



Neptune E&P UK Limited

Public Environmental Annual Statement 2018

Our culture: Neptune Energy's culture is centred around HSE, entrepreneurship, efficiency and value, attracting top E&P industry talent and creating an environment where our employees can flourish.

HSE is valued above all else and we are strongly committed to achieving best-in-class HSE standards, ensuring continued safe, reliable operations across all the whole organisation. The environment is a key consideration and Neptune Energy is committed to environmentally responsible operations, energy efficiency and transition to a low carbon future.

Contents

- 3. Managing Director's address
- 4. Introduction to Neptune E&P UK Limited
- 5. Overview of offshore activities in 2018
- 5. Overview of offshore drilling activities in 2018
- 7. Operating environment
- 8. Management of issues
- 10. 2018 Environmental headlines
- 13. Environmental objectives
- 15. Environmental performance data
- 18. Environmental challenges
- 19. Appendices

UK Managing Director's address

Neptune Energy's goal is to conduct our business activities with no harm to people, no damage to the environment and no accident, today and in the future.



Neptune E&P UK Limited is committed to responsible and sustainable exploration and production operations in the UK North Sea and is part of the wider Neptune Energy company. Our main activities are focused on our flagship asset, Cygnus, which is located 150 kilometres off the coast of Lincolnshire. Cygnus is the largest gas basin discovery in the Southern North Sea for over 30 years and at plateau contributes 6% of UK gas production; enough gas to heat the equivalent of 1.5million homes.

We are focused on energy efficient operations and the transition to a low carbon future. Pollution prevention, reduction of natural resource consumption and emissions, and the reduction and recycling of waste are three of the ways we seek to minimise our impact on the environment. We comply with environmental regulations in force both internationally and in the individual regions in which we operate. The company is committed to ongoing improvements to achieve best practice on all environmental issues.

In 2018, we delivered higher production, a substantial reserves upgrade and lower operating costs, with - most importantly - a materially improved HSE record.

The data on our environmental performance for 2018 is enclosed in this statement for your information. We remain committed to transparent reporting of our performance and working with our UK industry partners and regulators to take care of the environment and minimise the impact of our operations.

A handwritten signature in black ink, appearing to read 'Pete Jones', written over a white background.

Pete Jones
Managing Director
Neptune E&P UK
Limited

Introduction to Neptune E&P UK Limited and the annual statement

Neptune Energy is an independent gas and oil exploration and production company with a regional focus on the North Sea, North Africa and the Asia Pacific region.

About Neptune E&P UK Limited

Neptune E&P UK Limited (part of the wider Neptune Energy) is the operator of the Cygnus development, one of the most significant gas fields in the Southern North Sea. Located 150 kilometres off the coast of Lincolnshire, Cygnus has gross 2P (proved and probable) reserves of approximately 18 billion cubic metres and supplies gas to the equivalent of 1.5 million UK homes.

The purpose of this annual statement is to provide an overview of Neptune E&P UK Limited activities during 2018, how environmental issues are being managed and the environmental performance for 2018.

The statement aims to:

- Present an overview of Neptune E&P UK Limited assets and activities
- Put this into context of the operating environment
- Detail how Neptune E&P UK Limited manages the issues associated with the operating environment
- Summarise environmental performance.

Cygnus supplies gas to the equivalent of 1.5 million UK homes.



Overview of offshore operated activities in 2018

UK North Sea

Production

Our production operations are, like the rest of our business, driven by a commitment to quality - above all to health, safety and the environment - but also to performance, expertise and technology. In 2018, we had two operated fields in production and one field which ceased production..

Juliet is a gas field located in block 47/14b of the Southern North Sea. We successfully drilled the Juliet exploration well at the end of 2008/early 2009. With our then licence partners First Oil Expro and Hansa Hydrocarbons we drilled two horizontal subsea production wells in 2013, and gas is now exported through a pipeline to the Pickerill A Platform, 22 kilometres to the east. From there, existing infrastructure is transporting the gas to the Theddlethorpe terminal. The Juliet field cessation of production was submitted in Q1 2018.

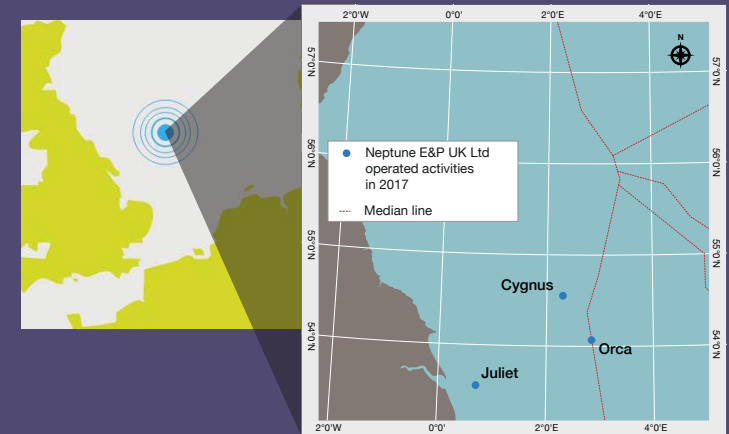
The Orca gas field consists of the D18a-A, a normally unmanned production platform located in Dutch waters, 500 metres from the UK sector and in approximately 45 metres water depth. Neptune E&P Nederland B.V. is the operator and duty holder and Neptune E&P UK Limited is operator of the UK licences.

During December 2016, Cygnus Alpha began producing and in August 2017 Cygnus Bravo produced its first gas. Cygnus is a gas field located in blocks 44/11a and 44/12a of the Southern North Sea. At its peak, Cygnus contributes 6% to UK gas production.

During August 2017, the Cygnus Bravo platform produced its first gas. This is a major milestone for the Cygnus facility and Neptune Energy as a whole, and signified the completion of the Cygnus development. It did not come without its small environmental challenges (see the Oil in Water challenges page further in the document) but was achieved successfully and in a timely manner.

