



2019

**ANNUAL ENVIRONMENTAL
STATEMENT** for
Shell U.K. Limited Upstream

CONTENTS

INTRODUCTION	3
TERMINOLOGY IN THIS STATEMENT	3
WHAT WE DO	4
OUR ENVIRONMENTAL GOALS AND OBJECTIVES	5
Shell Commitment and Policy on HSSE & SP	7
ENVIRONMENTAL PERFORMANCE	8
Emissions and Discharges	
■ Greenhouse Gas Emissions	
■ Energy Use and Resource Management	
■ Oil in Produced Water	
■ Unplanned Releases	
Chemical Management	13
Waste Management	15
SHELL DECOMMISSIONING IN THE NORTH SEA	17
CONTACT US	20
APPENDIX 1	21
Summary of Environmental Data (2015-2019)	
APPENDIX 2	22
Well Activities in 2019	
APPENDIX 3	24
Abbreviations and Terminology	
APPENDIX 4	25
ISO 14001-2015 Certificate 2020-2025	
CAUTIONARY STATEMENT	26

© 2020 Shell U.K. Limited

This report has been produced in order to meet the requirements of OSPAR Recommendation 2003/5, as advised by the U.K. Government Department of Business, Energy and Industrial Strategy (BEIS), formerly known as Department of Energy and Climate Change (DECC).

Where the words “Shell”, “we”, “us” and “our” are used in this report they refer specifically to Shell UK Upstream business. “Our facilities” or “our installations” refers to facilities or installations which we are appointed to operate on behalf of co-venturers which own the facilities or installations jointly.

The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate legal entities.

In this report, the expressions “Royal Dutch Shell” and “Shell group” are sometimes used for convenience where references are made to Royal Dutch Shell plc and its subsidiaries in general.

INTRODUCTION

This is the 2019 annual environmental statement for Shell U.K. Limited (Shell UK). The statement summarises the environmental performance in 2019 of our upstream offshore and onshore facilities operated by Shell in the UK.

Shell UK has been producing oil and gas from the North Sea for over 50 years and makes a significant contribution to the UK economy; we supply around 10% of the UK’s oil and gas, with interests in over 50 fields, 25 platforms and 1 Floating Production and Storage Offshore (FPSO) vessel operated on our behalf. Oil and gas production is from our offshore platforms and vessels, while onshore we operate two gas processing plants responsible for delivering more than 20% of the UK’s gas supply, and one liquids processing plant.

The data used in this report has been previously reported to the relevant UK environmental regulators which for offshore is via the Environmental Emissions Monitoring System (EEMS) to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED, a department within BEIS), and for onshore is to the Scottish Environment Protection Agency (SEPA) via the Scottish Pollutant Release Inventory, and to the Environment Agency (EA) in England via the Pollution Inventory. BEIS is the UK Government Department of Business, Energy and Industrial Strategy.

TERMINOLOGY USED IN THIS STATEMENT

“Installations” refers to:

- Shell UK operated oil and gas offshore production platforms and Floating Production and Storage Offshore (FPSO) vessels;
- Shell UK operated gas and liquid processing plants onshore; and,
- Third party mobile drilling rigs in the UK whilst on contract to Shell in UK waters.

“Facilities” refers to Shell UK operated installations in addition to wells, subsea infrastructure and onshore pipeline systems.

“Functions” refers to services required to facilitate and support the Shell UK business including facility operations, engineering, logistics (vessels and helicopters), project and development planning, health, safety, security, environment and social performance, production and well fluids chemistry, finance, legal, contracts & procurement and office management.

Acronyms and abbreviations used in the text are described in **Appendix 3**.



WHAT WE DO

Installations operated by Shell UK in 2019 included:

- **Shearwater:** a high pressure, high temperature gas/condensate reservoir produced from an integrated process, utilities and living quarters platform which is bridge linked to a wellhead platform in the Central North Sea.
- **The Shearwater-Elgin Area Line (SEAL):** a pipeline that transports sales quality gas from the Shearwater and Elgin-Franklin platforms to the Shell UK operated Bacton Gas Terminal on the Norfolk coast.
- **Nelson:** a drilling and production platform with subsea satellite wells tied back to the platform. The Nelson cluster consists of the Nelson field and the Howe and Bardolino fields via subsea tie-backs in the Central North Sea.
- **Gannet:** a fixed drilling and production platform which processes oil and gas from the Gannet A, B, C, D, E, F and G fields via subsea wellhead tie-backs in the Central North Sea.
- **Curlew:** producing reservoirs tied back to the Curlew FPSO via subsea wells based around three drilling centres in the Central North Sea. Curlew production ceased at end of March 2019 and the FPSO was unhooked and towed to shore for preparation prior to dismantling.
- **Pierce:** an FPSO (the Haewene Brim) producing, storing and offloading crude oil from the Pierce North and South fields in the Central North Sea. The installation operator for the Haewene Brim is the Pierce Production Company Limited (part of Bluewater Energy Services).
- **The Brent field:** was four installations, Alpha, Bravo, Charlie and Delta in the Northern North Sea. Brent Delta ceased production at the end of 2011 and the platform topside was removed and shipped to shore for dismantling in May 2017. Production ceased at Alpha and Bravo in late 2014. Brent Bravo was de-manned in March 2019, and the topside removed in June 2019 and transported to shore for dismantling. The Brent Alpha installation was de-manned in October 2019 and is undergoing final preparation for topside and partial jacket removal to shore. Brent Charlie is still in production, including producing hydrocarbons from the nearby Penguins field.
- **Goldeneye:** a Normally Unattended Installation (NUI) in the Central North Sea controlled from an Installation Control Centre based at the onshore St Fergus Gas Plant. The Goldeneye field ceased production in 2011 and the facilities are being prepared for decommissioning.
- **Clipper:** six fixed bridge linked platforms in the Sole Pit field located in the Southern North Sea. The Clipper installation produces and processes natural gas from its own wells and imports and processes gas from Barque PB & PL, Galleon PN & PG, Skiff, Carrack, Carrack East and Cutter fields.
- **Leman:** five bridge linked platforms located in the Southern North Sea. The Leman Alpha installation produces and processes natural gas from its own wells. It imports and processes gas from the remainder of the Leman field platforms, Bravo, BT, Charlie, Delta, Echo, Foxtrot, Golf, and imports natural gas and liquids from Corvette, Brigantine BG & BR, Caravel and Shamrock.
- **St Fergus Gas Plant:** a gas processing plant near Peterhead in North East Scotland that receives wet gas from multiple North Sea fields via the Fulmar Gas pipeline and from Norway via the FLAGS (Far North Liquids and Associated Gas System) pipeline. The gas is processed to supply the national grid. Extracted Natural Gas Liquids (NGL) are piped south to Shell UK's fractionation plant in Fife, Scotland (Fife NGL).
- **Fife Natural Gas Liquids Plant (FNGL):** two sites located in Mossmorran Fife, Scotland - the Fife NGL fractionation plant and Braefoot Bay Marine Terminal. The NGLs are received at the fractionation plant via a 220 km underground pipeline from the St Fergus Gas Plant and separated into ethane, propane, butane and natural gasoline. The ethane is piped to the neighbouring Fife Ethylene Plant (FEP), operated by another company. The remaining products are transported via pipeline to the Braefoot Bay Marine Terminal, 7 km to the south of the plant on the Firth of Forth, for loading onto ships and export to international customers. Products are also exported from the plant by road tanker.
- **Bacton Gas Plant:** a gas reception and processing plant located near Great Yarmouth in the East of England. The plant processes gas received from the Sole Pit, Leman, SEAL, BBL and Sean pipelines. Processed gas is transferred to the national grid via the adjacent Transco transmission facilities.
- **In addition:** a number of mobile rigs were contracted to Shell UK in 2019 to drill new wells, conduct well interventions and well plug and abandonment operations. These included the Ocean Endeavor, Ocean Valiant, Ensco 122 and the Wilphoenix mobile rigs, and the Light Weight Intervention vessels Seawell and the Well Enhancer.

For more information on Shell UK, visit our website at www.shell.co.uk/about-us/what-we-do

OUR ENVIRONMENTAL GOALS AND OBJECTIVES

Through the application of global environmental standards, Shell carefully considers the potential impacts Shell may have on the environment and the communities we share it with during the planning of projects and throughout the lifetime of operations. We seek to avoid adverse environmental impacts when carrying out our activities and, where avoidance is not possible, we implement controls that are designed to minimise any residual impacts.

Shell's commitment and policy on Health, Safety, Security, Environment and Social Performance (HSSE & SP) is included on page 7. In the UK, our integrated HSSE Management System aims to drive for continuous improvement in our approach to environmental risk management and performance. The system covers all of our upstream activities and locations involved in exploration and production, as well as the processing of oil and gas.

The processes and procedures we follow, and resources deployed, are designed to comply with the Shell Group's global standards and environmental regulations. Focus is on the identification of risk and the management of potential impacts while at the same time preparing for future challenges and opportunities. Our environmental management system is certified to ISO 14001:2015, the current international environmental management standard (see **Appendix 4**).

Continuous improvement in our environmental performance has the following objectives:

- Environmental risk management for our activities throughout the life cycle of a project to avoid or minimise any impact on the environment or the communities we share it with;
- Using materials and energy efficiently in the production and delivery of products and services;
- Monitoring performance and setting targets for improvement;
- Effective engagement with our stakeholders; and,
- Playing a leading role in promoting good practice in our industry.

