

# ANNUAL PUBLIC STATEMENT ENVIRONMENTAL MANAGEMENT SYSTEM 2020

**Petrofac Facilities  
Management Limited**

# INTRODUCTION

This report is Petrofac Facilities Management Limited's 2020 annual public statement for environmental management, covering our UK Operations.

Prepared in line with the reporting requirements of the UK's Department for Business, Energy and Industrial Strategy, it meets the requirements of the Oslo Paris (OSPAR) Convention Recommendation 2003/5. This report outlines our Environmental Management System (EMS) and focuses on our 2020 environmental performance.

## WORKING RESPONSIBLY

Our EMS was developed alongside our Health, Safety, Security and Environment framework and the ISO 14001 standard for environmental management. It enables us to manage the environmental impacts arising from our activities and is based on the internationally approved 'Plan-Do-Check-Act' process. This ensures we have the philosophy, procedures and methods in place to manage significant environmental risks throughout the life cycle of our projects.

As a provider of managed solutions to our clients in the UKCS we fulfil the role of 'Operator' on behalf of the asset owner. As a result, our EMS has been designed to support our operating responsibilities:

- The environmental goals for the prevention and elimination of pollution from offshore sources and the protection and conservation of the maritime area against other adverse effects of offshore activities
- Provision of trained emergency and oil spill responders and specialist emergency response facilities
- Continual improvement in environmental performance

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Our vision is to reach  
**Horizon Zero**; a future  
with no accidents or incidents

# THINKING DIFFERENTLY ABOUT DELIVERY

As a leading service provider to the energy production and processing industry, we design, build, operate and maintain energy facilities.

We think differently about delivery. By providing standalone or integrated services we align our approach to meet our clients' operating strategies and project objectives, unlocking significant value.

One example of this is our innovative Operator models, which have evolved from the Duty Holder service we pioneered in 1997, whereby we take responsibility for the Safety Case on behalf of a client.



# OUR JOURNEY TO NET ZERO

Never before have we had such an awareness of the importance of sustainability. Petrofac has a duty of care to do all we can to put this awareness into action and support our clients to accelerate the Energy Transition.

We are committed to reducing emissions to Net Zero by 2025\* and are working to influence our supply chain to set their own reduction targets.

Our Net Zero Strategy of 'Reduce, Transform, Enable' will focus the business on three areas:

- **Reduce** – cut our emissions by implementing energy efficiencies and low carbon strategies on sites and operations, optimising our operations and methods of construction, and advancing flare and venting reduction and carbon abatement plans
- **Transform** – adopt new technologies such as phasing in hybrid and electric vehicles on site, decarbonising our heating and cooling systems by switching to renewable electricity where available, and fitting smart building technology in our offices to maximise energy efficiency
- **Enable** – support our clients, partners and suppliers in their lower carbon ambitions, enable flexible and agile working practices, continue to embed emission reduction targets in management scorecards, and incentivise our staff to be advocates for Net Zero

Petrofac is made up of three divisions; Engineering & Construction (E&C), Engineering & Production Services (EPS), and Integrated Energy Services (IES).

\*We expect Engineering & Production Services, which incorporates Petrofac Facilities Management Limited, to reduce its Scope 1 and 2 emissions to Net Zero by 2025, while Engineering & Construction and Integrated Energy Services will achieve the same by 2030.

# OUR OPERATING MODELS

Following the introduction of the 2015 Safety Case Regulations, our outsourced Duty Holder model evolved to include the management of the environmental aspects of an installation. This is now known as the Installation Operator.

Responsibility for wells and pipelines (Well Operator and Pipeline Operator) can be combined with Installation Operator within one outsourced model called Service Operator.

## SERVICE OPERATOR

Anasuria Operating Company (AOC), Anasuria cluster and FPSO, UKCS

During 2020, as Service Operator for AOC we managed the Anasuria FPSO and associated pipelines. We have focused on providing an integrated and aligned approach to the operation and development of the cluster to support our client in its objective to extend the life of field.

## WELL OPERATOR

Hess Corporation

We were appointed Well Operator for a three well plug and abandonment campaign in the Central North Sea for Hess, which is documented within this statement.

## INSTALLATION OPERATOR

FPF-1, Hewett, Irish Sea Pioneer, Kittiwake, and Schooner and Ketch platforms

During 2020, our Installation Operator portfolio included the FPF-1 Floating Production Facility, the Hewett Complex, and the Irish Sea Pioneer, Kittiwake, and Schooner and Ketch platforms.

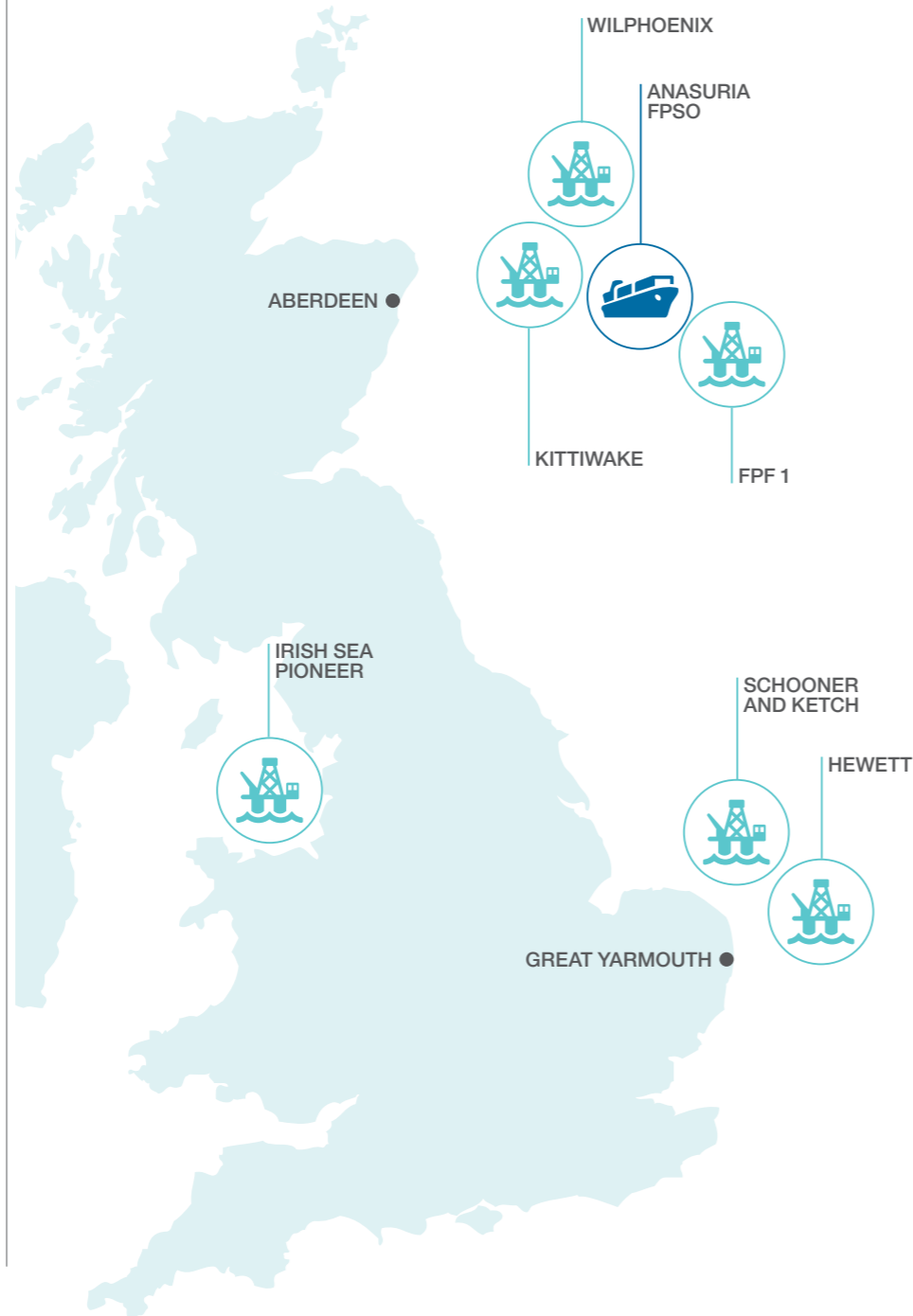
# OUR OFFSHORE OPERATIONS

On behalf of their owners, we currently operate a range of platforms and undertake offshore oil and gas production activities including:

- Non-producing intervention vessel operation
- Oil and gas production platform operation
- Late-life platform operations
- Drilling activities with third-party rig provision

Under the requirements of this disclosure, the UKCS Operator responsibilities and UKCS assets highlighted within this statement include:

- Service Operator (including Installation Operator) – the Anasuria FPSO and Irish Sea Pioneer, Hewett, Kittiwake, and Schooner and Ketch platforms
- Well Operator – WilPhoenix drilling rig



## SERVICE OPERATOR (INCLUDING INSTALLATION OPERATOR)



**Anasuria FPSO**

The Anasuria FPSO is owned by Anasuria Operating Company, a joint venture between Hibiscus Petroleum Berhad and Ping Petroleum Limited. It is located 175km east of Aberdeen.