In addition to the successful and safe first gas delivery at Bravo, the Cygnus team carried out a debottlenecking scope of works on the Cygnus facilities which increased the maximum rate of production to 300 million cubic feet per day. Following planned works in Bacton Gas Terminal, the Cygnus Facility can produce at 320 million cubic feet per day.

The Compression Module brownfield modification/project was also started and aims to successfully commission the compressor turbines in the second half of 2019. This will help to ensure the best rate of production from the Cygnus field.



Subsurface data analysis, combined with innovative geological thinking and leading-edge geophysics, allows us to develop the Cygnus field, the largest gas field discovery in the Southern North Sea for 30 years.

Overview of offshore drilling activities in 2018

Drilling

Neptune Energy is an active explorer, and in 2018 drilled one of only 7 exploration wells in the UKCS. 44/12b-7 was drilled into a previously untested fault block in the Greater Cygnus area, and whilst the well did not encounter hydrocarbons, it was delivered safely, with zero environmental incidents whilst exhibiting industry benchmarked top quartile drilling performance.

In addition to exploration well drilling, Neptune Energy continue to actively develop the Cygnus Field. In 2018, development well 44/11a-B1Z was drilled as a development side-track from the previously drilled 44/11a-B1 pilot hole, (which was suspended in January 2017). This was followed by the commencement of well 44/12a-A5 in December 2018.

Adopting the learnings from previous Cygnus development wells, 44/11a-B1Z was successfully delivered using a process called 'geosteering'. This is a globally utilised technique by oil and gas companies in hydrocarbon fields that require horizontal production wells to be accurately placed in the reservoir. However, the standard application of this technique is on thick-layered reservoirs that offer sufficient room for navigation.

On the Cygnus Field, the most productive reservoir layers are only 1-2ft thick, which means that a high level of accuracy is required in the well positioning process. Additionally, the characteristics of the Leman reservoir in the Cygnus Field means that traditional solutions are unable to provide sufficient information to facilitate the production well geosteering operations.

To overcome these limitations, the company has undertaken an extensive period of R&D with the aim of significantly improving the application of geosteering techniques to optimise the placement of wells.

A combination of technology and geological understanding has allowed Neptune Energy to maximise production whilst developing the Cygnus Field with the minimum number of wells, thereby reducing the overall environmental impact when compared to conventional well targeting strategies.



Operating environment

Our operating environment is more than the physical environment we work in. It also includes political, regulatory and economic landscapes, as well as the interests of our stakeholders. All of these factors influence our management of environmental issues.

Discovering gas and oil and delivering it to the UK's energy network has a range of drivers:

- Creating shareholder value
- Meeting the UK's energy needs and ensuring security of supply
- Complying with regulations.
- Meeting stakeholder expectations.

The North Sea is bordered by eight countries, 100 million people live around its coastline, and it is home to internationally important communities of plants and animals. It is our responsibility to ensure we minimise the impact of our activities on the environment.

Environmental issues associated with our activities include:

- Climate change and air quality
- Water and sediment quality
- Waste disposal
- Spills
- Physical presence
- Habitats and species conservation
- Decommissioning
- Liability Management



Environmentally sensitive area

The Cygnus field lies within the boundaries of both the Dogger Bank Special Area of Conservation (SAC) and the Southern North Sea cSAC. The Dogger Bank is a unique, dynamic sandbank of the North Sea and its designation as a SAC means that any development within its boundaries has to ensure that project activities will not affect the structure or integrity of the bank.

The Dogger Bank is the UK's largest example of a sandbank listed in Annex I of the Habitats Directive ('Sandbanks which are slightly covered by sea water all the time').

Interesting features for the site under the EU Habitats directive include:

- Sandbanks which are slightly covered by sea water all the time
- Harbour porpoise (*Phocoena phocoena*) (non-qualifying)
- Grey seal (*Halichoerus grypus*) (non-qualifying)
- Common seal (*Phoca vitulina*) (non-qualifying)

During January 2018, the Southern North Sea site was submitted to the European Commission and became a cSAC primarily due to the significant numbers of harbour porpoise (*Phocoena phocoena*) residing in the area (approximately 17.5% of the North Sea Management Unit population. It is the largest cSAC in UK and European waters at the time of writing and covers a 36,951km² area.

Anthropogenic disturbance including fishing and oil and gas activities have the potential to impact the protected features within the Dogger Bank SAC and any significant underwater noise (e.g. large-scale piling and explosives use) has the potential to significantly impact the harbour porpoise within the Southern North Sea cSAC. The impacts that the Cygnus development would have are similar to those of previous oil and gas developments in the area and have been assessed in the Cygnus environmental statement and recent applications and deemed to be minor.

Note: Non-qualifying species are species that are protected under UK legislation but not protected under the Habitats Directive.

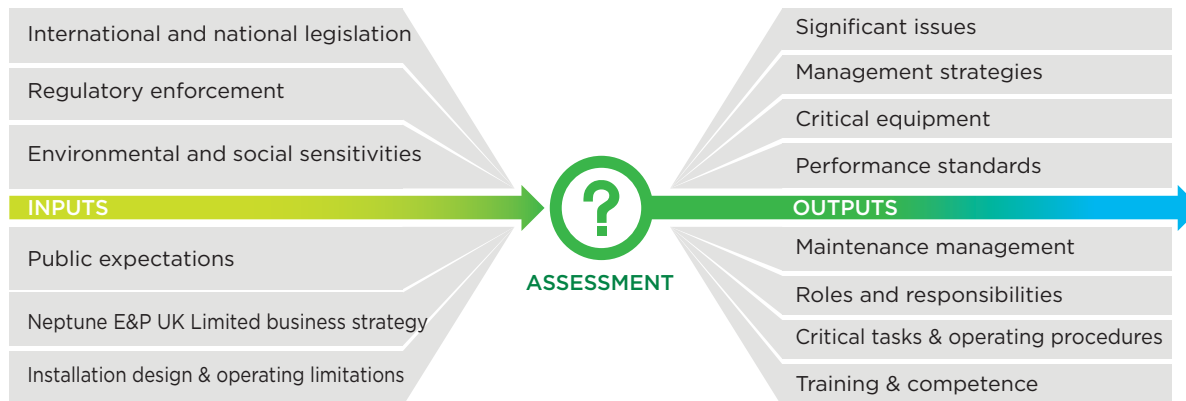
Management of issues

We assess and minimise impact on the environment from our activities through an Integrated Management System (IMS) certified against ISO14001 and underpinned by the same commitment to quality that we bring to all areas of our performance.