We provide day to day support to our operations, exploration and new projects and routinely monitor compliance with UK legislation and Shell standards. In addition, the main environmental performance focus areas in 2019 included:

- Evaluation of the use of energy at all our operated installations to identify optimisation opportunities that may reduce combustion emissions.
- Review of potential flaring and venting reduction opportunities.
- Identification of potential methane emission sources and fugitive losses to enhance methane management procedures.
- Environmental impact assessment programmes, such as for the Jackdaw project and the decommissioning of Scoter, Merganser and Goldeneye.
- Supporting preparations for the decommissioning programme such as at the Curlew field and the Brents field, including the continued consultation and engagement on the decommissioning programme at the Brents field.
- Supporting the delivery of several infield subsea pipeline installation projects.
- Delivery of environmental commitments made with respect to the construction of the Penguins facilities.
- Final deployment of the EmTrax application for production chemical use across all of our offshore facilities and the phased implementation of EmTrax waste tracking.
- Recertification of our environmental management system to the ISO 14001:2015 standard.



Environmental improvement programmes and achievements in 2019 included:

- Completion of an energy use review of all Shell UK operated installations and the identification of new optimisation opportunities that could further reduce greenhouse gas (GHG) emissions. Several opportunities have been selected for further feasibility studies in 2020. The review programme incorporated compliance with the Energy Savings Opportunity Scheme (ESOS) legislation.
- Preparation of an updated GHG and Energy Management Plan for the Shell UK asset, including individual facility specific emissions intensity targets.
- Delivery of initiatives and projects that resulted in removing around 9,000 tonnes of direct GHG emissions per annum from Shell UK operations until the end of field life.
- Elimination of the indirect emissions from the electricity supplied to our onshore facilities was achieved by purchasing all of our electricity from certified renewable resources. This removed over 54,000 tonnes of GHG from our overall UK footprint.
- Achieved internal approval from Shell and external approval from the Regulator for the Environmental Statement in support of the Goldeneye field decommissioning programme.
- Completion of the Environmental Impact Assessment (EIA) programme for the Jackdaw project and preparation of the Environmental Statement for submission to the Regulator and for public consultation.
- Introduction and deployment of the EmTrax tool for the tracking and reporting of production chemicals use at all of our UK sector offshore operated installations.
- Introduction and deployment of the EmTrax tool for the tracking and reporting of waste at all of our UK sector offshore operated installations.
- Completion of the Brent Delta topsides demolition at the onshore yard with a 97% waste reuse and recycling rate.
- Completion of eight marine environmental baseline and/or monitoring surveys in support of project assessments and/or operational monitoring around offshore facilities.
- Successful re-certification of our UK wide environmental management system to the ISO14001:2015 standard.
- Continued support for Phase 2 of the INSITE Programme (Influence of man-made Structures in the Ecosystem). The programme supports independent science leading to a greater understanding of the influence of man-made structures on the North Sea ecosystem. Shell UK has supported the programme since it started in 2012.
- Support to further research by Wageningen University on decommissioning methodologies with the objective of developing a model to predict marine growth on man-made structures in support of decommissioning planning.



SHELL COMMITMENT AND POLICY ON HEALTH, SECURITY, SAFETY, THE ENVIRONMENT AND SOCIAL PERFORMANCE

COMMITMENT

In Shell we are all committed to:

- Pursue the goal of no harm to people;
- Protect the environment;
- Use material and energy efficiently to provide our products and services;
- Respect our neighbours and contribute to the societies in which we operate;
- Develop energy resources, products and services consistent with these aims;
- Publicly report on our performance;
- Play a leading role in promoting best practice in our industries;
- Manage HSSE & SP matters as any other critical business activity; and
- Promote a culture in which all Shell employees share this commitment.

In this way we aim to have an HSSE & SP performance we can be proud of, to earn the confidence of customers, shareholders and society at large, to be a good neighbour and to contribute to sustainable development.

POLICY

Every Shell Company:

- Has a systematic approach to HSSE & SP management designed to ensure compliance with the law and to achieve continuous performance improvement;
- Sets targets for improvement and measures, appraises and reports performance;
- Requires contractors to manage HSSE & SP in line with this policy;
- Requires joint ventures under its operational control to apply this policy, and uses its influence to promote it in its other ventures;
- Engages effectively with neighbours and impacted communities; and
- Includes HSSE & SP performance in the appraisal of staff and rewards accordingly.

Ben van Beurden
Chief Executive Officer

Sinead Lynch
UK Country Chair

Originally published in March 1997 and updated by the Executive Committee December 2009.

General Disclaimer: The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate entities. In this Policy the expression "Shell" is sometimes used for convenience where references are made to companies within the Shell group or to the group in general. Likewise, the words "we", "us" and "our" are also used to refer to Shell companies in general or those who work for them. These expressions are also used where no useful purpose is served by identifying specific companies.



ENVIRONMENTAL PERFORMANCE

EMISSIONS AND DISCHARGES

Greenhouse Gas Emissions

We actively monitor our greenhouse gas (GHG) emissions and report these emissions as carbon dioxide equivalents (CO₂e) which includes CO₂ and methane. The sources of direct GHG emissions from our activities at Shell UK facilities in 2019 are shown in **Figure 1**.

The principal contributor to the direct GHG emissions from our operations is the combustion emissions generated from the burning of fuel gas in turbines for power generation and compression duty, as well as in facility boilers, heaters and engines. In 2019, fuel gas combustion contributed 73% of the total GHG emissions. Other contributors to the total include emissions at our installations that result from flaring for safety reasons, which contributed 15% and from venting which contributed 6%. Emissions from the combustion of diesel contributed 5% of the overall total. Diesel is used in a variety of situations including in the engines of mobile rig units and vessels on hire and in dual-fuel generators used for power when fuel gas is not available, as with Brent Bravo and Curlew.

The total direct GHG emissions from Shell UK facilities in 2019 was 2.1 million tonnes of CO₂e, a reduction of 109,000 tonnes or 4.9% of the total emitted in 2018 (2.22 million tonnes CO₂e). Emissions by source at each Shell UK facility are shown in **Figure 2**.



Figure 1: GHG Emissions by source in 2019*

**(based on 100% of emissions at Shell UK operated facilities, mobile rigs on contract to Shell UK and the Pierce facility operated by Pierce Production Company Ltd)*

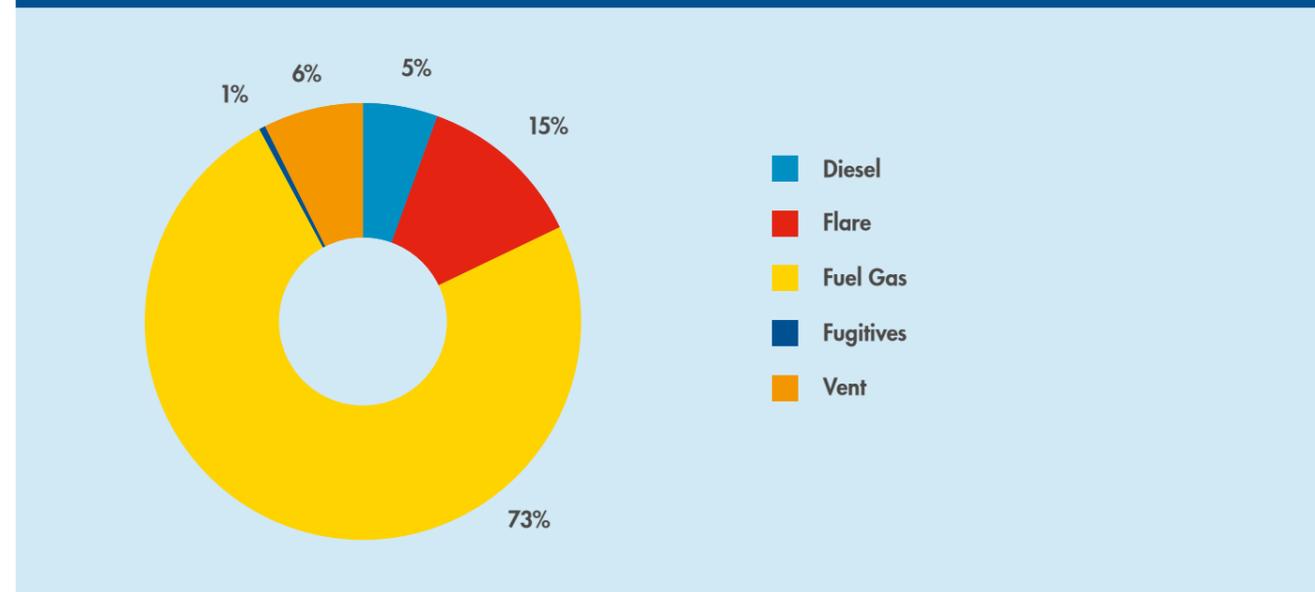
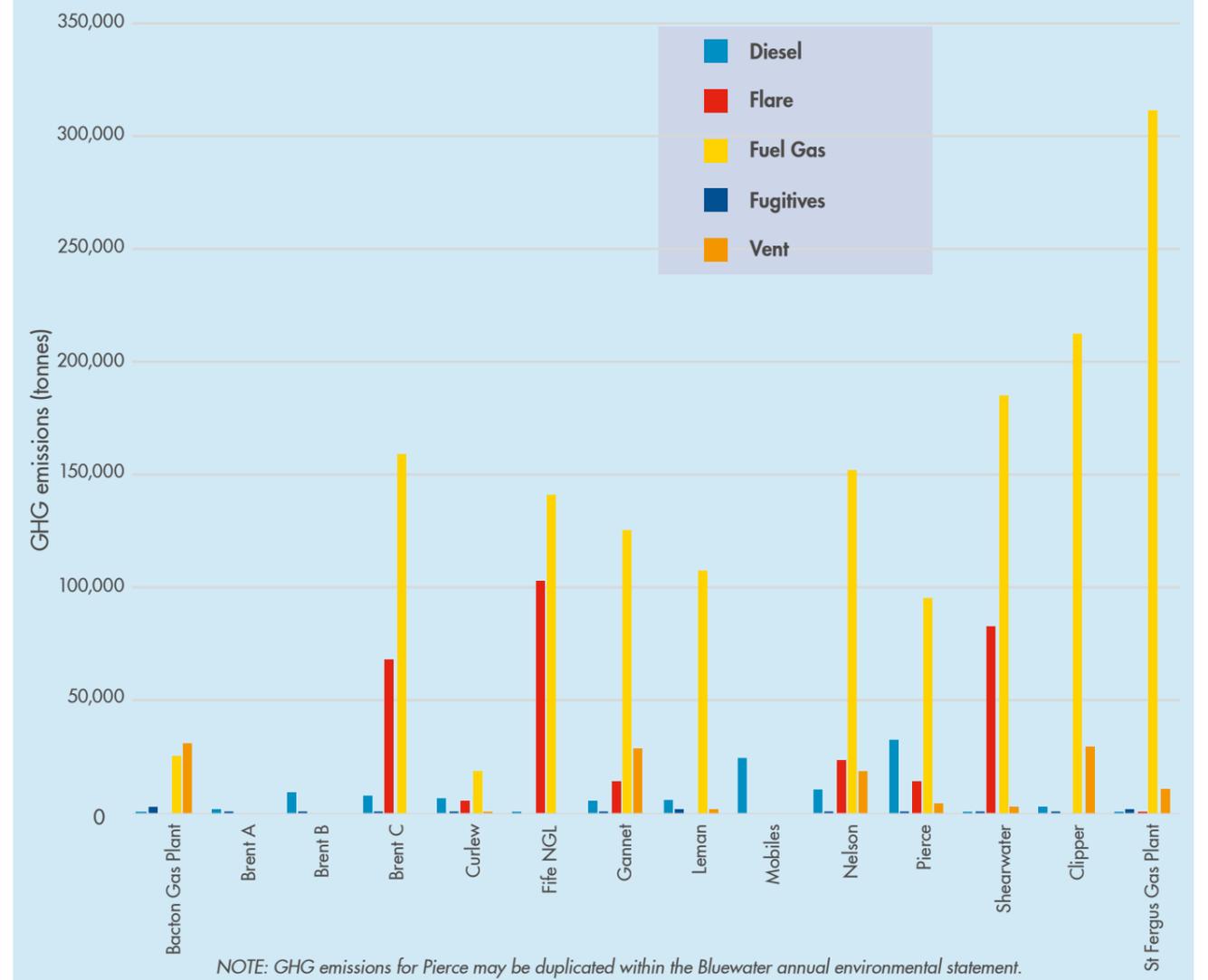