In 2016, Petrofac was awarded a Service Operator contract for the FPSO and associated cluster, with responsibility for the installation, wells and pipelines, with exception of the Cook well.



**Irish Sea Pioneer**

Petrofac has been Installation Operator of the Irish Sea Pioneer since 2015, prior to which Petrofac had been Duty Holder of the asset since 2006.

The non-producing mobile platform is owned by ENI and provides intervention services to ENI's operations in the Liverpool Bay area.



**FPF-1**

The FPF-1 is a Floating Production Facility, located in the Greater Stella Area in the Central North Sea, that has been in operation since 2016. Petrofac was Installation Operator for FPF-1 until September 2020, when Ithaca Energy assumed Duty Holder responsibility.



**Kittiwake**

Petrofac has been the Duty Holder for the Kittiwake, a fixed steel jacket platform in the Central North Sea, since 2004, on behalf of current and previous owners EnQuest, Centrica and Venture Production respectively.

In June 2017, Petrofac became Installation Operator and assumed responsibility for the environmental performance for the asset.



**Hewett**

Petrofac has been Duty Holder for the Hewett platforms since 2003 on behalf of current and previous owners Eni and Tullow Oil respectively. In January 2018, Petrofac became Installation Operator.

Located in the Southern North Sea, there are four platforms: The Hewett Complex (48/29Q, AP and A-FTP), 48/29 B, 48/29 C and 52/5A. The Complex is permanently manned whilst 48/29 B, 48/29 C and 52/5A are Not Permanently Attended Installations (NPAI).



**Schooner and Ketch**

Schooner and Ketch, located in the fields of the same name in the Southern North Sea, are normally unmanned gas platforms. Petrofac has been Duty Holder for the Schooner and Ketch assets since 2005 on behalf of current and previous owners Faroe Petroleum and Tullow Oil respectively.

In March 2017, Petrofac became Installation Operator and assumed responsibility for the environmental performance for assets.

## WELL OPERATOR

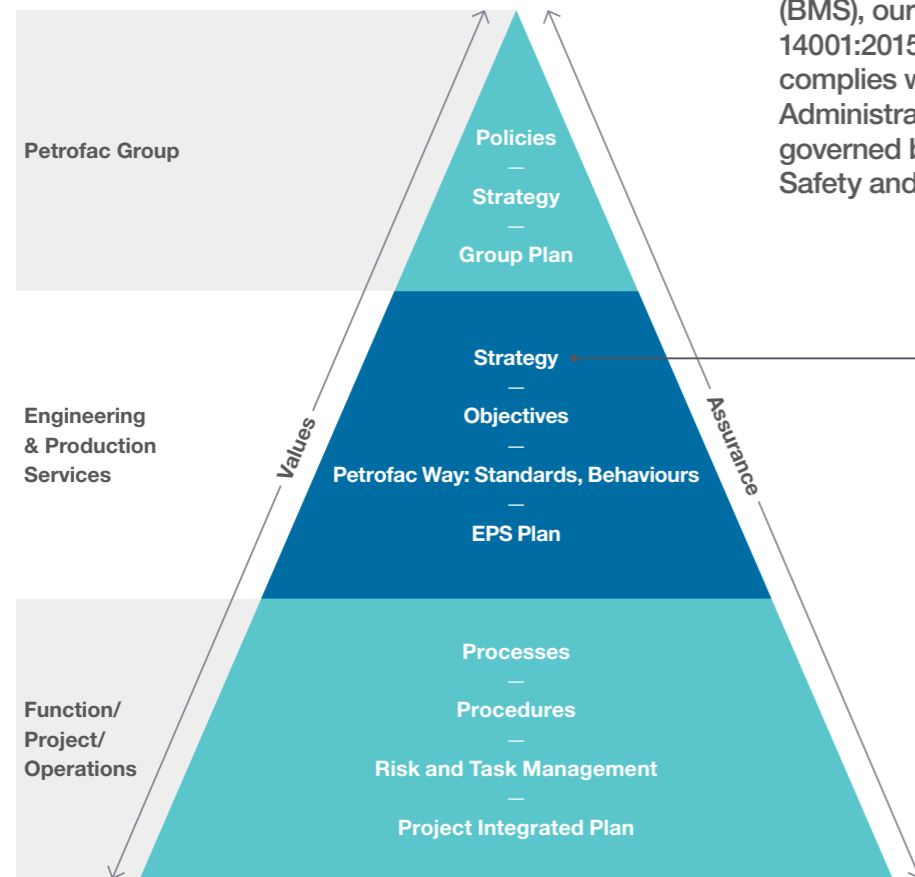


**WilPhoenix**

Petrofac was the appointed Well Operator, on behalf of licensee Hess, for a three well plug and abandonment campaign in the Central North Sea. The semi-submersible drilling rig, owned by Awilco Drilling, carried out the work in the Rubie and Renee fields.

# ENVIRONMENTAL MANAGEMENT SYSTEM

## HSE MANAGEMENT STRATEGY



As part of our Business Management System (BMS), our EMS is certified to the ISO 14001:2015 International Standard, and complies with the Oil Spill Prevention, Administration and Response Fund. It is governed by the Petrofac Group Health Safety and Environment Management Strategy.

### HSE MANAGEMENT STRATEGY ELEMENTS

1. Leadership and accountability
2. People and competence
3. Subcontractors, suppliers and partners
4. Customers, products and services
5. Community and stakeholders
6. Risk assessment and management
7. Design and construction
8. Operations and maintenance
9. Management of change
10. Information and documentation
11. Incident investigation and analysis
12. Crisis and emergency management
13. Assessing and improving effectiveness

Our EMS is flexible enough to maintain continuity with existing practices during the transfer of platforms to the Petrofac system, whilst taking on board best practice where identified which is then shared across other assets.

# MANAGING OUR IMPACT ON THE ENVIRONMENT

Specific areas of our offshore operations require daily focus to ensure their impact on the environment is managed effectively. These include:

## DISCHARGES TO SEA

### OIL IN WATER

Water is extracted from wells, along with oil and gas. The water, known as produced water, is then separated from the oil and treated. Although treatment removes most of the oil from the water, residual traces are still discharged. These traces are regulated and released under permitted conditions.

### DRILL CUTTINGS DISCHARGE

Drill cuttings and fluids discharged from drilling operations can also contain residual oil associated with the formation.

### CHEMICAL DISCHARGES

Prior to approval and discharge for use offshore, chemicals are subjected to a risk assessment. The potential impact from chemical discharges is graded using the ranking system below:

COLOUR BANDING		INITIAL OFFSHORE CHEMICAL NOTIFICATION SCHEME (OCNS) GROUPING	
GOLD	Lowest hazard ↓ Highest hazard	Initial grouping	
SILVER		A	
WHITE		B	
BLUE		C	
ORANGE		D	
PURPLE		E	