Neptune E&P UK Limited has developed an effective approach for the management of environmental issues. The company is developing Environmental Cases (E-cases) for our offshore operations and onshore assets.

The E-cases are central to the environmental aspects of the IMS and are designed to bridge the gap between operational objectives and stakeholder expectations. They provide an audit trail between high level objectives and individual tasks and responsibilities.

Embedding environmental risk management into our operations



We believe that all incidents are preventable



OUR BELIEFS

HEALTH, SAFETY & ENVIRONMENT

Excellence in HSE is demanded and integral to everything we do.

INDIVIDUAL ACCOUNTABILITY

Take responsibility for actions and results, personally commit to the success of Neptune Energy.

INTEGRITY

Commitment to ethical operations and respect to all individuals across all organisations.

TEAMWORK

Only together can we grow, only in partnership can we succeed.

Please visit connect and www.neptuneenergy.com for more information on our beliefs, vision and strategy.

Management of issues continued

E-cases offer a structured approach to better alignment in the management of environmental issues.

They also offer a path towards unlocking the benefits of goal setting regulation and away from prescriptive regulation.

Our side-by-side assessments provide an interpretation of different environmental expectations in society. It looks to science for an objective assessment of impacts while being conscious of its limitations. On the more subjective side it looks at the expectations of stakeholders while considering their motivations and influence. Finally, it reviews legislation and company standards.

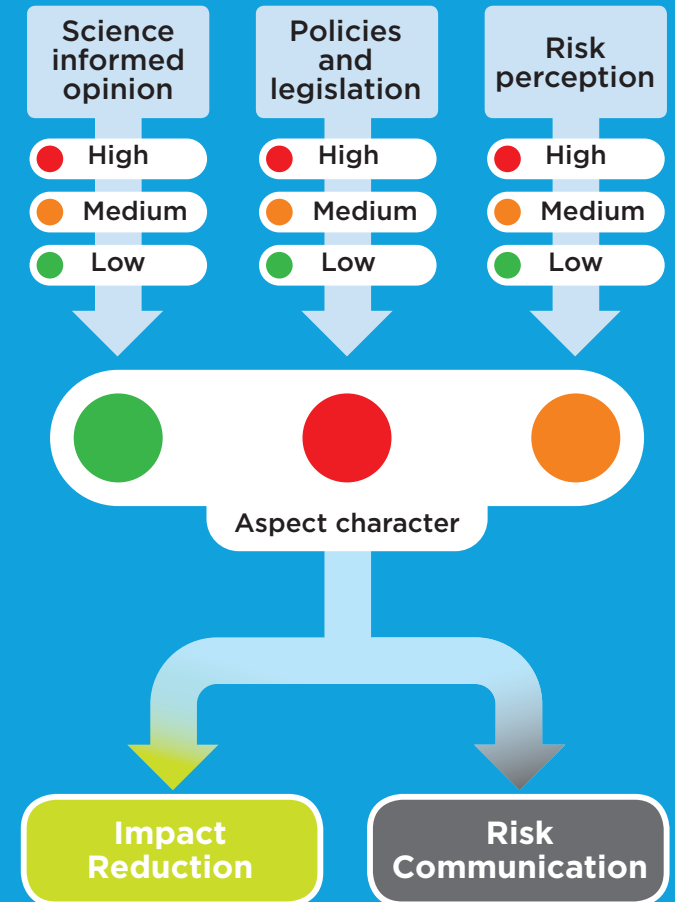
The aspect characters (Science informed opinion, Policies and legislation, Risk perception, as seen in the flow diagram to the right) reveal differences of opinion and a starting point for dialogue.

We distinguish two main response strategies: impact reduction and risk communication.

- **Impact** reduction is reducing the physical environmental impact by, for instance reducing the use of resources, by reducing emissions or discharges or by reducing noise emissions.
- **Risk** communication is increasing the acceptance of the risk by better explaining the acceptability of the risk, by challenging the motives of stakeholders or by sharing control with stakeholders.

This approach helps us to meet regulatory requirements and stakeholder expectations more effectively as we can develop realistic and timely management strategies.

Environmental aspect characterisation and resultant management strategies



2018 Environmental headlines

Cygnus project development

Cygnus

The Cygnus field is the largest discovery in the Southern North Sea in 30 years and the sixth largest field by remaining gas reserves. It is a natural gas field comprising both Leman and Carboniferous reservoirs.

Neptune E&P UK Limited is Operator (38.75%) with partner Spirit Energy (61.25%).

Quick facts:

- Discovered 1988
- Project sanctioned in August 2012
- First Gas (Alpha) December 2016
- First Gas (Bravo) August 2018
- Licence(s) P1055 and P1731
- 7 (of 10) initial production wells drilled
- Currently producing 300 mmscf/d
- Ownership
 - Neptune E&P UK Limited (operator) - 38.75%
 - Spirit Energy - 61.25%



300 million
ft³ per day

Maximum gas output



18 billion m³

Gross reserves



38.75%

Neptune E&P UK Limited share,
with partner Spirit Energy (61.25%).

2018 Environmental headlines continued

Cygnus project development

Neptune E&P UK Limited is the operator of the Cygnus field, one of the largest undeveloped gas fields in the Southern North Sea prior to Cygnus first gas. The Cygnus project, sanctioned in August 2012, contributes 6% of the overall UK gas production at its peak - supplying gas to the equivalent of 1.5 million homes in Britain.