Figure 2: GHG emissions by source per facility in 2019* (tonnes CO₂e)

**(based on 100% of emissions at Shell UK operated facilities, mobile rigs on contract to Shell UK and the Pierce facility operated by Pierce Production Company Ltd)*



Key changes by source since 2018 are shown in **Figure 3** and include:

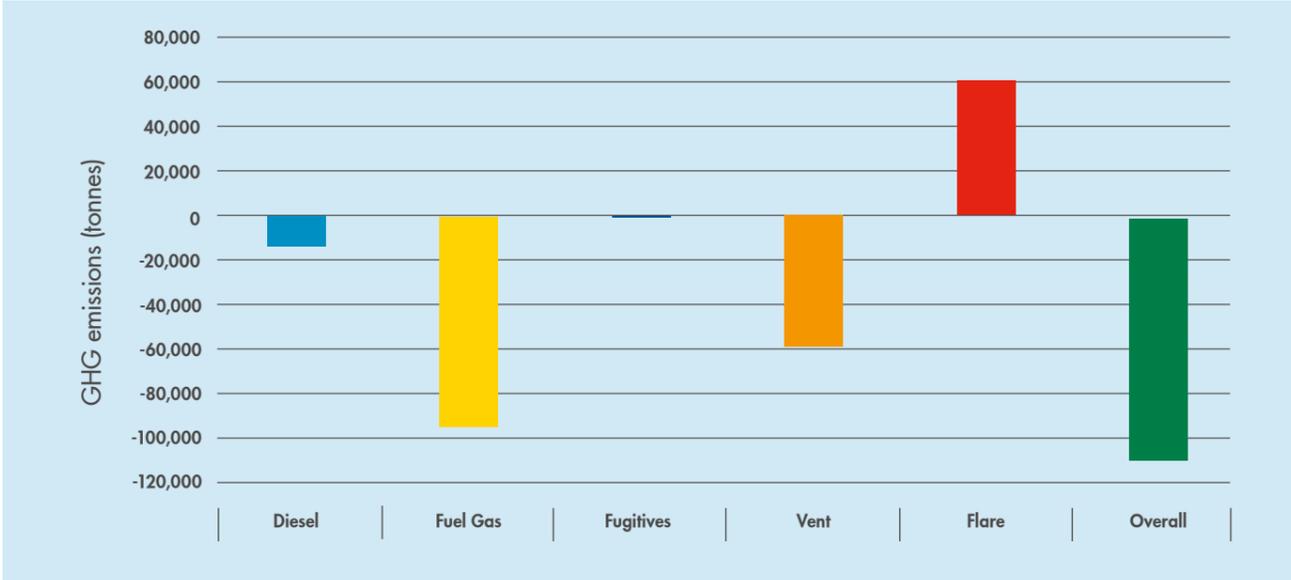
- A reduction in GHG emissions from fuel gas combustion of 96,000 tonnes since 2018, the main contributors to this reduction were the cessation of production at the Curlew installation at the end of March, no further fuel gas requirements at Brent Bravo following full shutdown and removal of the topside in June and, lower consumption at Lemna during a planned shutdown for maintenance in September and October.
- A reduction in GHG emissions from diesel combustion of 13,900 tonnes since 2018. The reduction was recorded despite the increased diesel consumption from mobile rig activity for the 2019 wells campaigns. The net reduction was mainly the result of reduced consumption of diesel used in facility decommissioning activities at the Brent field compared to 2018, following the Brent Bravo platform topside removal in June 2019.
- Emissions due to venting reduced by 59,000 tonnes CO₂e compared to 2018. A key contributor to this overall

reduction was the the Low Pressure (LP) flare stack at Shearwater remaining lit in 2019. Whereas, in 2018, the high CO₂ content from the well fluids at the Shearwater installation made the gas in the LP system difficult to ignite. This was remedied in August 2018. The amount of venting at the Clipper installation also reduced since 2018 due to improved reliability and uptime of processing equipment.

- Overall emissions from flaring increased by 60,000 tonnes CO₂e since 2018. This was due predominantly to ground flaring from production at the Fife Natural Gas Liquids (Fife NGL) plant during the temporary shutdown in August 2019 of the neighbouring Fife Ethylene Plant (FEP), operated by another company. FEP could no longer receive the ethane feedstock from Fife NGL, and a proportion that could not be re-directed needed to be flared. Flaring reductions were, however, recorded at both Gannet and Pierce between 2018 and 2019.

Figure 3: GHG emissions 2019 performance relative to 2018*

**(based on 100% of emissions at Shell UK operated facilities, mobile rigs on contract to Shell UK and the Pierce facility operated by Pierce Production Company Ltd)*



ENERGY USE AND RESOURCE MANAGEMENT

The management of GHG emissions from Shell UK operations is central to Shell’s activities and the control and reduction of our GHG footprint is a key priority. We continue to seek opportunities to reduce our emissions across our portfolio of activities.

Improving the energy efficiency at the facilities we operate is one of the ways we manage our emissions. In 2019, we conducted an energy use review across our portfolio in order to ensure identification of opportunities to reduce our emissions in line with our focus on continuous improvement. The programme of work was supported by an energy efficiency benchmarking exercise that assisted our understanding of how our installations compare with other similar installations across Shell’s global upstream portfolio. The review identified a number of opportunities that have been selected for additional feasibility studies in 2020. These will help to identify the most effective emissions abatement opportunities for delivery as future projects.

The energy reviews in 2019 also ensured our compliance with the UK’s Energy Savings Opportunities Scheme requirements.

Energy use optimisation activities, along with flaring and venting reduction initiatives, form part of Shell’s wider energy transition programme for the UK organisation. This is aligned with Shell group’s ambition to achieve Net Zero emissions by 2050 or sooner and our industry sector’s contribution to the UK’s Net Zero ambitions.

In 2019, a number of initiatives and projects were delivered that resulted in removing around 9,000 tonnes of GHG emissions from our operations each year until the end of field life. These projects included a de-complexing programme at Leman; lowering of the gas compression pressure at Pierce; a reduction in stripping gas emissions from the glycol plant at Nelson; reduction of the purge gas rates to the flare stack at Brent Charlie; and, at St Fergus, the sour gas flare was taken out of service.

Additionally, the indirect emissions from electricity supplied to our onshore facilities were eliminated in 2019 by purchasing all of our electricity from certified renewable resources. This removed 54,000 tonnes of GHG from our overall UK footprint.