## ATMOSPHERIC EMISSIONS

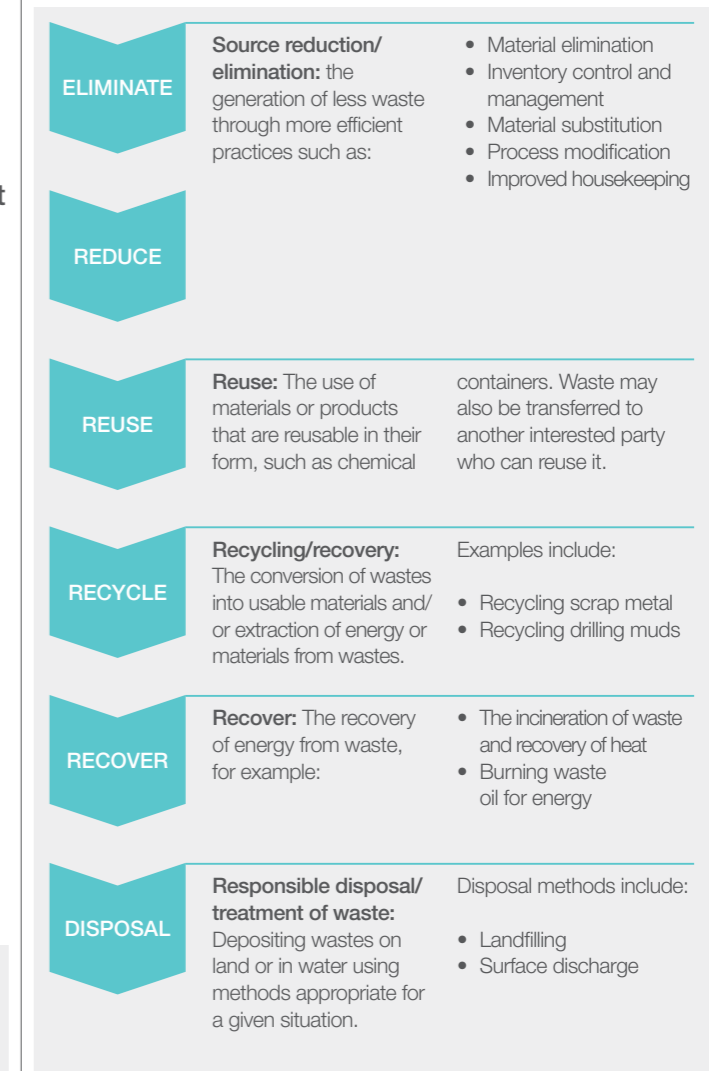
The combustion of diesel and gas to generate power and the burning of flare gas creates atmospheric emissions of Carbon Dioxide (CO<sub>2</sub>) and other combustion products including:

- Nitrous oxides
- Sulphurous oxides
- Carbon Monoxide (CO)
- Methane (CH<sub>4</sub>)
- Other Volatile Organic Compounds (VOCs)

During activities on the assets, refrigerant gases are used offshore, primarily to support living conditions and equipment cooling. This activity is regulated and reported on annually.

## WASTE MANAGEMENT

Waste generated offshore is managed to allow maximum reuse or recycling of materials before being treated, incinerated or disposed to landfill. Petrofac follows the waste management hierarchy below:



## PETROLEUM OPERATIONS NOTICE AND NON-COMPLIANCE REPORTING

All notices and non-compliance are recorded within Petrofac's incident management system, detailing the circumstances, investigation, outcomes and actions. The system is also used for lesson sharing and incident trending to assist with continuous improvement.

### PETROLEUM OPERATIONS NOTICE

Any spill to sea of oil or chemical is reported to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) using the Petroleum Operations Notice (PON 1).

The loss of any objects to sea which may have an impact on the environment or sea users are reported to OPRED using a PON 2 Notice.

### NON-COMPLIANCE

A non-compliance against any of the permit conditions is reported using the appropriate format to OPRED.

# ENVIRONMENTAL OBJECTIVES AND TARGETS

## 2020 OBJECTIVES

## 2020 ACHIEVEMENTS

Digital tracking of significant environmental emissions	Embarked on the development of an emissions tracking tool to support internal emissions management that also provides a platform for asset performance tracking and management
Support the business in new areas of energy diversification and transitional opportunities	Continued to diversify into renewable energy such as offshore wind, carbon capture and storage, and hydrogen generation
Support preparation of energy reduction and efficiency plans for identified energy saving opportunities	Prepared energy reduction plans across the business based on reduction of energy demand and the switch to lower emissions fuel and/or energy provider
Work with the wider Petrofac Group to raise sustainability awareness across the business	Published sustainability goals which include Net Zero by 2030 for the Group and by 2025 for Engineering and Production Services

## CONTINUOUS IMPROVEMENT

In 2021, Petrofac will maintain ISO 14001 Certification across all operated assets and extend in to new areas as operational changes require. It is also planning to enhance the use of digital technology in support of the United Nations' Sustainable Development Goals.

Petrofac's EPS West business on track to reduce emissions by 25% based on 2019 levels	Develop methodology for methane monitoring and quantification
Net Zero Think Tank output to be translated into local energy and emission reduction plans	Roll out emissions monitoring and management system internally and for client activities and operations





# ENVIRONMENTAL PERFORMANCE

## ANASURIA FPSO

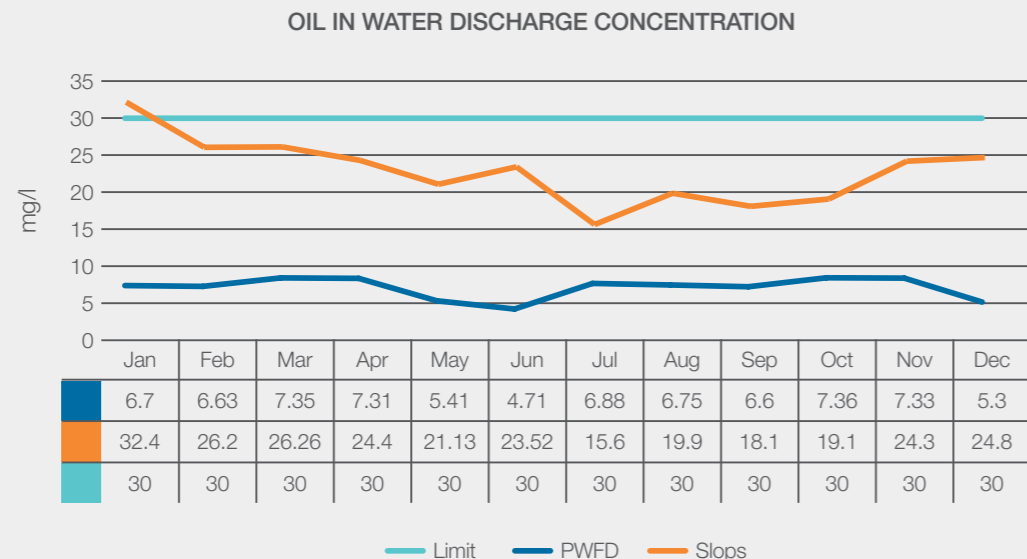
The environmental permits in place for the Anasuria FPSO are associated with oily water discharges to sea, offshore chemical use and discharge, and atmospheric emissions from power generation and flaring.

### DISCHARGES TO SEA

#### OIL IN PRODUCED WATER

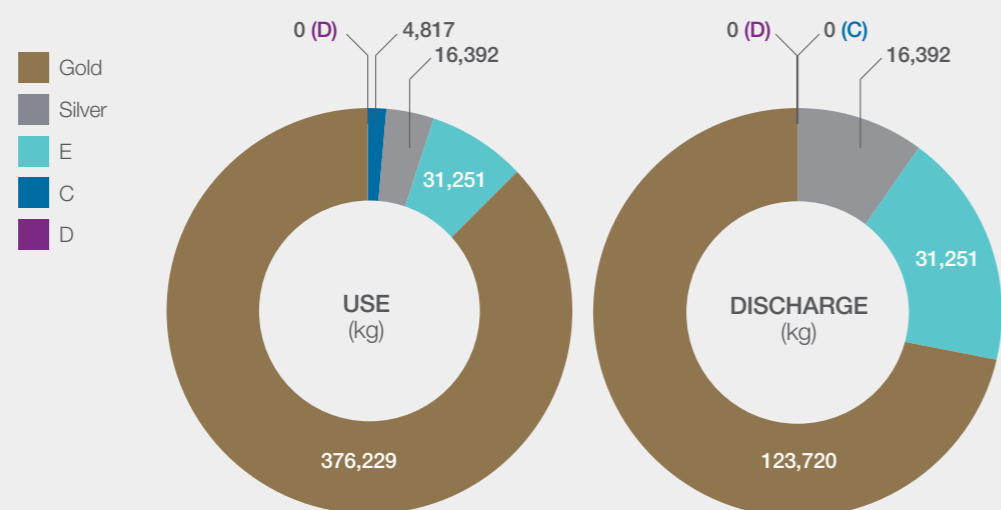
Water discharges are monitored and reported in accordance with the Oil Pollution, Prevention and Control Permit. The average oil in water concentrations over both discharges (produced water flush drum and slops) for the period was 6.87 mg/l.

The total volume of water and mass of oil discharged over the period of operation was 1,565,832m<sup>3</sup> and 10,753 kg of oil.



