investigate ways in which waste can be removed or reduced at source. We believe that a focus on engagement and constructive interaction with the supply chain, supplemented by input from our ESG champions and workforce, is the best way to achieve a continued reduction in waste.

## Glossary

<b>3D</b>	three-dimensional
<b>ALARP</b>	As Low as Reasonably Practicable
<b>boe/d</b>	barrels of oil equivalent (barrels of oil, condensate and LPG plus the heating equivalent of gas converted into barrels at the appropriate rate) produced per day
<b>BKR</b>	Bruce, Keith and Rhum fields
<b>CH<sub>4</sub></b>	Methane
<b>CO</b>	Carbon Monoxide
<b>CO<sub>2</sub></b>	Carbon Dioxide
<b>EEMS</b>	Environmental and Emissions Monitoring System
<b>EMS</b>	Environmental Management System
<b>ESG</b>	Environment, Social & Governance
<b>GHG</b>	Greenhouse Gas
<b>HP</b>	High Pressure
<b>HPHT</b>	High Pressure High Temperature
<b>HSE</b>	Health, Safety and Environmental
<b>HSEQ</b>	Health, Safety, Environment & Quality
<b>KPIs</b>	Key Performance Indicators
<b>LP</b>	Low Pressure
<b>mg/l</b>	milligrams per litre
<b>mmboe</b>	million barrels of oil equivalent
<b>mmscfd</b>	million standard cubic feet per day
<b>NNS</b>	Northern North Sea
<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>NCR</b>	Non-compliance report
<b>OCR</b>	Offshore Chemicals Regulations
<b>OCNS</b>	Offshore Chemical Notification Scheme
<b>OCGT</b>	Open Cycle Gas Turbines
<b>OGA</b>	Oil and Gas Authority
<b>OiPW</b>	Oil in Produced Water
<b>OMS</b>	Operations Management System
<b>OPPC</b>	Oil Pollution Prevention & Control
<b>OPRED</b>	Offshore Petroleum Regulator for Environment and Decommissioning
<b>OSPAR</b>	Oslo Paris Convention
<b>PLONOR</b>	Pose little or no risk to the environment
<b>PON</b>	Petroleum Operations Notification
<b>PWRI</b>	Produced Water Re-injection
<b>SEUK</b>	Serica Energy (UK) Limited
<b>SO<sub>2</sub></b>	Sulphur Dioxide
<b>SSIV</b>	Subsea Isolation Valves
<b>SUB</b>	Substitution
<b>UKCS</b>	United Kingdom Continental Shelf
<b>VOC</b>	Volatile Organic Compound
<b>WAD</b>	Western Area Development
<b>WEEE</b>	Waste, Electrical & Electronic Equipment





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