OIL IN PRODUCED WATER

Water produced with oil and gas at Shell UK offshore facilities is separated from hydrocarbons during processing. This produced water is discharged to sea following additional treatment to remove residual oil components. All oil discharges to sea are regulated through the Offshore Petroleum Activities (Oil Pollution Prevention and Control) Regulations 2005 (as amended) and residual oil discharge limits for each installation are permitted by the Regulator under this legislation.

The amount of produced water and residual oil discharged to sea in produced water from each of our operated facilities in 2019 is shown in **Figure 4**. Discharged amounts in 2019 were all within the volumes set by the Regulator for each installation. The total amount of residual oil discharged from installations under permit to Shell UK in 2019 was 244 tonnes, a slight increase compared to 242 tonnes discharged in 2018.

Annual average concentrations of residual oil in the produced water discharges from each installation in 2019 are presented in **Figure 5**. Residual oil in produced water concentrations are monitored prior to discharge and any exceedance of the regulatory monthly average limit of 30 milligrams of oil per litre or ppm (parts per million) are reported to the Regulator.

In 2019, the 30 ppm average oil in water discharge for the year was met at all installations. Onboard water treatment can be affected by changes in produced fluid content, for example, during the start-up of a well when oil in water levels may breach limits for a short duration resulting in occasions where a non-compliance in the monthly average is recorded. Compliance with the 30 ppm monthly average was met in the majority of occasions, although four non-compliances with the monthly standard were recorded against Shell UK permits in 2019:

- An average level of 44.2 ppm oil in water for the month of June at Gannet which was due to batch draining to enable platform turnaround and is considered a one-off event.
- An average level of 36.7 ppm oil in water for the month of July at Shearwater which was caused by treatment challenges at the beginning of the month during a process start-up with very low produced water flow rates. Measures were taken to remediate the out of spec fluids at the time, including temporarily re-routing produced water to the condensate export line to cease discharge to sea until process stability was regained.
- An average level just above the limit at 30.5 ppm oil in water for the month of September at Nelson due to a build-up of sand in equipment which compromises effective separation of the oil from the water. The situation was quickly remedied through corrective maintenance.
- An average level of 32.3 ppm oil in water for the month of November at Leman. This was due to instability in the process at start-up following a shutdown of the platform.

Figure 4: Total volume of produced water and mass of oil discharged to sea from each Shell UK operated offshore installation in 2019

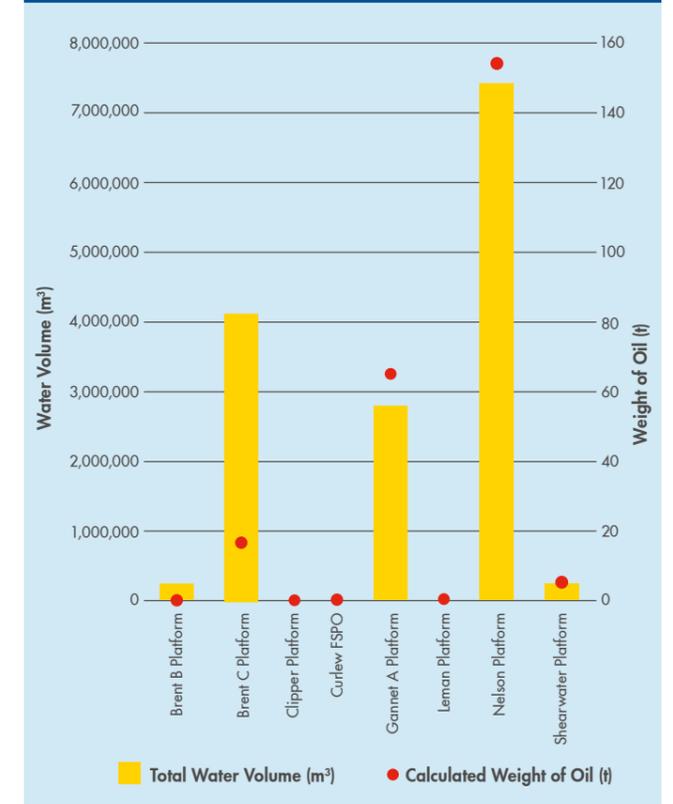
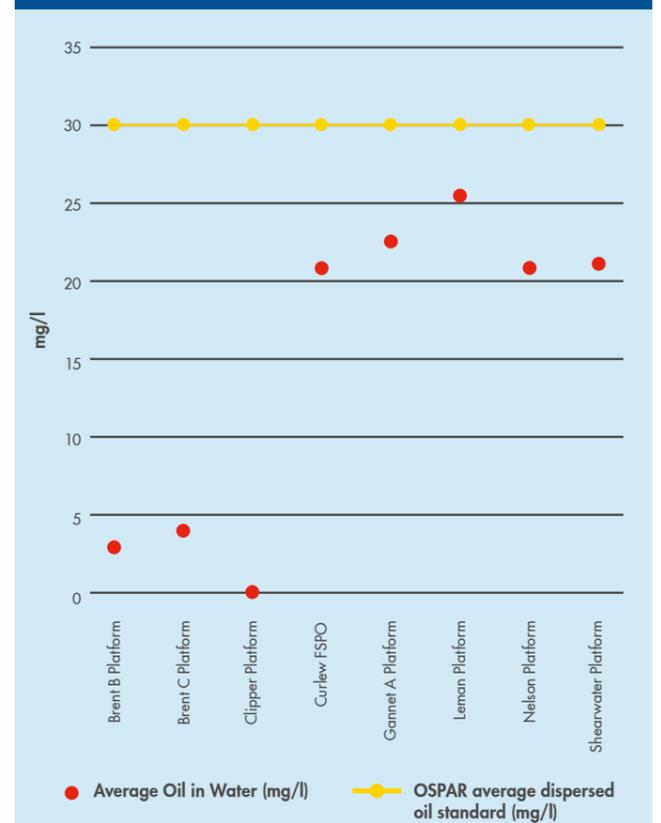


Figure 5: Annual average dispersed oil concentrations in produced water from Shell UK operated offshore installations in 2019



UNPLANNED RELEASES

We have extensive controls and procedures in place to prevent the unplanned release of hydrocarbons or chemicals. We conduct extensive maintenance programmes to ensure the integrity of equipment used in the production, processing or transfer of liquid materials and to improve reliability. We also have secondary containment barriers fitted around storage tanks, hydrocarbon processing areas and equipment to help prevent any accidental releases from entering the environment. However, during the course of conducting operations unplanned releases can still take place for reasons such as operational upsets, minor equipment failures or they may be due to unusual corrosion.

All unplanned releases are closely monitored and recorded internally regardless of volume, and releases to the sea are reported to the Regulator at the time of the release using a Petroleum Operations Notice (PON1). The Regulator publishes an annual list of PON1s reported by all operators in the North Sea.

The total number and mass of unplanned releases to the sea during Shell UK activities in the North Sea over the last five years is shown in **Table 1**. In 2019, a total of 31 unplanned releases of oil and chemicals from our operations were recorded and reported, a lower number than 2018 (42) and the lowest number recorded in a year for the last five years. The total mass released to sea in 2019 was estimated to be 52.5 tonnes, this was higher than that recorded in 2018 (1.9 tonnes).

Of the 31 unplanned releases in 2019, 16 of them were related to hydrocarbon releases with a total mass released of 2 tonnes and 15 were chemical releases with a total mass of 50.5 tonnes. 20 of the 31 releases were small, and less than 10 kg (<0.01 tonne) each, the remaining 11 releases were each over 100 kg. Five of these releases were individually greater than 2 tonnes, and these five releases amounted to a total of 43.2 tonnes of chemicals to sea (or 82% of the total unplanned release in 2019). These were:

- An unplanned discharge of cement while grouting during decommissioning preparations where the cement exited to sea through holes that had been pre-drilled for future leg cutting operations. This release resulted in an estimated discharge of 16 tonnes of cement.
- An estimated loss of 6.3 tonnes of methanol from a failed pump seal. On discovery, the pump was immediately isolated to stop the leak.
- A leak of water-based hydraulic fluid from a subsea safety valve package. Repair options are under evaluation. In the meantime, the cumulative losses at end of 2019 are estimated to be 4.7 tonnes.
- An estimated 2 tonnes release of water based hydraulic fluid from a hose on a mobile drilling rig. The hose contents were released after the hose was sheared from its housing during a period of bad weather.
- A potential sub-surface loss of methanol and glycol during start-up of a subsea well. Potential leak paths are under investigation. If released to sea, losses of 6.3 tonnes of methanol and 7.9 tonnes of glycol are assumed.

It should be noted that, at the time of writing, 11 of the 31 PON1s submitted in 2019 were still under review by the Regulator. This may result in a future adjustment to our figures.



	2015	2016	2017	2018	2019
Number of Oil & Chemical Spills (includes spills <100kg)	64	59	53	42	31
Mass of Oil & Chemical Spills (tonnes)	20	27	56	1.9	52.5

Table 1: Number and mass of spills to sea (2015-2019)

CHEMICAL MANAGEMENT

Production Chemicals

The type and volume of production chemicals used in our operations varies across our facilities depending on the requirements. Production chemical use and discharge is affected by various factors such as:

- Oil, gas and water production. In particular, as fields age, water production generally increases leading to greater chemical consumption in order to maintain effective operations.
- New technology that either removes the need for chemicals or can improve chemical efficiency which reduces chemical use.
- Improved knowledge of chemical behaviour to more accurately determine the fate of chemicals used.