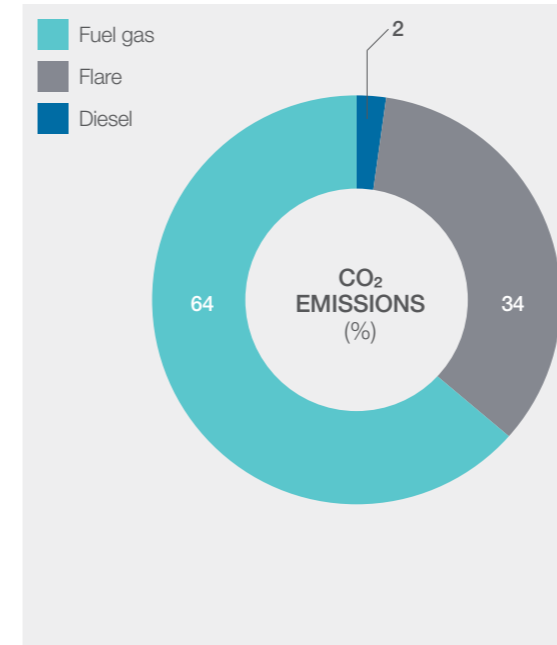
#### CHEMICAL USE AND DISCHARGE

The majority of chemicals in use on the Anasuria FPSO are in the least harmful Gold (CHARM) and E (non-CHARM) categories. Ongoing chemical management aims to continue to minimise the impact of chemicals on the environment.



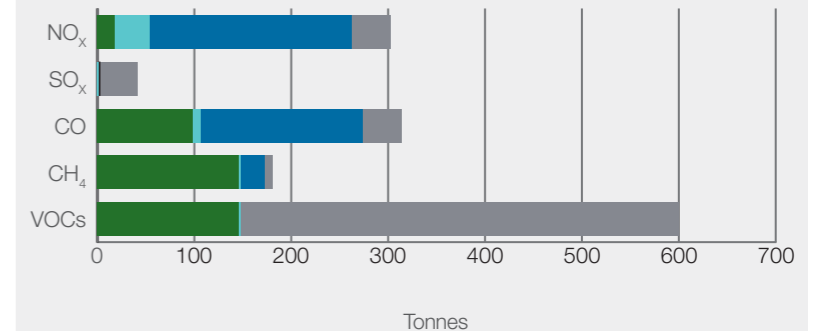
### DISCHARGES TO ATMOSPHERE

Power generation is the main source of atmospheric emissions. Other sources are flaring and venting gas. 119,080 tonnes of CO<sub>2</sub> emissions were verified for greenhouse gas reporting purposes in 2020. Other emissions were reported through the Environmental Emissions Monitoring System.



Other combustion emissions reported through the Environmental Emissions Monitoring System (EEMS) can be found below:

#### EMISSIONS BY SOURCE



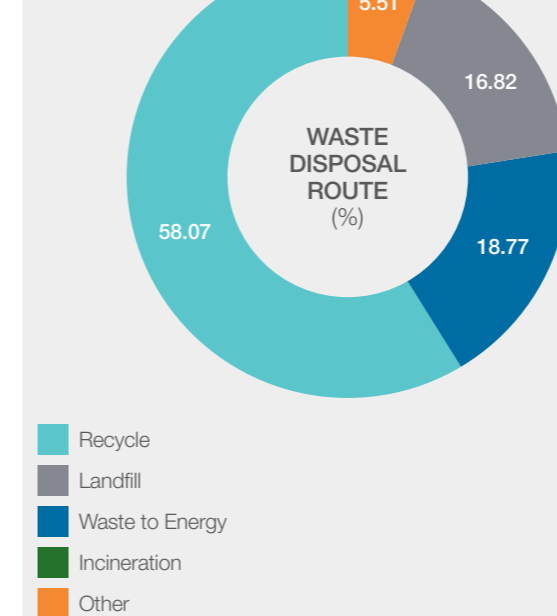
	VOCs	CH <sub>4</sub>	CO	SO <sub>x</sub>	NO <sub>x</sub>
Flare	146.22	146.22	97.96	0.19	17.55
Diesel	1.18	1.18	8.88	1.58	36.45
Fuel Gas	1.00	25.58	166.81	0.36	208.25
Vent	451.29	7.67	40	40	40

There are three hydrochlorofluorocarbon (HCFC) refrigerant compounds in use on the Anasuria FPSO. The inventory and emission details are monitored and reported:

Compound	On Facility (kg)	Emitted (kg)	CO <sub>2</sub> Equivalent Factor (kg)	CO <sub>2</sub> Equivalent (t)
HFC-134a	1.61	0.00	1,430	0.00
HFC-404a	17.96	0.00	3,922	0.00
HFC-417a	30.40	0.00	2,346	0.00
<b>Total</b>	<b>49.97</b>	<b>0.00</b>		<b>0.00</b>

### WASTE MANAGEMENT

117 tonnes of waste were managed onshore. The disposal routes are charted below:



### REPORTS AND NOTIFICATION

During 2020 there were two releases of oil and one release of secondary chemicals reported. There was no unpermitted discharge of chemicals reported. All incidents were closed out through the PON 1 reporting system.

#### PON 1 Notification details

Activity	Oil/Chemical type	Discharge (t)
Produced water leak from the reject line from the hydrocyclones / TEG reboiler to the LP flare drum	Oil	< 1L
Produced water leak from the LP flare header downstream from where the reject line from the hydrocyclones / TEG reboiler ties into the LP flare	Oil	< 1L
Relief valve RV-4403 on Waste Heat Recovery Unit E-4401 lifted, resulting in heating medium being discharged to sea via the relief valve vent line	Chemicals	348

A total of two non-compliances with permit conditions were submitted to OPRED during 2020:

Permit	Non-compliance	NO.
OPPC	Monthly average of slop OIW discharge exceeds regulatory 30mg/l for January 2020	1
Chemical	Exceeded discharge of MEG / water mix due to difficulties with reaching the seal on the downline / emergency shutdown valve connection	1

# ENVIRONMENTAL PERFORMANCE

## FPF-1

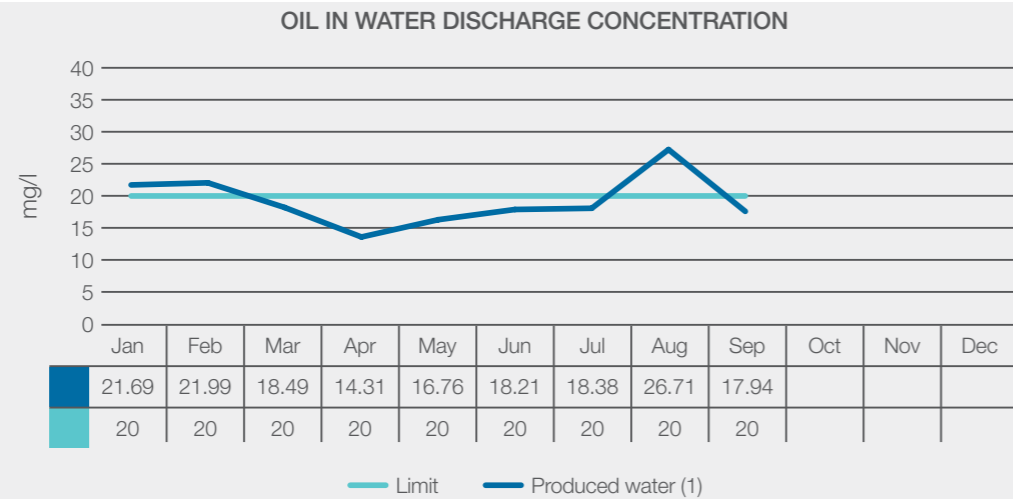
The environmental permits in place for the FPF-1 are associated with oily water discharges to sea, offshore chemical use and discharge and atmospheric emissions from power generation and flaring. On the 14th of September 2020, Ithaca Energy transitioned back to Installation Operator of the FPF-1 asset. The data in this report covers January 2020 through to the end of August / middle of September 2020.

### DISCHARGES TO SEA

#### OIL IN PRODUCED WATER

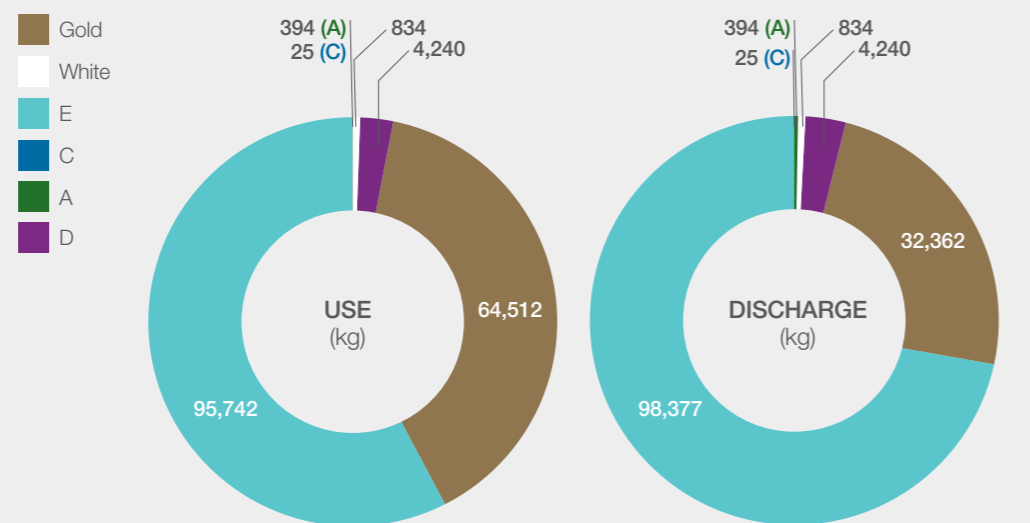
Water discharges are monitored and reported in accordance with the Oil Pollution, Prevention and Control Permit. The average oil in water concentrations for the period (January to 13 September 2020) was 18.9 mg/L.