The Cygnus offshore installation campaign began with the installation of Cygnus Alpha in 2014 and was completed in the summer of 2015 after the safe and successful installation of all four jackets and topsides. The detailed design of the Cygnus field incorporated the principles of Best Available Techniques (BAT) and Best Environmental Practice (BEP) which were implemented during installation and commissioning and will influence day to day operations. Commissioning of the Cygnus Alpha platforms was eventually completed and began producing in December 2016

The central Alpha complex consists of three bridge linked platforms: a wellhead drilling centre; a processing and utilities unit; and a living quarters with the central control room.

The Cygnus Bravo location is positioned approximately 7km North West of Alpha and is a normally unmanned satellite wellhead platform. The Cygnus Bravo platform is essential to supplement the gas flow from Alpha and maintain production at maximum levels.

The final phases of Cygnus Bravo installation and commissioning were completed in August 2018 where first gas was subsequently flowed. This was a major milestone in the Cygnus development and signified the completion of installation and commissioning phases. The gas produced at Cygnus Bravo flows approximately 7km southeast, to Cygnus Alpha where further separation and processing takes place. It eventually comingles with gas produced from Alpha and travels via a 55km long export line to the Esmond Transportation System and then onto Bacton Gas Terminal.

A separate scope of works, the debottlenecking scope was also carried out in 2018. During a planned shutdown in September 2018, modifications were carried out to enable Cygnus to produce at a newly increased maximum rate. The previous maximum rate of production was increased from 280 million standard cubic feet per day to 300 million standard cubic feet per day. As with the Cygnus Bravo first gas delivery, the modifications were delivered successfully, safely and in a timely manner. It is expected that when further modifications at Bacton Gas Terminal are carried out, Cygnus will be able to produce at 320 million standard cubic feet per day.





Cygnus has been designed and built using the principles of Best Available Techniques (BAT) and Best Environmental Practice (BEP).

Environmental objectives

2018 Objectives

Environmental Management Key Focus Areas for 2018

1. Comply with ISO 14001 Environmental Management System Standard.

- Implement actions from the gap analysis between the previous and new (2015) ISO 14001 standard.
- Manage the transition to the new ISO 14001 standard.
- Manage the extension of the scope of the current certificate to include Cygnus Production Operations.

Performance: Transition to new ISO14001 achieved and scope extension to include Cygnus Production Operations successfully completed.

2. Maintain HSE Regulatory Compliance

- Establish COMPASS Lite as a principal regulatory compliance assurance tool
- Agree and implement solution regarding the ongoing Oil in Produced Water non-compliances.
- Ensure environmental drilling and decommissioning permits are prepared and maintained.

Performance: COMPASS Lite implementation remains ongoing
Oil in Produced Water trial successfully implemented at end of 2018 and performing well
All environmental drilling and decommissioning permits have been delivered as required

3. Environmental Performance Reporting

- Development and implementation of One Company environmental dashboard for performance monitoring against established environmental performance indicators, agreed with Neptune E&P UK Limited.

Performance: One Company Environmental Reporting Tool and Dashboard successfully delivered

4. Waste Management

- Identify and implement improvements to waste management and segregation in the Aberdeen Office.

Performance: Incremental improvements made and future initiatives planned.

Environmental objectives continued

2019 Objectives

Environmental Management Key Focus Areas for 2019

1. Achieve ISO50001 certification (and compliance with ESOS requirements) across the UK business

- Certification must cover Cygnus and Aberdeen & London offices

2. Complete the forward plan for Oil in Water (OIW) improvement studies, ready for implementation in 2020

- Technology review (BAT and BEP Assessment)
- The Concept Study to determine platform limitations and feasibility
- FEED/Detail Design

3. Complete a company wide Environmental Legislation gap analysis/review

- Contribute to the delivery of a Neptune Energy company-wide report on Environmental legislation gap analysis and ensure readiness for future projects

4. Enhance methane emissions quantification in preparation for next years CCAC submission

- Mitigated methane emissions have to be quantified and provided for the submission in 2020 which covers 2019 data.



Environmental performance

This section outlines Neptune E&P UK Limited environmental performance for 2018, see appendix B for historical environmental data.

Atmospheric emissions

Atmospheric emissions in the North Sea are controlled by international, European and UK regulations. Atmospheric releases include; Carbon dioxide (CO₂) (the most commonly emitted greenhouse gas (GHG) during operations), Carbon monoxide (CO), Methane (CH₄), the Oxides of Nitrogen (NOX) and Sulphur (SOX). Low quantities of Nitrogen dioxide (NO₂) may also be released.

During 2018, the following essential activity conducted by Neptune E&P UK Limited, during drilling and production operations resulted in the release of atmospheric emissions:

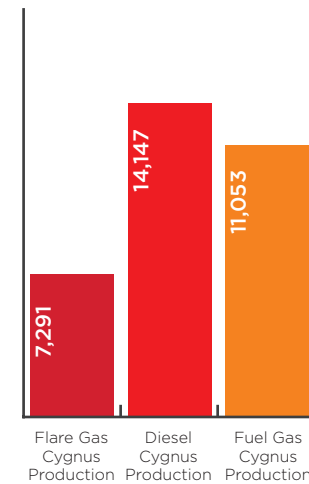
- The combustion of diesel fuel in generators to provide power
- The combustion of fuel gas in generators to provide power
- Flaring of hydrocarbons during production operations

A comparison of 2016-2018 diesel data is available in the Overall Diesel Use graph.