We have strict chemical selection procedures in place that seek to ensure the most efficient chemicals are selected for each process and any potential impact to the environment is minimised. All chemicals selected and their use and discharge is approved by the Regulator under the Offshore Chemicals Regulations 2002 with specific allowances approved through chemical permits.

Table 2 shows the historical use of offshore production chemicals across Shell UK production operations, along with the proportion that may have been discharged to the sea through the offshore production process, as estimated by the partitioning characteristics of the chemical used. The data shows that production chemical use in 2019 has decreased compared to 2018. The percentage of production chemicals that may have been discharged, as they are more likely to enter the water phase and be released with the produced water stream, has increased. This is due to changes in chemical applications for operational reasons. The majority of these chemicals (89%) are classified as either posing little or no risk to the environment ("PLONOR" classified chemicals) or not containing substances which are required by the Regulator to be substituted.

	2015	2016	2017	2018	2019
Production Chemicals (Tonnes)	4,159	4,989	5,631	3,923	3,130
Estimated Percent Discharged	56	53	60	37	75

Table 2: Production chemicals use and estimated discharge (2015-2019)

The Regulator has highlighted certain chemicals to be phased out by means of substitution warnings (known as 'sub-warning chemicals'). Reducing the use of these chemicals can be challenging, especially for those that have been engineered for specific fields or applications. Shell UK has been working to replace sub-warning chemicals by phasing in alternative chemicals as they become available on the market.

The assessment of options to phase out the remaining sub-warning chemicals that we still need to use for our operations continues as we work with our suppliers to identify alternatives. Their entire removal remains technically challenging at present but use is expected to reduce over time through a combination of factors:

1. Replacement with alternative chemicals as they enter the market;
2. Decommissioning of the installations where particular product is used;
3. Reclassification of risks as new chemical data becomes available.

The use of chemicals with sub-warnings by Shell UK has declined over the last few years as shown in **Figure 6** with 25 sub warning chemicals being used across our operated sites in 2019.

Figure 6: Trend in Numbers of Production Chemicals used by Shell UK with Substitution Warnings (2007-2019)



Wells Chemicals

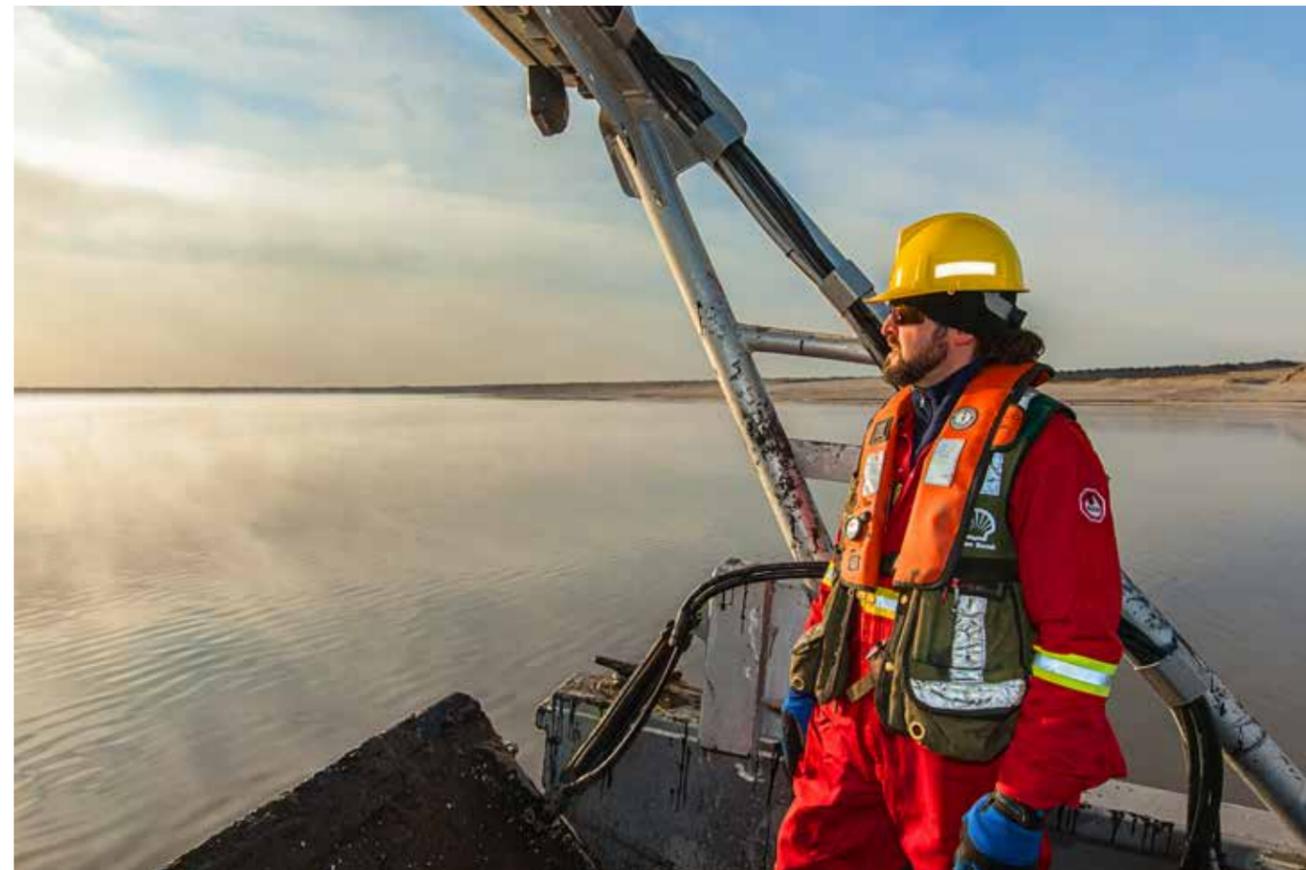
In 2019, we used a total of 10,589 tonnes of chemicals in well activities as shown in **Table 3**. Of this figure approximately 19% of the chemicals were discharged to sea in accordance with the allowances of approved chemical permits from the Regulator. The volume of chemicals used and discharged is directly related to the type and number of well activities undertaken. The increase in the use and discharge of chemicals compared to 2018 levels was due to increased drilling activity in 2019. This also explains the relative increase in discharge percentage compared to 2018 as more chemicals are discharged during drilling activities. The Ensco 122 rig drilled a well in the Southern North Sea and the Ocean Endeavour commenced drilling on the Penguins re-development campaign in the Northern North Sea. Other well activities included the continuing intervention and plug and abandonment operations, particularly in the Brent field. There were also further plug and abandonment operations carried out on various sub-sea wells. Further details on wells operations can be seen in **Appendix 2**.

The use and discharge from the two drilling installations accounted for 63% of the total chemical use and 53% of the total discharge. It should be noted that in the total chemical use and discharge from all operations, chemicals categorised as PLONOR accounted for 67% of the use and 77% of the discharges.

	2015	2016	2017	2018	2019
Wells chemicals (Tonnes)	13,784	12,818	13,505	7,138	10,589
% Discharged	11	16	9	9	19

Table 3: Wells chemicals use and discharge (2015-2019)

In 2019, approximately 2% of the total weight of well chemicals used was made up of chemicals which carry sub-warnings. This is a slight increase (0.15%) from 2018 levels, and this increase is due to the nature of the work undertaken. The total tonnage of sub rated chemicals used was 217.2 tonnes and of these, 16.9 tonnes were discharged which is 0.16% of total use. The majority of the sub-warning chemicals which are discharged are from cementing operations and so this figure is expected to remain relatively stable while well plug and abandonment operations are continuing.



WASTE MANAGEMENT

Waste is controlled across all our UK operations with our installations segregating their waste streams to ensure compliance with company standards and with applicable legal requirements.

Effective segregation of waste also allows for more environmentally acceptable routes of disposal. Waste contractors are involved with the checking, compliance and working with the operators on site, so that they understand the requirements for segregating wastes during activities at the installations. In accordance with the waste hierarchy, which ranks waste management options according to what is best for the environment, we always look at reducing waste volume at source and minimising any waste generated.

The overall waste mass for 2019 was lower than in 2018, primarily due to reduction in the amount of non-hazardous waste generated. **Table 4** shows the total amount of hazardous and non-hazardous waste produced over the last 5 years. In 2019, we also re-used or recycled approximately 16% of our total waste materials (this does not include decommissioning waste which stood at 97% re-use or recycling). Examples of re-use and recycling from our operations include, drums/containers, scrap metal and other segregated recyclables.

In 2019, hazardous waste, which included drilling mud and cuttings shipped to shore from our drilling activities, contaminated water and sludge from onshore and offshore operations, waste oil, paint and chemicals, decreased by 4.5 %.

Non-hazardous waste, which included liquid production residues, scrap metals, wood, paper, plastics, cans and other general waste such as office waste reduced in 2019 compared to 2018. This was mainly due to the enhanced performance of the effluent waste water treatment plant at Bacton Gas Terminal that allowed an increase in liquids discharged under Regulator consent by 160% compared to 2018, and thereby negating the requirement for off-site disposal.