The total volume of water and mass of oil discharged over the period of operation was 78,335m<sup>3</sup> and 1,480 kg of oil (January to 13 September 2020).



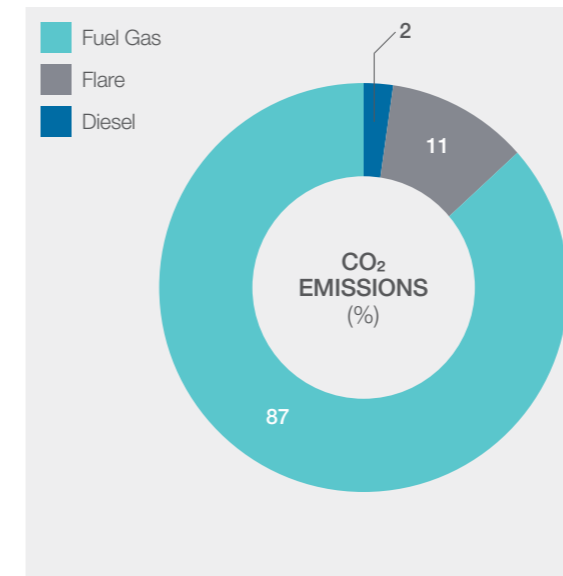
#### CHEMICAL USE AND DISCHARGE

The majority of chemicals in use on the FPF-1 asset are E and Gold categories. Ongoing chemical management aims to continue to minimise the impact of chemicals on the environment.

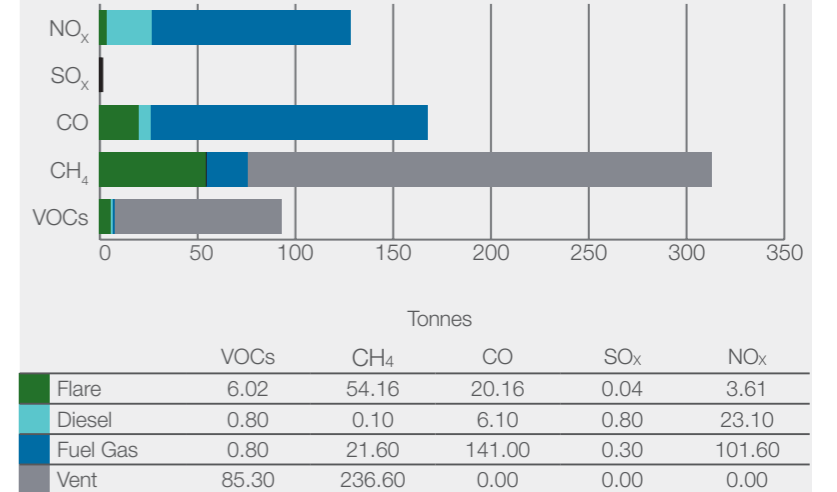


### DISCHARGES TO ATMOSPHERE

Power generation is the main source of atmospheric emissions. Other sources are flaring and venting gas. 71,637 tonnes of CO<sub>2</sub> emissions were verified for greenhouse gas reporting purposes (for emissions from January to August 2020). Other emissions were reported through the Environmental Emissions Monitoring System. The data below is reported between January and August 2020.



#### EMISSIONS BY SOURCE

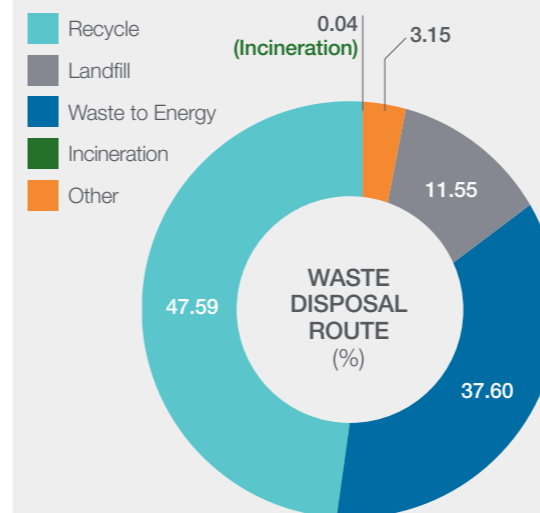


There are four hydrochlorofluorocarbon (HCFC) refrigerant compounds in use on the FPF-1. The inventory and emission details are monitored and reported:

Compound	On Facility (kg)	Emitted (kg)	CO <sub>2</sub> Equivalent Factor (kg)	CO <sub>2</sub> Equivalent (t)
HFC-134a	1	0.00	1,430	0.00
HFC-404a	48	0.00	3,922	0.00
HFC-407c	862	8	1,774	15
HFC-417a	5	0.00	2,346	0.00
<b>Total</b>	<b>916</b>	<b>8</b>	<b>9,472</b>	<b>15</b>

### WASTE MANAGEMENT

168 tonnes of waste was managed onshore from January to the end of August 2020. The disposal routes are charted below:



### REPORTS AND NOTIFICATION

In 2020 (January to 13 September) there were no releases of oil reported. There were two unpermitted discharge of chemical reported and closed out through the PON 1 reporting system.

#### PON 1

Activity	Oil/Chemical type	Discharge (t)
Cooling medium release through burst disc	TEG and Corrosion inhibitor	1.1 and 0.00325
Cooling medium release through burst disc	TEG and Corrosion inhibitor	1.145 and 0.00325

A total of four non-compliances with permit conditions were submitted to OPRED during January to 13 September 2020:

Permit	Non-Compliance	No.
Oil discharge permit	Monthly discharge limit exceeded	4

## ENVIRONMENTAL PERFORMANCE

# HEWETT

The environmental permits in place for the Hewett Field Complex, blocks 48/29AP, 48/29 B, 48/29 C and 52/5A are associated with oily water discharges to sea, offshore chemical use and discharge, and atmospheric emissions from power generation and venting.

### DISCHARGES TO SEA

#### OIL IN PRODUCED WATER

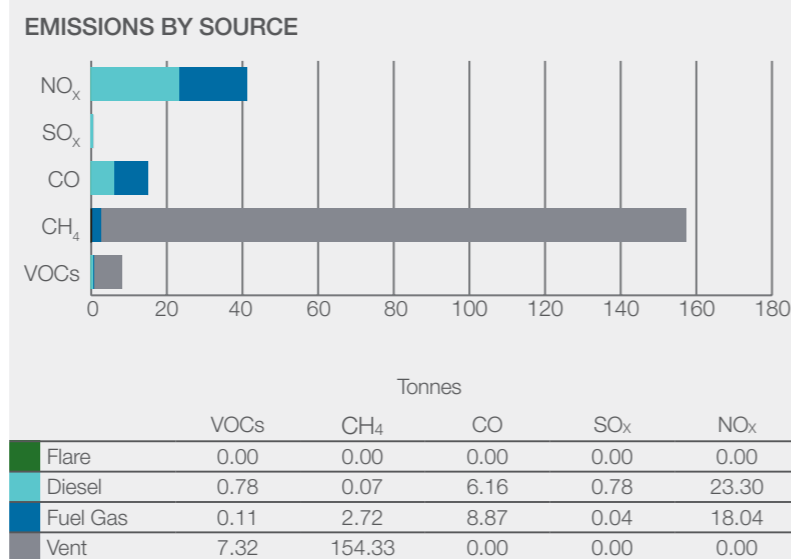
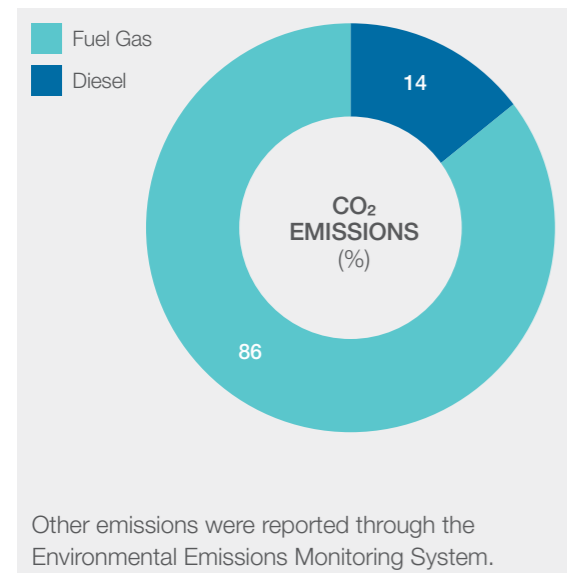
No produced water was discharged to sea in 2020. During preparations for decommissioning, fluids from cleaning and flushing activities were reinjected into 48/29B well A9.