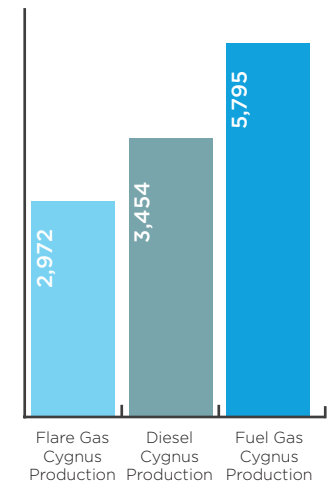
Overall fuel usage for Cygnus during 2018 has been summarised in the respective graph. Additionally, the CO₂ emissions emitted during Neptune E&P UK Limited operations within the North Sea during 2018 are illustrated in the CO₂ atmospheric emissions graph. All other atmospheric emissions emitted during these operations in 2018 are illustrated in the Non CO₂ graph.

All atmospheric emissions are calculated in an effort to identify the greatest sources of emissions and to aid in their reduction where possible.

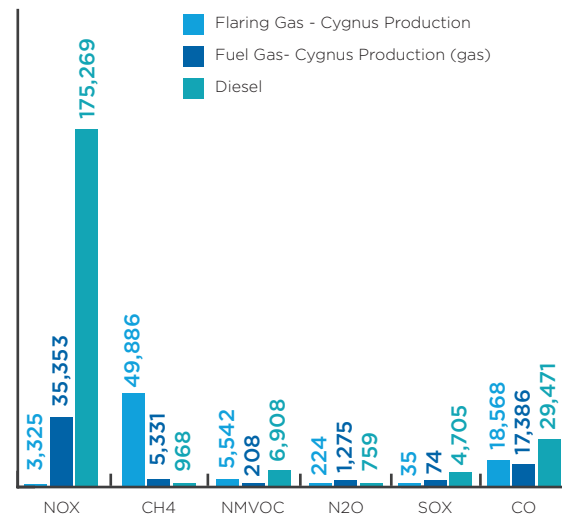
CO₂ Emissions from Fuel Gas and Flare Gas Use 2018 (tonnes)



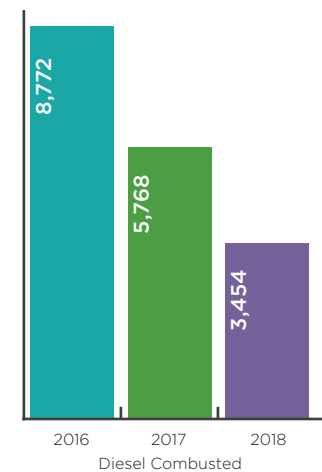
Fuel and Flare Gas Use 2018 (tonnes)



Non-CO₂ Emissions Summary (kg)



Overall Diesel Use (tonnes) 2016-2018



Note: All emissions figures presented do not include combustion data relating to logistics.

Environmental performance continued

Chemical Consumption

Use and discharge associated with drilling and project operations.

The use of chemicals in the offshore industry is an essential part of any drilling activity and the subsequent processes involved in the production of hydrocarbons from an installation, including drilling mud chemicals, corrosion inhibitors, scale inhibitors, biocides, demulsifiers, antifoams and detergents.

Due to the hazards associated with the use of chemicals offshore to the marine environment, any activity within the North Sea is controlled and regulated using the OSPAR requirements.

These requirements, implemented in the UK through the Offshore Chemicals Regulations 2002, require operators such as Neptune E&P UK Limited to obtain a chemical permit from the Department of Business, Energy and Industrial Strategy (BEIS) in the application and discharge of any chemical used offshore.

As stated in these regulations, Neptune E&P UK Limited may only use chemicals which have been registered by the Centre for Environment, Fisheries & Aquaculture Science (Cefas) and continues to work to manage the risks posed to the environment from chemical use.

This has been achieved by actively aiming to use chemicals which are considered to pose little or no risk to the environment (PLONOR) where technically possible and limiting the amount of discharge to the marine environment.

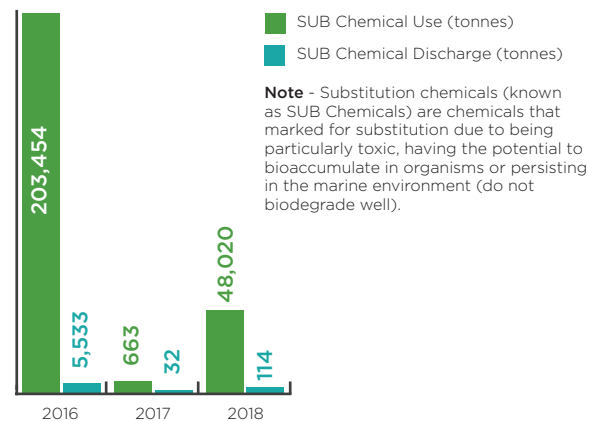
- The graph outlines the quantities of chemical consumption used in North Sea operations in 2018 and is ranked using the Cefas ranking A (the most toxic OCNS category) to E (the least toxic OCNS category) and HQ colour banding (Gold, Silver, White, Blue, Orange and Purple) approach. Rank E and HQ Gold represent the least risk in their respective categories

- The total chemical used and discharged during 2018 includes the chemicals utilised during drilling and project operations

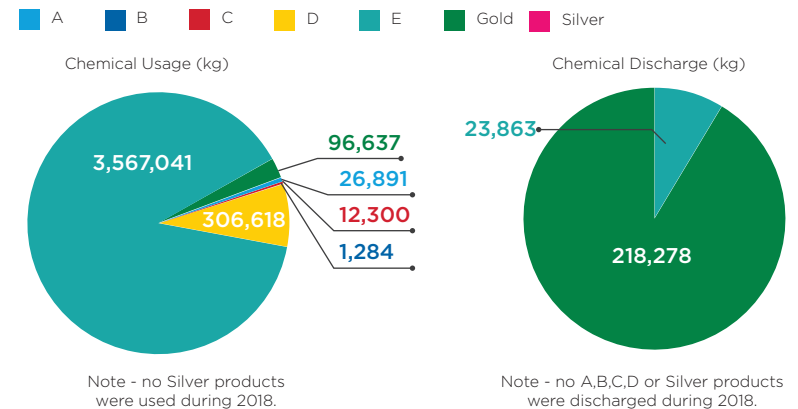
- All operations were carried out in compliance with their respective chemical permits (whether subsea, platform or drilling related)

- Any chemicals which have been identified for substitution by the OSPAR Commission are required to be phased out by 2016. Neptune E&P UK Limited are working in conjunction with these requirements to identify the best possible replacements.