	2015	2016	2017	2018	2019
Hazardous waste (Tonnes)	14,792	27,708	22,601	22,909	21,575
Non-Hazardous Waste (Tonnes)	33,704	17,088	14,280	27,160	17,476
Totals	48,496	44,796	36,881	50,069	39,051

Table 4: Mass (tonnes) of wastes (hazardous and non-hazardous) generated by our UK Upstream operations between 2015 and 2019

Figure 7: Mass (tonnes) of hazardous and non-hazardous waste disposed of in 2019

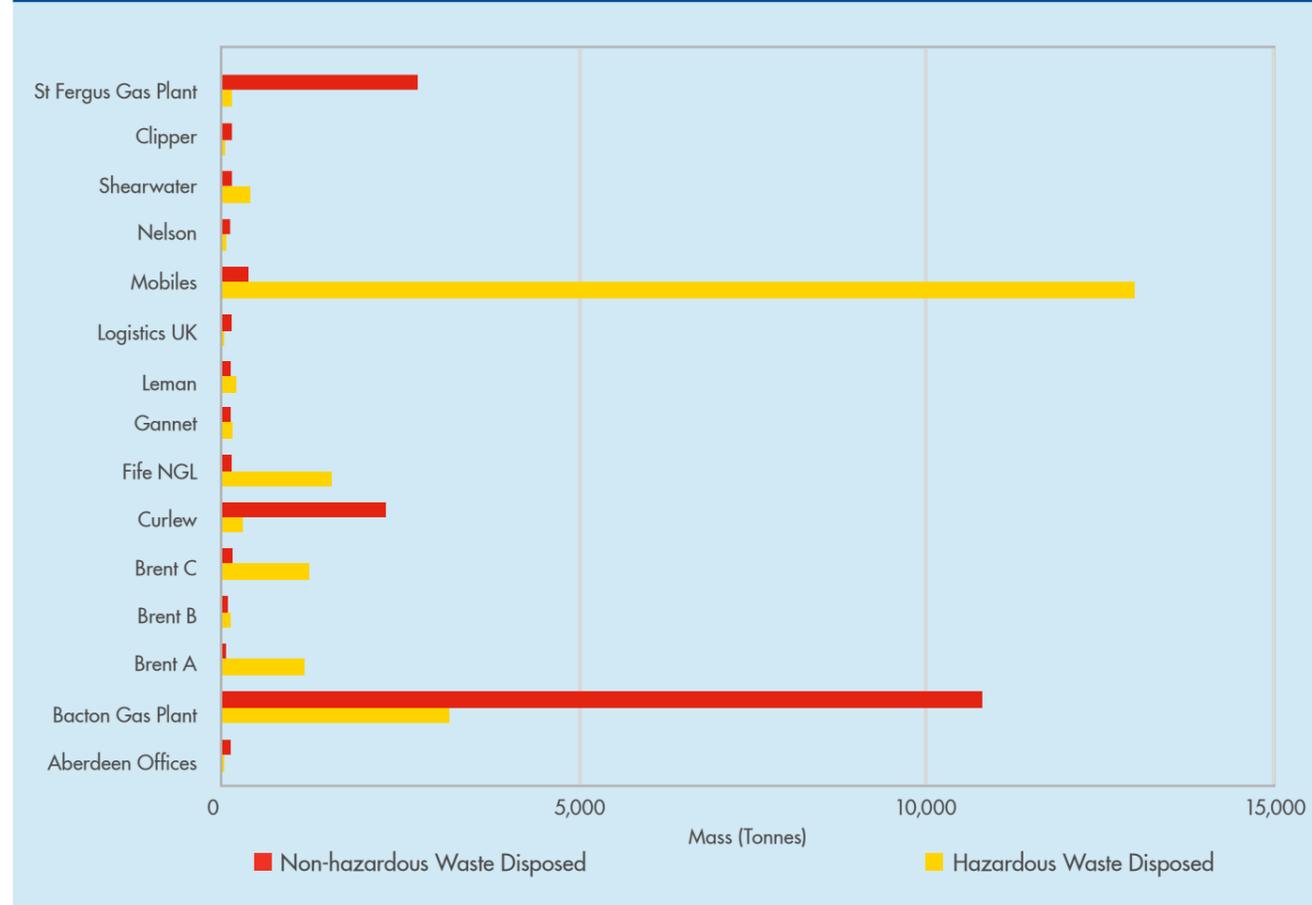


Figure 7 shows the ratio of hazardous to non-hazardous waste by location in 2019. The largest producers of hazardous waste were mobile rigs due to the volume of wet bulk waste generated at these installations. The Bacton Gas Terminal produced the largest amount of non-hazardous waste in 2019.



SHELL DECOMMISSIONING IN THE NORTH SEA

BRENT DECOMMISSIONING

The Brent oil and gas field, and its pipeline systems, is located in Block 211/29 of the UK sector of the North Sea, approximately 186 km north east of the Shetland Islands. It has been a cornerstone of the UK's hugely successful oil and gas industry for over 40 years, it is one of the largest fields in the North Sea, and consisted of four large platforms - Alpha, Bravo, Charlie and Delta.

The Brent field is a prolific national asset and since 1976 has produced around three billion barrels of oil equivalent. At its peak, it was producing more than half a million barrels a day. The Regulator granted permission for the cessation of production from Brent Delta in 2011, and Alpha and Bravo at the end of 2014.

The Brent Decommissioning Project is unique, due to the sheer scale and age of the field, the complex infrastructure, and the challenges of how to decommission the concrete legs and cells, and the cell contents. The field infrastructure is extensive and comprises: four topsides with a combined weight of over 100,000 tonnes; three gravity base structures (GBS) weighing more than 300,000 tonnes each; 31,500 tonnes of steel jacket; and 103 kilometres of pipelines. A total of 143 wells have been drilled from the 154 Brent platform well slots, and 3 subsea wells have been drilled in the Brent South field.

In 2014, the decision was made to bring forward submission of a Decommissioning Programme (DP) for the Brent Delta topside – ahead of the Programmes for the remainder of the Brent Field infrastructure. The Brent Delta topside Decommissioning Programme was approved in July 2015.

An extended 60-day Public Consultation for the full Brent Field Decommissioning Programmes took place between February and April 2017. In 2018, OPRED agreed that the topsides decommissioning proposals for Brent Alpha, Brent Bravo and Brent Charlie could also be removed from the current Brent Field DP, and form a separate, topsides only DP. This was approved in early August 2018.

The Brent Field DP advanced through the regulatory process to the point that OPRED submitted the derogation documentation for the three Gravity Base Structures and the Alpha footings to OSPAR in January 2019. This concluded with a Special Consultative Meeting in October 2019, and a Chairman's report issued in November 2019. OPRED conducted additional bi-lateral engagements with the OSPAR representatives from Germany and The Netherlands and it will consider the views and any conclusions recorded in the report before making a decision on the approval of the Brent Field DP.

The 24,200 tonne Delta topside was removed in 2017; in a single lift operation by Allseas' vessel 'Pioneering Spirit' and taken to Able UK's Seaton Port facility in Hartlepool, north east England for dismantling and recycling.

Dismantling of the topside was completed in Q1 2019, and the component materials or 'waste streams' segregated and stored on site before being transported to other onshore facilities for re-use, recycling or disposal as appropriate. Approximately 97% by mass of topside material was re-used or recycled. All materials are being tracked to their final destination.

A final close-out report was submitted to OPRED in December 2019 which described the offshore and onshore programme of work carried out to cut, lift, transport and load-in the Brent Delta topside to Able UK's Seaton port facility. It also describes the installation of the caps and Aids to Navigation on top of the legs of the Gravity Base Structures.

Brent Bravo was de-manned in March 2019, and the 25,000 tonnes topside was removed also in a single lift by the Pioneering Spirit in June 2019 and transported to Able UK's facility for dismantling and recycling.

Elsewhere in the field, the Brent Alpha wells "plug and make safe campaign" was completed in February 2019, and engineering preparations for lifting the topside and upper portion of the jacket continued through 2019. The Brent Alpha installation was de-manned in October 2019, and the removal of the topside is currently scheduled for 2020.

Decommissioning of the Brent Charlie wells started in late 2017 and will continue for the next few years.



BRENT BYPASS COMPLETED

As part of the decommissioning process for the Brent Field, a Brent Bypass project was started in 2017, to isolate Brent Alpha and Brent Bravo from the Far North Liquids and Associated Gas Systems (FLAGS). As part of this project Shell UK also needed to reconfigure the pipeline network to ensure the continued export of gas through the Western Leg Gas Pipeline (WLGP), the Northern Leg Gas Pipeline (NLGP) and the FLAGS export routes. The Brent Bypass Project was executed in two phases, and was completed in February 2019.

UKCS – OTHER DECOMMISSIONING ACTIVITY

In 2019 there was an increase in decommissioning activities for Shell UK in the Central North Sea (CNS).