#### CHEMICAL USE AND DISCHARGE

Chemicals in use on the Hewett Complex are Gold and D categories. Just over 1L of Hydrosure HD 5000 was used but not discharged (GOLD category), the remaining use and discharge was 1,926kg of Aqualink 300-F V2 (D category). Ongoing chemical management aims to continue to minimise the impact of chemicals on the environment.

### DISCHARGES TO ATMOSPHERE

Power generation is the main source of atmospheric emissions, with the other sources comprising of flaring and venting gas. 9,168 tonnes of CO<sub>2</sub> emissions were verified for greenhouse gas reporting purposes.

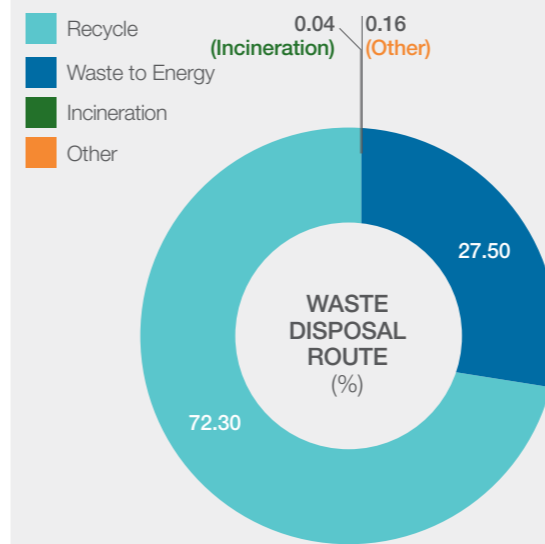


There are four hydrochlorofluorocarbon (HCFC) refrigerant and one non-HCFC refrigerant compound in use on the Hewett Complex. The inventory and emission details are monitored and reported:

Compound	On Facility (kg)	Emitted (kg)	CO <sub>2</sub> Equivalent Factor (kg)	CO <sub>2</sub> Equivalent (t)
HFC-134a	4	0.00	1,430	0.00
HFC-227ea	12	0.00	3,220	0.00
HFC-407c	8	0.00	1,774	0.00
HFC-422d	7	0.00	2,729	0.00
HC-600a (Isobutane)	2	0.00	3	0.00
<b>Total</b>	<b>33</b>	<b>0.00</b>	<b>-</b>	<b>0.00</b>

## WASTE MANAGEMENT

24.865 tonnes of waste was managed onshore. The disposal routes are charted below:



## REPORTS AND NOTIFICATION

During 2020 there were no hydrocarbon releases and no unpermitted discharge of chemical from the Hewett Complex.

## ENVIRONMENTAL PERFORMANCE

# IRISH SEA PIONEER

The Irish Sea Pioneer (ISP) has no production capability and is powered by diesel generators. Emissions to the environment are related to the maintenance of the accommodation and movement of the vessel. The environmental permits in place for the ISP are associated with atmospheric emissions from power generation.

### DISCHARGES TO SEA

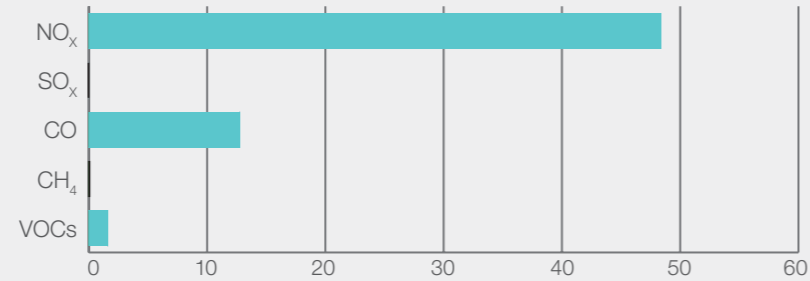
#### CHEMICAL USE AND DISCHARGE

The two chemicals in use on ISP are in the Gold and D categories, and only the Gold category chemical is discharged. Ongoing chemical management aims to continue to minimise the impact of chemicals on the environment.

### DISCHARGES TO ATMOSPHERE

Power generation is the only source of atmospheric emissions on the ISP, emitting 2,605 tonnes of CO<sub>2</sub>. Other combustion emissions reported through the Environmental Emissions Monitoring System are described on the right.

#### EMISSIONS BY SOURCE

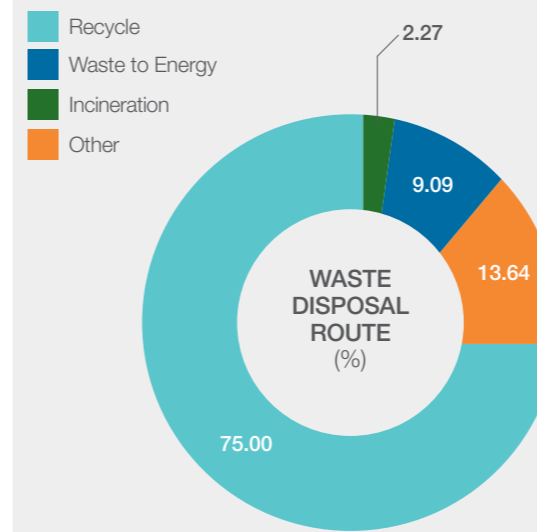


There are two hydrochlorofluorocarbon (HCFC) refrigerant components in use on the ISP. The inventory and emission details are monitored and reported:

Compound	On Facility (kg)	Emitted (kg)	CO <sub>2</sub> Equivalent Factor (kg)	CO <sub>2</sub> Equivalent (t)
HFC-143a	51.00	10.00	1,430	14.00
HFC-404a	25.00	0.00	3,922	0.00
<b>Total</b>	<b>76.00</b>	<b>0.00</b>	<b>-</b>	<b>14.00</b>

## WASTE MANAGEMENT

44 tonnes of waste was managed onshore. The disposal routes are charted below:



## REPORTS AND NOTIFICATION

During 2020 there was one release of oil reported which was closed out through the PON 1 reporting system.

#### PON 1 Notification details \*(CHART)\*

Activity	Oil/Chemical type	Discharge (litres)
Oil leak from failed seal on port crane hydraulic control block	Castrol Hyspin Oil	1

# ENVIRONMENTAL PERFORMANCE

## KITTIWAKE

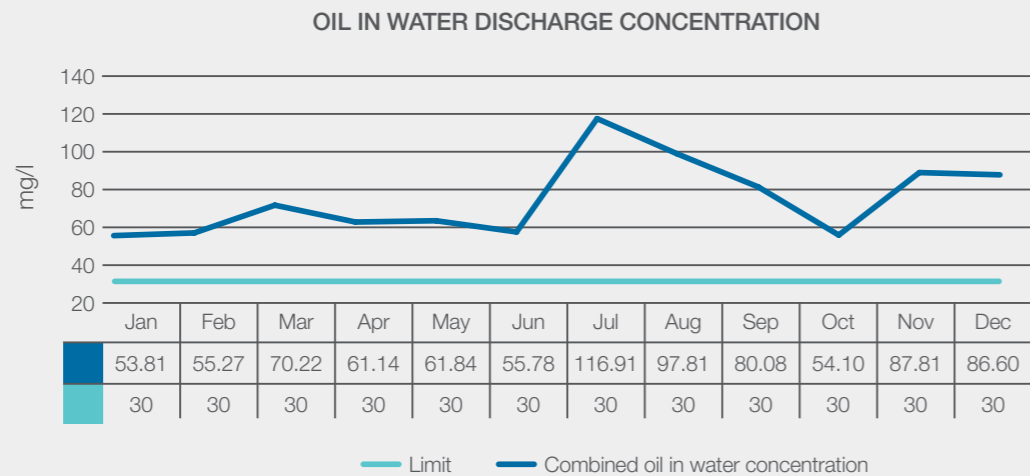
The environmental permits in place for the Kittiwake platform are associated with oily water discharges to sea, offshore chemical use and discharge, and atmospheric emissions from power generation and flaring.