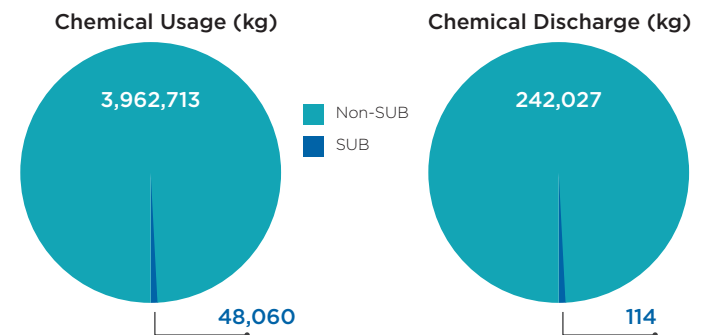
SUB Chemical usage & discharge during drilling & project operations (kg) 2016 | 2017 | 2018 SUB Use



Total chemical usage & discharge during drilling & project operations (tonnes)



Chemical usage & discharge during drilling & project operations (tonnes) - SUB vs Non-SUB



Environmental performance continued

Operational waste management

Many aspects of offshore activities in the oil and gas industry generate operational waste and can provide a significant environmental challenge to operators in its safe disposal. As per statutory regulations, any produced waste must be categorised and should be managed accordingly using a waste management system.

This system ensures all waste is monitored and any hazardous operational waste produced is stored on the installation and shipped ashore for safe disposal. The graphs show the operational waste produced in tonnes during drilling operations in 2015, 2016 and 2017.

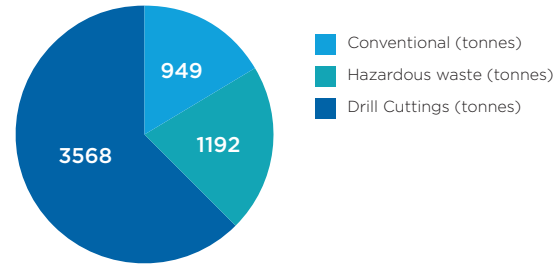
These have been segregated into three streams:

Conventional waste - composed typically of accommodation waste, kitchen waste, paper, wood, redundant packaging and other non-hazardous waste

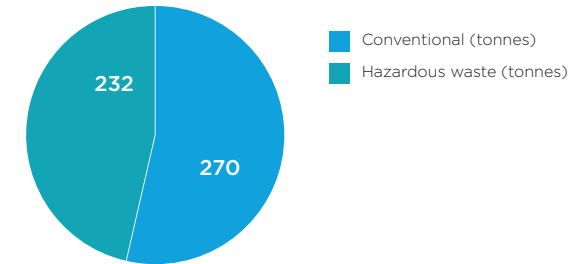
Hazardous waste - oil contaminated waste, sludges/liquids/tank washes, oily rags, paint, batteries, fluorescent tubes, used chemicals and electrical equipment

Drill cuttings - oil based drill cuttings that have been shipped to shore for further treatment. We do not discharge drill cuttings contaminated with oil based mud.

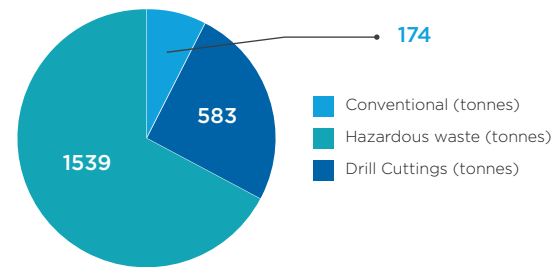
Waste produced in 2016 from drilling operations (tonnes)



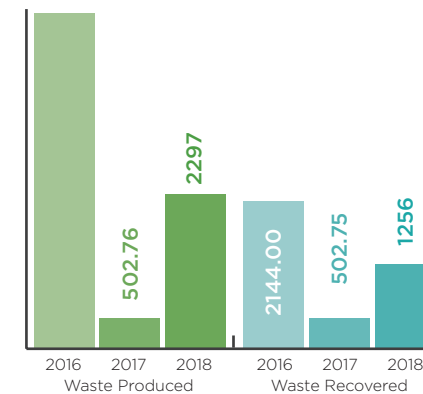
Waste produced in 2017 from drilling operations (tonnes)



Waste produced in 2018 from drilling operations (tonnes)



Waste produced and recovered in (tonnes)



Environmental challenges

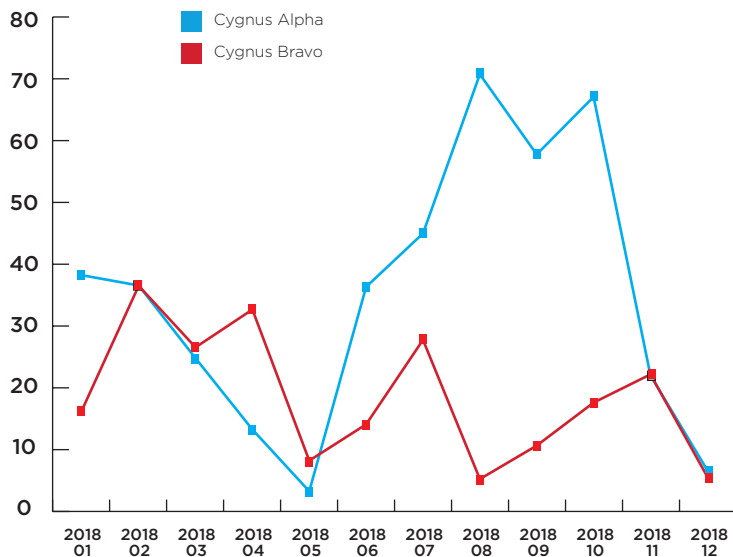
Oil in Water

In 2017, upon startup of the Cygnus Bravo facility, it immediately became apparent that the oil in produced water levels at both Cygnus Alpha and Bravo were outwith the regulator stipulated limits of 30mg/l and our even more stringent internal goal of 20mg/l. The regulator was notified and the operations team here at Neptune E&P UK Limited immediately began investigating.