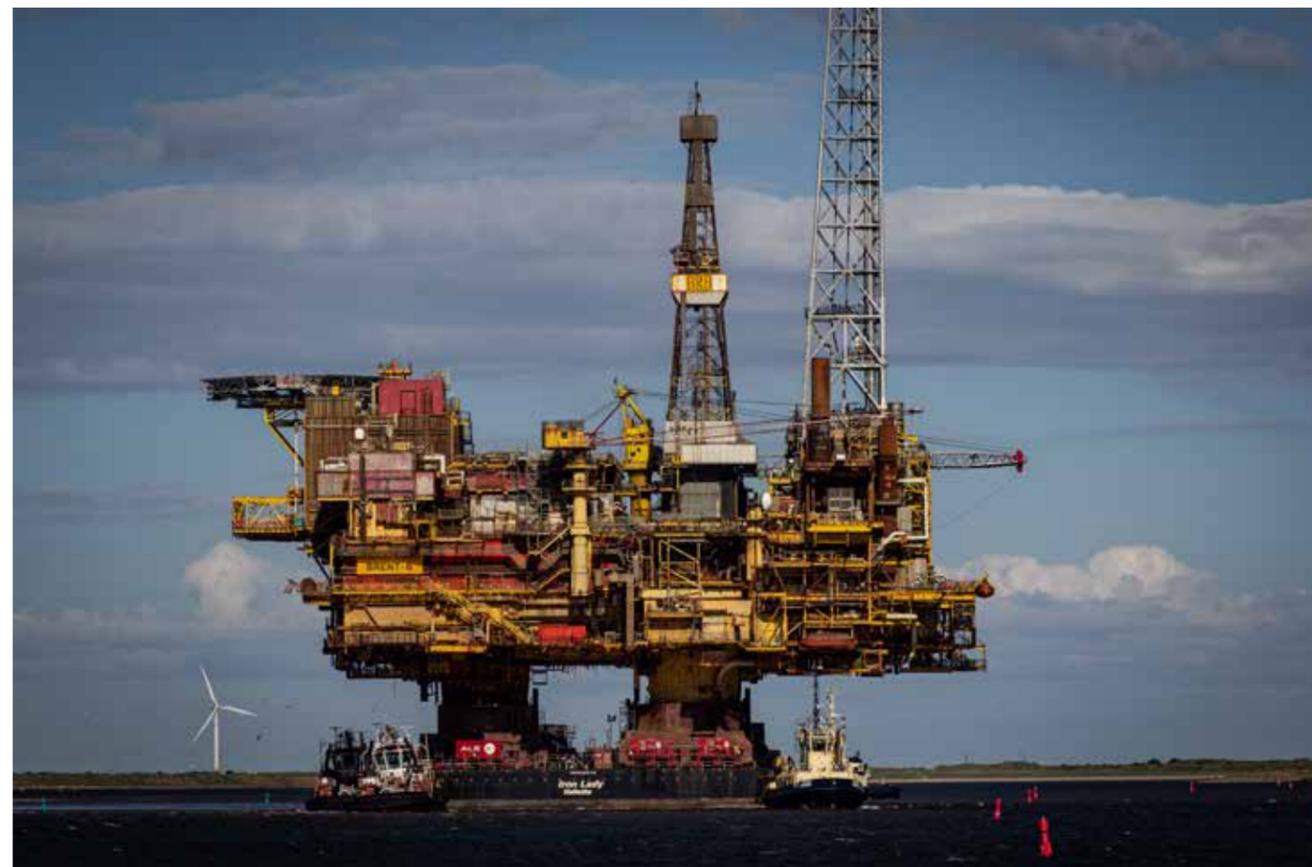
Curlew Field

The Curlew Field is located approximately 210 kilometres east of the Aberdeenshire coastline, and 55 kilometres west of the UK/Norway median line, in a water depth of 93 metres. The facility consists of a central processing Floating Production, Storage and Offloading (FPSO) vessel, with three subsea field tie-backs, and is connected into the Fulmar pipeline for gas export to the St Fergus onshore facility.

A draft Decommissioning Programme, which included the Environmental Statement in support of the programme, was submitted to OPRED for the Curlew Field in June 2018, and the 30-day Public Consultation closed July 18, 2018. The DP was approved by OPRED in March 2019. Cessation of Production (CoP) was agreed for the end of March 2019.

In 2019 decommissioning operations were performed on five Curlew wells to plug them and make them safe with one further well currently suspended and scheduled to be plugged and made safe. The Curlew FPSO was towed to Forth Ports' Dundee facility for cleaning in June 2019.

Shell UK is currently reviewing various options, where dismantling, cleaning and recycling the vessel can all take place at the same location. It is anticipated that over 97% of the materials brought to shore will be re-used or recycled.



Goldeneye Field

Goldeneye is located in the Central North Sea, in the UK Continental Shelf, approximately 100 kilometres north east of the Aberdeenshire coast, and was operational as a gas producing field since 2004. It is a wellhead platform, with a 1,400 tonnes topside, five platform wells in a water depth of 120 metres, with a direct tie-back to the St Fergus onshore facility. Cessation of production was granted in March 2011.

The platform had been preserved as a Normally Unattended Installation (NUI), and the status changed in 2018 to a Permanently Unattended Installation (PUI). The five wells were successfully plugged and made safe in 2018, a draft Decommissioning Programme was submitted to OPRED at the start of November 2018, and the 30-day Public Consultation closed on December 5, 2018.

Following the Public Consultation, Shell UK entered discussions with OPRED and Carbon Capture, Utilisation and Storage (CCUS) stakeholders regarding the potential future re-use of both the Goldeneye and Atlantic and Cromarty pipelines. The development of UK policy on the re-use of oil and gas infrastructure for CCUS, including identification of infrastructure with recognised potential for re-use, is ongoing.

With the agreement of OPRED and the CCUS stakeholders, and to allow timely contracting for the removal of the Goldeneye topsides and jacket, Shell UK separated the previously submitted Decommissioning Programmes into two documents:

1. The Decommissioning Programme for the Goldeneye topsides, jacket, wells and subsea infrastructure up to but excluding the main pipeline tie-in flanges. This DP was approved in November 2019, and plans for the removal of the topsides, jacket and related subsea infrastructure are anticipated to be finalised in 2020. It is anticipated that over 97% of the materials brought to shore will be re-used or recycled.
2. In the event that re-use of the pipelines is not possible, a second DP describing the decommissioning solutions for the two Goldeneye pipelines (export and methanol line) from and including the tie-in flanges adjacent to the Goldeneye Platform to landfall adjacent to the St Fergus Gas Terminal will be submitted for approval at a later date.

Subsea assets

In 2019, there was significant progress with decommissioning preparatory work on a portfolio of Shell UK UKCS subsea assets including Heron, Gannet C, Kingfisher, Scoter and Merganser. This included developing a strategy for an integrated subsea decommissioning campaign. These installations are expected to be decommissioned in the next few years, subject to Regulatory approvals.



CONTACT US

This report summarises our environmental performance in relation to our HSSE & SP policy, goals and objectives in Shell U.K. Limited's upstream operations and activities in 2019.

This report is updated and published annually on our corporate website at www.shell.co.uk

For further information, please contact the Shell office in Aberdeen on 01224 882000 and ask for the External Relations department:

Shell U.K. Limited
1, Altens Farm Road
Aberdeen AB12 3FY
01224 882000

APPENDIX 1

SUMMARY OF ENVIRONMENTAL DATA (2015 - 2019)

	2015	2016	2017	2018	2019
Greenhouse Gases (GHG) (tonnes CO2 equivalent)	2,593,723	2,743,723	2,571,161	2,227,523	2,096,676
Oil to Sea (tonnes) (discharged in produced water)	235	202	213	242	244
Hazardous Waste Generated (tonnes)	14,792	27,708	22,601	22,909	21,575
Non-Hazardous Waste Generated (tonnes)	33,704	17,088	14,281	27,160	17,476
Production Chemical Use (tonnes)	4,159	4,989	5,631	3,923	3,130
% Discharge	56	53	60	37	75
Wells Chemical Use (tonnes)	13,782	12,818	13,505	7,138	10,589
% Discharge	11	16	9	9	19
Unplanned Releases/Spills (tonnes)	64 (20)	59 (27)	53 (56)	42 (1.9)	31 (52.5)

Data may have changed from previous years' reports as revisions of the data can happen after the reports have been finalised.

The figures shown above relate to all offshore installations operated by Shell U.K. Limited, and third-party fields that produce into them, plus onshore plants and mobile rigs in the UK - all as reported by Shell in the UK Environmental Emissions Monitoring System (EEMS).

APPENDIX 2 WELL ACTIVITIES IN 2019

DRILLED

Installation / Rig	Shell Well Name	Well Start Date	BEIS Permit Reference
EnSCO 122	Galleon PN09	16/12/2018	DRA-585
Ocean Endeavor	DT04	19/05/2019	DRA-648
Ocean Endeavor	Rockhopper	07/06/2019	DRA-652
Ocean Endeavor	Pan-North	06/07/2019	DRA-647
Ocean Endeavor	C-Triassic	18/07/2019	DRA-644
Ocean Endeavor	PC04	25/07/2019	DRA-645
Ocean Endeavor	C-Updip	31/07/2019	DRA-643
Ocean Endeavor	*DT04 Revisit	07/08/2019	DRA-648
Ocean Endeavor	Pan-West	20/08/2019	DRA-646
Ocean Endeavor	*C-Updip Respod	28/08/2019	DRA-732
Ocean Endeavor	Tybalt	08/09/2019	DRA-649
Ocean Endeavor	Fram G5	29/10/2019	DRA-739
Ocean Endeavor	Fram G3	17/12/2019	DRA-716