### DISCHARGES TO SEA

#### OIL IN PRODUCED WATER

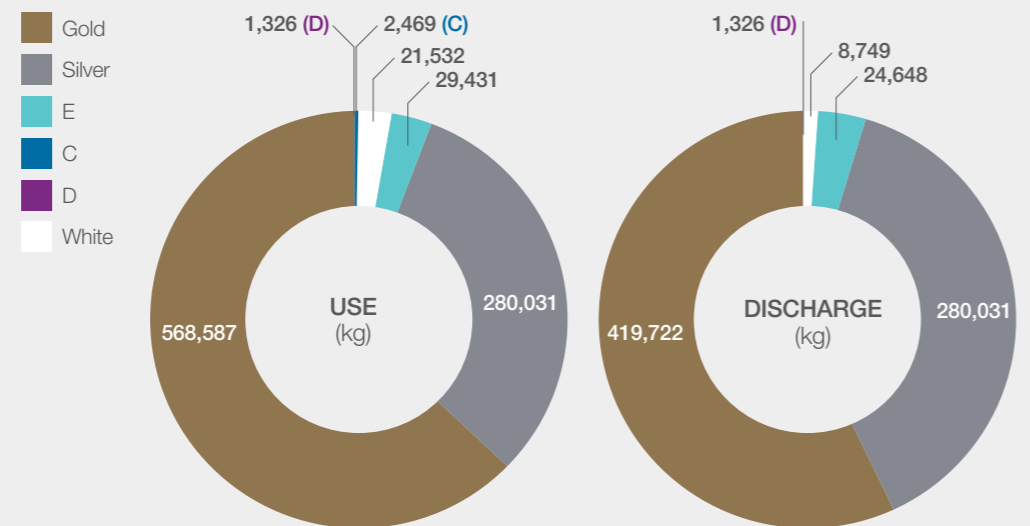
Water discharges are monitored and reported in accordance with the Oil Pollution, Prevention and Control Permit. The average oil in water concentration for both Kittiwake-produced water discharges (Degasser and Coalescer) for the period was 73.28mg/l. Further detail is provided in the Reports and Notification box on p25.

The total volume of water discharged in 2020 was 1,436,665m3 with an associated dispersed oil mass of 105,274 kg.



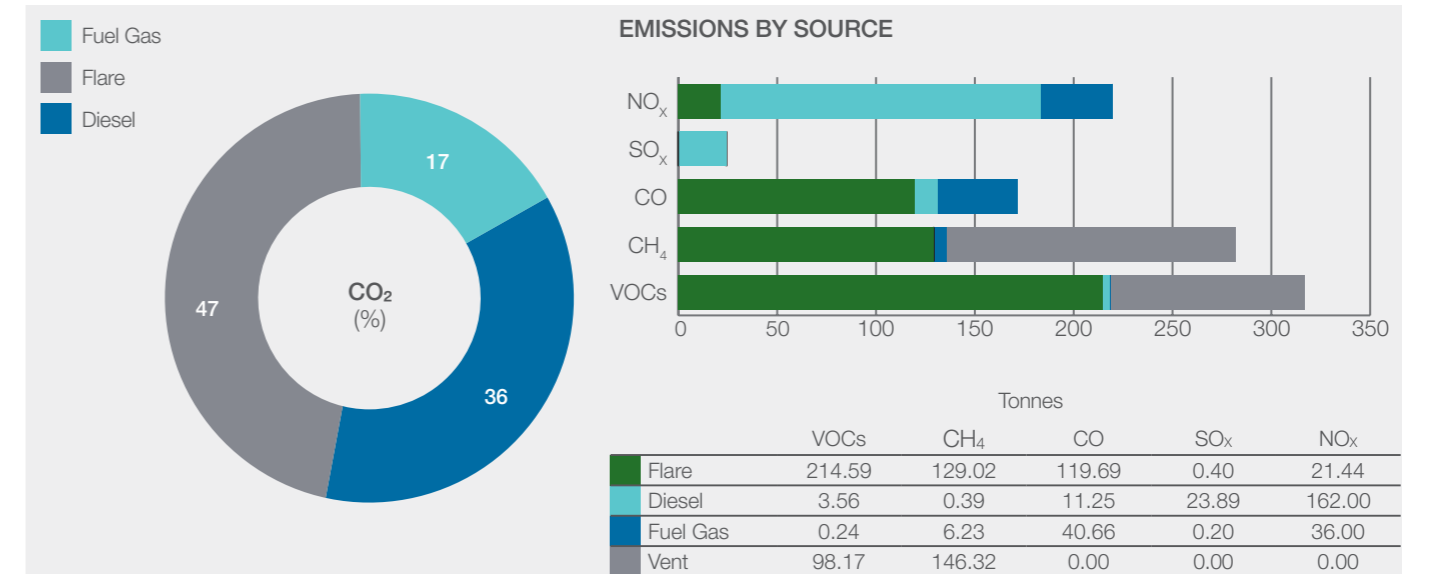
#### CHEMICAL USE AND DISCHARGE

The majority of chemicals in use on the Kittiwake platform are in the least harmful Gold, Silver and E categories. Ongoing chemical management aims to continue to minimise the impact of chemicals on the environment.



### DISCHARGES TO ATMOSPHERE

Power generation is the main source of atmospheric emissions from Kittiwake. Other sources are flaring and venting gas. 105,866 tonnes of CO<sub>2</sub> emissions were verified for greenhouse gas reporting purposes. Other emissions were reported through the Environmental Emissions Monitoring System.

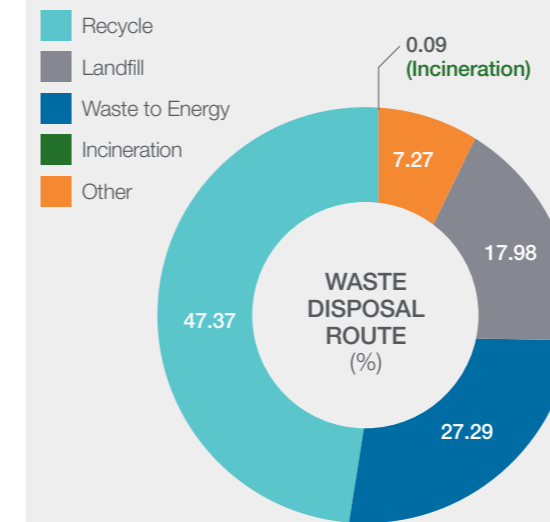


There are five hydrochlorofluorocarbon (HCFC) and one hydrocarbon (HC) refrigerant compounds in use on Kittiwake. The inventory and emission details are monitored and reported:

Compound	On Facility (kg)	Emitted (kg)	CO <sub>2</sub> Equivalent Factor (kg)	CO <sub>2</sub> Equivalent (t)
HFC-134a	3.00	0.20	1,430	0.30
HFC-143A	0.30	0.00	4,470	0.00
HFC-404a	6.00	5.00	3,922	21.00
HFC-407c	45.00	0.00	1,774	0.00
HFC-417a	34.00	0.00	2,346	0.00
HFC-407c	1.00	0.00	3.00	0.00
<b>Total</b>	<b>89.30</b>	<b>5.20</b>	<b>-</b>	<b>21.30</b>

### WASTE MANAGEMENT

151 tonnes of waste was managed onshore. The disposal routes are charted below:



### REPORTS AND NOTIFICATION

During 2020 there were no releases of oil. There was one unpermitted discharge of chemical reported and closed out through the PON 1 reporting system, and one permitted discharge notification.

#### PON 1 Notification details

Activity	Oil/Chemical type	Discharge (t)
Loss of cooling medium following bursting disc activation	TEG	0.92
Abnormal sheen caused by high OIW concentrations during Mallard well scale squeeze	Oil	0.39

A total of 35 non-compliances with permit conditions were submitted to OPRED during 2020. 33 of the non-compliances were a result of oil in water discharge issues. A Kittiwake oil in water improvement plan was developed during 2020 and is discussed on a regular basis with OPRED.

Permit	Non-Compliance	No.
Oil discharge permit	Monthly discharge limit exceeded	15
Oil discharge permit	Single OIW sample > 100mg/l	8
Oil discharge permit	In operable hazardous drains recovery pump	1
Oil discharge permit	Produced water quantification issues	1

## ENVIRONMENTAL PERFORMANCE

# SCHOONER AND KETCH

Schooner and Ketch are normally unmanned gas platforms in the Southern North Sea. They entered cessation of production in August 2018. The environmental permits in place for the Schooner and Ketch are associated with offshore chemical use and atmospheric emissions from power generation and venting.