The issues and investigation continued to impact the Cygnus platforms throughout 2018, where the cause of the high oil in water was found to be due to shearing of the hydrocarbons leading to small droplet sizes. This ultimately caused difficulty for the installed systems at Cygnus and meant other options for further treatment had to be considered. Various technologies and chemical based trials were reviewed (and trialled) throughout the year but the majority of trials were found to be ineffective. However, during November/December, Neptune E&P UK Limited began to successfully trial a physical methodology of further separation at Cygnus Alpha that involved the use of activated carbon filters to capture the hydrocarbons. Applying this technology as a trial at Cygnus Alpha resulted in oil in water values during December that were less than the statutory 30mg/l limit and this performance has continued into 2019.

During August, September and October, high concentration samples were witnessed at Cygnus Bravo. After further investigation, this was caused by equipment issues which were then rectified as a matter of priority and ultimately lowered the Oil in Water levels back to what was characteristic of Bravo at the time.

Amount of Hydrocarbon Discharged in Produced Water (kg)



The graph displays the oil in water concentrations throughout the year.

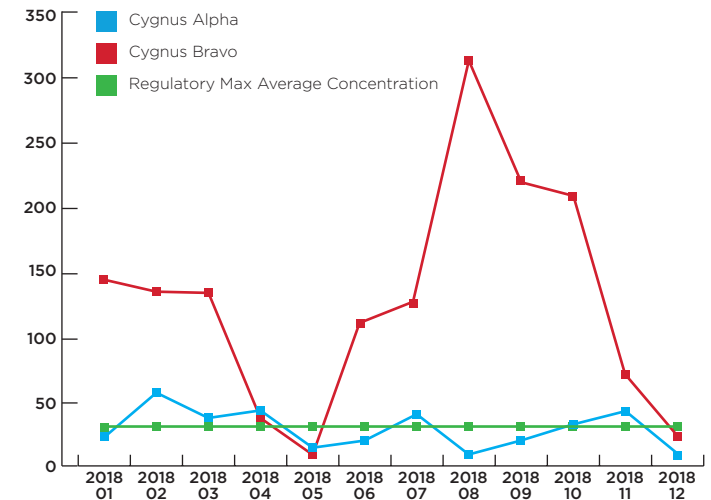
Looking forward to 2019, Neptune E&P UK Limited will ensure the following is carried out:

- Continue to trial the equipment and filtration system
- Endeavour to ensure that the oil in water concentrations remain below 20mg/l
- Identify and finalise a permanent engineered solution which will then be implemented/installed within 2020.

Despite the apparently high oil in water concentrations, the overall discharge of produced water and oil in water was actually very small. The graph to the left displays the actual mass of oil discharged to the environment in kg. The total amount of oil discharged from Cygnus Alpha and Bravo combined during 2018 was 0.645 tonnes.

Whilst the overall discharge is low, Neptune E&P UK Limited recognises that we will continue to be non-compliant with the legislative requirements if we do not reduce our oil in water levels. Neptune E&P UK Limited are fully committed to ensuring compliance with the local legislative and regulatory expectation and as such, multiple options of improving our oil in water concentration were reviewed- these included physical modifications/ additions to the platform and this investigation continued into 2018. All investigation findings were passed onto the regulator and regular updates were provided.

Oil In Water Average Monthly Concentrations (mg/l)



Neptune E&P UK Limited

Appendices

- 17 Appendix A: Neptune E&P UK Limited HSE Policy
- 18 Appendix B: Environmental data



Appendix A: Neptune E&P UK Limited HSE policy

Our Goal is to conduct our business activities with no harm to people, no damage to the environment and no accidents, today and in the future.

Together, we will:

- **Take care of our people** (including contractors and stakeholders) in all work related activities through risk identification, assessment and management.
- **Integrate HSE** in decision making and in the management and execution of all activities.
- Ensure that **safety takes precedence over production**, cost and schedule.
- **Achieve the highest level of HSE** performance by demonstrating professional conduct and compliance to all applicable laws and regulations.
- **Facilitate a no blame culture** that encourages our people to share experiences and insights in order to learn from incidents and near incidents.
- **Intervene when unsafe situations occur.**
- **Prevent major accidents** by suitable and effective implementation of our Global Operational Integrity Management Standard (GOIMS) and our HSE Management System.
- **Minimize our impact** on the environment through pollution prevention, reduction of natural resource consumption and emissions, and the reduction and recycling of waste.
- **Communicate openly** with our stakeholders and ensure an understanding of our HSE Policy, our standards and performance.
- **Continuously improve our HSE performances** by monitoring the suitability and effectiveness of our management standards and systems, and learning from industry best practice.

We believe that incidents are preventable in all our activities and we require the relentless collaborative effort of professional and responsible individuals to drive this ambition.



HEALTH, SAFETY AND ENVIRONMENT POLICY

Our Goal is to conduct our business activities with no harm to people, no damage to the environment and no accidents, today and in the future.

Neptune Energy requires the active commitment to, and accountability for, HSE from all our people, employees and contractors alike.

We believe that incidents are preventable in all our activities and we require the relentless collaborative effort of professional and responsible individuals to drive this ambition.

All personnel working on behalf of Neptune Energy shall comply with this policy and be proactive in the pursuit of our zero accident goal.