APPENDIX 2 (continued) WELL ACTIVITIES IN 2019

ABANDONED

Installation / Rig	Shell Well Name	Well Start Date	BEIS Permit Reference
Brent Charlie	BC18	20/01/2019	WIA-780
Brent Charlie	BC22	10/02/2019	WIA-780
Brent Charlie	BC32	02/08/2019	WIA-780
Brent Charlie	BC33	25/08/2019	WIA-780
Brent Charlie	BC27	21/09/2019	WIA-780
Brent Charlie	BC21	02/11/2019	WIA-780
Awilco Wilphoenix	Gannet C A303	14/04/2019	WIA-783
Awilco Wilphoenix	Gannet C A301B	25/04/2019	WIA-783
Awilco Wilphoenix	GANNET C A101	10/05/2019	WIA-783
Awilco Wilphoenix	GANNET C A102	17/05/2019	WIA-783
Awilco Wilphoenix	GANNET C A103	24/05/2019	WIA-783
Awilco Wilphoenix	GANNET C A403	02/06/2019	WIA-783
Awilco Wilphoenix	GANNET C A401	04/06/2019	WIA-783
Awilco Wilphoenix	HERON H1	25/06/2019	WIA-883
Awilco Wilphoenix	HERON H3	27/06/2019	WIA-883
Awilco Wilphoenix	HERON H4	27/06/2019	WIA-883
Awilco Wilphoenix	HERON H2	29/07/2019	WIA-883
Awilco Wilphoenix	SKUA S01	14/10/2019	WIA-884
Awilco Wilphoenix	CURLEW C P1	07/11/2019	WIA-932
Awilco Wilphoenix	CURLEW B P1L	18/11/2019	WIA-933

APPENDIX 3 ABBREVIATIONS AND TERMINOLOGY

BEIS	Department of Business, Energy and Industrial Strategy
CCUS	Carbon capture, utilisation and storage
CNS	Central North Sea
CO ₂ e	Carbon dioxide equivalent is a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO ₂ e signifies the amount of CO ₂ which would have a climate change global warming impact
CoP	Cessation of Production
DP	Decommissioning Programme
EA	Environment Agency
EEMS	Environmental Emissions Monitoring System
EIA	Environmental Impact Assessment
ESOS	Energy Savings Opportunity Scheme
FEP	Fife Ethylene Plant
FLAGS	Far Northern Liquids and Associated Gas System
FNGL	Fife Natural Gas Liquids plant
FPSO	Floating Production Storage and Offloading vessel
GBS	Gravity Based Structure
GHG	Greenhouse gases (mainly carbon dioxide, methane, nitrous oxide and HFC's)
HSSE & SP	Health, Safety, Security, Environment and Social Performance
INSITE	Influence of man-made Structures In the Eco-system
LP	Low Pressure
NGL	Natural Gas Liquids
NLGP	Northern Leg Gas Pipeline
NUI	Normally Unattended Installation
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning (a department of BEIS)
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic. In 1998 this replaced the Oslo Convention (for the Prevention of Marine Pollution by Dumping from Ships and Aircraft) and the Paris Convention (for the Prevention of Marine Pollution from Land-Based Sources).
PLONOR	Poses Little Or No Risk (to the environment)
PON1	Petroleum Operations Notice type 1. OPRED requires Operators to report any oil or chemical spills, sheens, or excessive discharges to their Offshore Inspectorate using a PON1 notification form
ppm	Parts Per Million
PUI	Permanently Unattended Installation
SEAL	Shearwater-Elgin Area Line
SEPA	Scottish Environmental Protection Agency
UKCS	United Kingdom Continental Shelf
WLGP	Western Leg Gas Pipeline

APPENDIX 4 ISO 14001-2015 Certificate - 2020-2022

BUREAU VERITAS
Certification

Shell UK Limited

1 Altens Farm Road, Aberdeen AB12 3FY

This is a multi-site certificate; additional site(s) are listed below

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 14001:2015

The exploration, construction, drilling, production, processing and storage of oil, natural gas and condensate and decommissioning under the control of Shell U.K. Limited, which includes:

- Offshore installations: Brent Alpha, Brent Bravo, Brent Charlie, Brent Delta, Shearwater, Gannet, Nelson, Curlew, Pierce, Goldeneye, Leman, Sole Pit Clipper and the Normally Unmanned Installations located in the Southern North Sea (NUI)
- Onshore locations: St Fergus Gas Plant, Mossmorran Gas Plant, Braefoot Bay Offloading Terminal and Bacton Gas Terminal
- Wells, pipelines and subsea infrastructure

Including the associated support and corporate functions at Aberdeen Tullos offices (Headquarter, 1 Altens Farm Road, Aberdeen, AB12 3FY) and Great Yarmouth offices (Norfolk, NR31 0ZS)

Original cycle start date: 30-11-2007

Re Certification Audit date: 24-10-2019
Re Certification cycle start date: 05-01-2020

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: **04 January 2023**

Certificate No 19LDR1008 Version: 01 Revision date: 20/12/2019


Ioannis CALOGERAS
UK Marine Chief Executive


UKAS
MANAGEMENT SYSTEMS
0008

Certification body address: 5th Floor, 66 Prescot Street, London E1 8HG, United Kingdom
Local office: Keel House Newcastle NE34 9PY

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.
To check this certificate validity please call: +44 (0) 1914278170

CAUTIONARY STATEMENT

The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate legal entities. In this report "Shell group" and "Royal Dutch Shell" are sometimes used for convenience where references are made to Royal Dutch Shell plc and its subsidiaries in general. In this report all references to "Shell" refers specifically to Shell UK Upstream business. Likewise, the words, "we", "us" and "our" are also used to refer to Shell UK Upstream business in general or to those who work for them. These terms are also used where no useful purpose is served by identifying the particular entity or entities. "Subsidiaries", "Shell subsidiaries" and "Shell companies" as used in this report refer to entities over which Royal Dutch Shell plc either directly or indirectly has control. Entities and unincorporated arrangements over which Royal Dutch Shell has joint control are generally referred to as "joint ventures" and "joint operations" respectively. Entities over which Royal Dutch Shell has significant influence but neither control nor joint control are referred to as "associates". The term "Shell interest" is used for convenience to indicate the direct and/or indirect ownership interest held by Royal Dutch Shell in an entity or unincorporated joint arrangement after exclusion of all third-party interest.

This report contains data and analysis from Shell's Sky scenario. Unlike Shell's previously published Mountains and Oceans exploratory scenarios, the Sky scenario is based on the assumption that society reaches the Paris Agreement's goal of holding the rise in global average temperatures this century to well below two degrees Celsius (2°C) above pre-industrial levels. Unlike Shell's Mountains and Oceans scenarios, which unfolded in an open-ended way based upon plausible assumptions and quantifications, the Sky scenario was specifically designed to reach the Paris Agreement's goal in a technically possible manner. These scenarios are a part of an ongoing process used in Shell for over 40 years to challenge executives' perspectives on the future business environment. They are designed to stretch management to consider even events that may only be remotely possible. Scenarios, therefore, are not intended to be predictions of likely future events or outcomes.

Additionally, it is important to note that as of 1 June 2020, Shell's operating plans and budgets do not reflect Shell's Net-Zero Emissions ambition. Shell's aim is that, in the future, its operating plans and budgets will change to reflect this movement towards its new Net-Zero Emissions ambition. However, these plans and budgets need to be in step with the movement towards a Net-Zero Emissions economy within society and among Shell's customers.

Also, in this report, we may refer to Shell's "Net Carbon Footprint", which includes Shell's carbon emissions from the production of our energy products, our suppliers' carbon emissions in supplying energy for that production and our customers' carbon emissions associated with their use of the energy products we sell. Shell only controls its own emissions. The use of the term Shell's "Net Carbon Footprint" is for convenience only and not intended to suggest these emissions are those of Shell or its subsidiaries.

This report contains forward-looking statements concerning the financial condition, results of operations and businesses of Royal Dutch Shell. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among other things, statements concerning the potential exposure of Royal Dutch Shell to market risks and statements expressing management's expectations, beliefs, estimates, forecasts, projections and assumptions. These forward-looking statements are identified by their use of terms and phrases such as "aim", "ambition", "anticipate", "believe", "could", "estimate", "expect", "goals", "intend", "may", "objectives", "outlook", "plan", "probably", "project", "risks", "schedule", "seek", "should", "target", "will" and similar terms and phrases. There are a number of factors that could affect the future operations of Royal Dutch Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this report, including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for Royal Dutch Shell's products; (c) currency fluctuations; (d) drilling and production results; (e) reserves estimates; (f) loss of market share and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions; (j) legislative, fiscal and regulatory developments including regulatory measures addressing climate change; (k) economic and financial market conditions in various countries and regions; (l) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, delays or advancements in the approval of projects and delays in the reimbursement for shared costs; (m) risks associated with the impact of pandemics, such as the COVID-19 (coronavirus) outbreak; and (n) changes in trading conditions. No assurance is provided that future dividend payments will match or exceed previous dividend payments. All forward-looking statements contained in this report are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward-looking statements. Additional risk factors that may affect future results are contained in Royal Dutch Shell's Annual Report and Accounts for the year ended December 31, 2019 and also Royal Dutch Shell's Form 20-F for the year ended December 31, 2019 (each available at www.shell.com/investor and www.sec.gov). These risk factors also expressly qualify all forward looking statements contained in this report and should be considered by the reader. Each forward-looking statement speaks only as of the date of this report, June 1, 2020. Neither Royal Dutch Shell plc nor

CAUTIONARY STATEMENT (continued)

any of its subsidiaries undertake any obligation to publicly update or revise any forward-looking statement as a result of new information, future events or other information. In light of these risks, results could differ materially from those stated, implied or inferred from the forward-looking statements contained in this report.

We may have used certain terms, such as resources, in this report that the United States Securities and Exchange Commission (SEC) strictly prohibits us from including in our filings with the SEC. Investors are urged to consider closely the disclosure in our Form 20-F, File No 1-32575, available on the SEC website www.sec.gov.