### DISCHARGES TO SEA

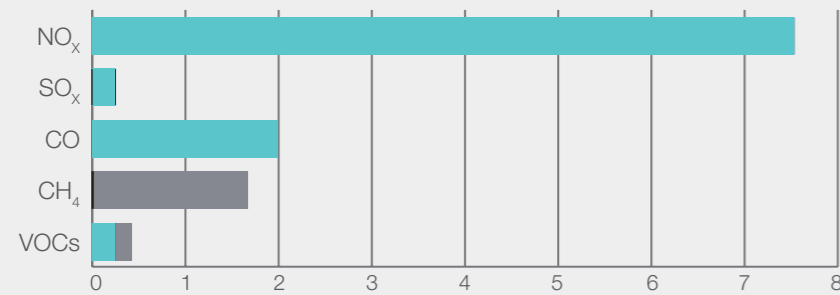
#### CHEMICAL USE AND DISCHARGE

During 2020, there was no chemical use and no discharge of chemicals to sea on the Schooner and Ketch platforms.

### DISCHARGES TO ATMOSPHERE

Power generation is the main source of atmospheric emissions. Other sources are flaring and venting gas. 405 tonnes of CO<sub>2</sub> emissions were verified for greenhouse gas reporting purposes. Other emissions were reported through the Environmental Emissions Monitoring System.

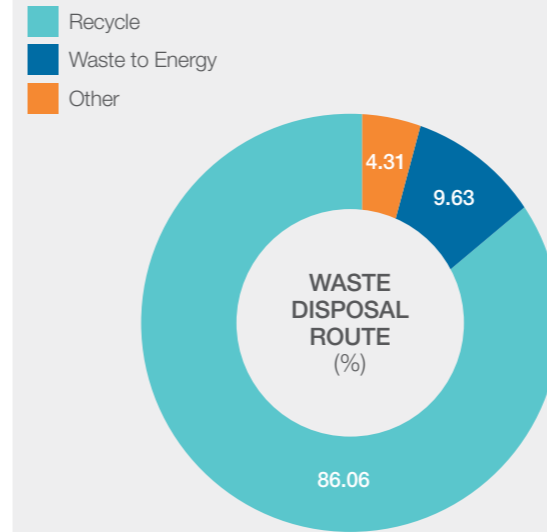
#### EMISSIONS BY SOURCE



	VOCs	CH <sub>4</sub>	CO	SO <sub>x</sub>	NO <sub>x</sub>
Flare	0.00	0.00	0.00	0.00	0.00
Diesel	0.25	0.02	1.99	0.25	7.53
Fuel Gas	0.00	0.00	0.00	0.00	0.00
Vent	0.18	1.66	0.00	0.00	0.00

## WASTE MANAGEMENT

10,238 tonnes of waste was managed onshore. The disposal routes are charted below:



## REPORTS AND NOTIFICATION

During 2020 there were no hydrocarbon releases and no unpermitted discharge of chemical from the Schooner and Ketch platforms.

## ENVIRONMENTAL PERFORMANCE

# WILPHOENIX

The WilPhoenix semi-submersible drilling rig completed a three well plug and abandonment campaign in the Rubie and Renee fields in the Central North Sea between May and September 2020.

### DISCHARGES TO SEA

#### WELL INTERVENTION FLUIDS DISCHARGE

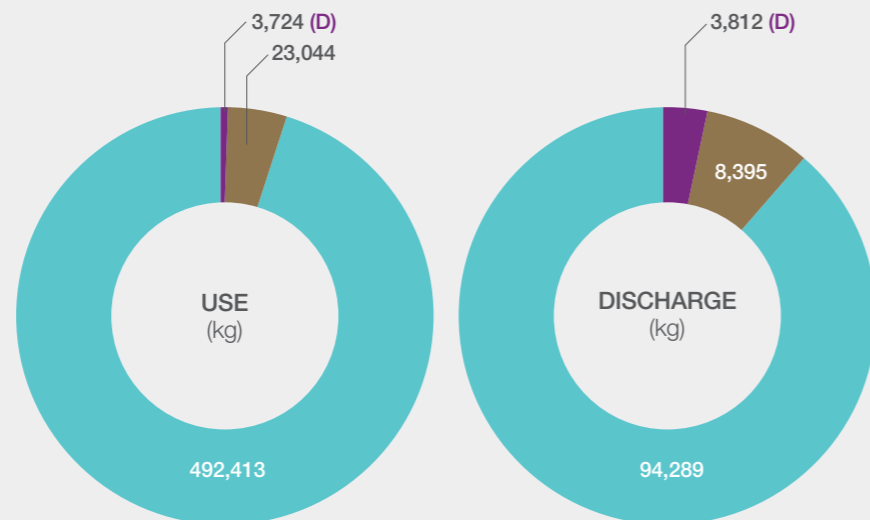
A total of 260.74m<sup>3</sup> of well clean up fluids were discharged to sea during plug and abandonment activities. The total oil discharged associated with the well clean up fluid was 0.0000002 tonnes, with an average concentration of oil in the fluids of less than 1 mg/l.

Total volume of well clean up fluids discharged (m3)	260.74
Total weight of dispersed oil in fluids discharged (t)	0.0000002
Average concentration of oil in well clean up fluids (mg/l)	<1

#### CHEMICAL USE AND DISCHARGE

The majority of chemicals in use during the WilPhoenix campaign were in the least harmful Gold and E categories. Ongoing chemical management aims to continue to minimise the impact of chemicals on the environment.

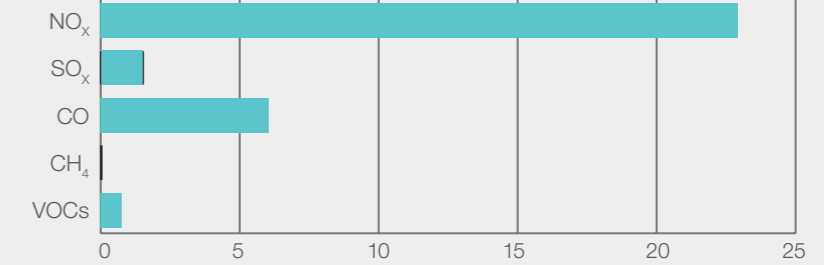
Gold  
E  
D



### DISCHARGES TO ATMOSPHERE

Emissions to atmosphere generated from drilling activities are associated with power generation using diesel fuelled engines. The main combustion product is carbon dioxide (CO<sub>2</sub>). A total of 1,234 tonnes of CO<sub>2</sub> was emitted from the sources described on the right:

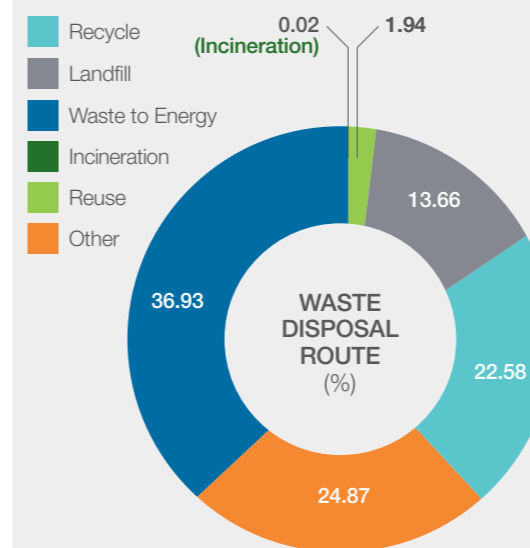
#### EMISSIONS BY SOURCE



	Tonnes				
	VOCs	CH <sub>4</sub>	CO	SO <sub>x</sub>	NO <sub>x</sub>
Flare	0.00	0.00	0.00	0.00	0.00
Diesel	0.77	0.07	6.05	1.54	22.9
Fuel Gas	0.00	0.00	0.00	0.00	0.00
Vent	0.00	0.00	0.00	0.00	0.00

### WASTE MANAGEMENT

A total of 173.03 tonnes of waste was brought onshore for disposal from the WilPhoenix during its activities. A large proportion of this waste was tank washings (94.06 tonnes) which included special wastes and required further treatment prior to disposal under licence.



### REPORTS AND NOTIFICATION

During its activities for Petrofac, one PON 1 Notification was submitted for the WilPhoenix drilling rig. The total discharged was less than one tonne of fluid – the details of which are indicated below.

#### PON 1 Notification details

Activity	Oil/Chemical type	Quantity (t)
BOP Recovery	BOP Control Fluid	0.003



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