Together, we will:

1. **Take care of our people** (including contractors and stakeholders) in all work related activities through risk identification, assessment and management.
2. **Integrate HSE** in decision making and in the management and execution of all activities.
3. Ensure that **safety takes precedence over production**, cost and schedule.
4. **Achieve the highest level of HSE** performance by demonstrating professional conduct and compliance to all applicable laws and regulations.
5. **Facilitate a no blame culture** that encourages our people to share experiences and insights in order to learn from incidents and near incidents.
6. **Intervene when unsafe situations occur.**
7. **Prevent major accidents** by suitable and effective implementation of Global Operating Integrity Management Standard (GOIMS) and HSE management systems.
8. **Minimise our impact** on the environment through pollution prevention, reduction of natural resource consumption and emissions, and the reduction and recycling of waste.
9. **Communicate openly** with our stakeholders and ensure an understanding of our HSE Policy, our standards and performance.
10. **Continuously improve our HSE performances** by monitoring the suitability and effectiveness of our management standards and systems, and learning from industry best practice.

James L. House,
Chief Executive Officer
Neptune Energy


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Appendix B:
Environmental
performance
indicators
2012 – 2018

Indicators	Unit	2018	2017	2016	2015	2014	2013	2012
Operated Gas Production								
Producing Assets No.	No.	2	3	3	2	2	2	1
Production Quantities	MWh	10,742,537.83	9,184,938.88	1,513,638.59	1,999,209.00	4,997,980.00	9,875.00	-
Energy Consumption*								
Diesel	MWh	2,066	6,176.14	124,698.86	64,935.00	72,893.00	59,475.00	29,415.00
Natural gas	MWh	82,496,947	65,583.33	1,876.57	-	202.00	21,246.00	12,634.00
Offshore Activities								
Drilling operations	No.	3	0	5	5	9	4	1
Workovers	No.	0	0	0	0	0	0	0
Well Decommissioning	No.	0	0	0	0	0	0	4
Environmental Incidents								
Chemical releases	No.	2	10	1	0	4	1	1
Hydrocarbon release	No.	3	3	6	2	1	1	0
Hydrocarbon release ≥ 2 tonnes	No.	0	0	0	0	0	0	0
Atmospheric emissions*								
Global warming potential	TCO2 EQ	41,316.74	25,925.40	41,108.45	36,458.20	17,906.95	35,390.20	8,169.10
Acidification Potential	TCO2 EQ	160.03	71.19	274.32	239.30	228.41	227.50	95.74
CO2	T	38,844.65	23,874.81	39,040.23	34,372.62	17,005.48	28,616.50	8,162.70
CH4	T	81.36	73.00	58.45	63.10	24.46	300.70	6.00
NOX	T	216.97	98.41	380.77	332.20	318.69	309.00	130.50
N2O	T	2.46	1.67	2.71	1.70	1.25	1.50	0.49
SO2	T	6.43	1.14	5.88	5.54	5.33	10.20	4.40
CO	T	82.29	47.06	107.64	122.03	98.66	77.70	17.70
VOC	T	37.83	8.05	17.53	73.04	29.83	48.20	3.60
Waste Produced								
Conventional waste	T	270.74	949.00	374.00	1,653.00	248.00	129.00	129.00
Hazardous waste	T	232.02	1,192.00	2,876.00	1,345.00	5,352.00	2,717.00	2,717.00
Drill cuttings	T	0.00	3,568.00	2,005.00	3,518.00	4,417.00	1,525.00	1,525.00
Chemical use (discharge)								
Gold total	T	96.637 (23.863)	145.638 (145.638)	203.34 (5.99)	231.3 (24.1)	246 (246.55)	205.6 (30)	111.6 (7.8)
Gold SUB	T	9.815 (0.114)	32 (32)	133.56 (5.28)	102.2 (4.72)	80.7 (8.86)	70.7 (3.5)	33.1 (0)
E total	T	3567.042 (218.279)	107.291 (14.124)	6,648.03 (14.13)	10,473.8 (595.8)	13,966.8 (1443.55)	8,939.3 (1324.9)	4,635.8 (368.3)
E SUB	T	0 (0)	0 (0)	0.42 (0)	3.8 (0)	1.45 (1.45)	1.5 (0.2)	0.9(0)
D total	T	306.618 (0)	0.631 (0)	2,745 (0)	8.4 (0.005)	15.69 (0.26)	3.6 (0.8)	1.01 (0.1)
D SUB	T	10.069 (0)	0 (0)	19.24 (0)	7.6 (0)	-	2.6 (0)	0.8 (0)
C total	T	12.300 (0)	0 (0)	48.6 (0)	54.3 (0)	65.78 (0)	586.8 (0)	311 (0)
C SUB	T	26.892 (0)	0 (0)	48.55 (0)	47.35 (0)	-	35.8 (0)	7.3 (0)
B total	T	1.284 (0)	0 (0)	0.04 (0)	8 (0)	17.69 (0)	4.4 (0)	2.6 (0)
B SUB	T	0 (0)	0 (0)	0.04 (0)	8 (0)	-	4.1 (0)	2.4 (0)
A total	T	26.892 (0)	0 (0)	0 (0)	2 (0)	4.32 (0)	6.5 (0)	0.6 (0)
A SUB	T	0 (0)	0 (0)	0 (0)	2 (0)	-	6.5 (0)	0.6 (0)
Oil in produced water								
Oil discharged (OPPC Permit)	Grams	645,350.00	345,824.17	810.00	412.00	40.00	-	380.10
Produced fluid discharge	M3	11,189.80	242,254.29	87.29	45.30	1.60	-	32.90

*Note: Figures reported do not include contributions from logistics operations



Our values:

Our values are a core component of our business and help to guide our actions.

- Excellence** - We strive to be the best, particularly in the areas of health and safety and carefully manage our environmental impact.
- Accountability** - We take ownership of actions and results.
- Integrity** - We have a commitment to ethical operations and respect every individual across every area of our business.
- Teamwork** - Only by working together can we grow and only through partnership can we succeed.

For further information or to provide comments about this report, please contact:

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