2021

ANNUAL ENVIRONMENTAL STATEMENT

A MESSAGE FROM SIMON RODDY

Senior Vice President Shell UK Upstream

The safety and environmental performance of Shell's upstream business in the UK is a responsibility I take very seriously, ensuring that we effectively manage and mitigate the environmental impacts associated with our operations in the UK.

The annual environmental statement is a visible and transparent record of the progress we are making. I am pleased to share that we are making good progress across the environmental metrics documented in this statement, with year on year reductions in Greenhouse Gas emissions and volume of Oil in Produced Water and hazardous waste.

The industry's commitment to reducing Greenhouse Gas emissions from operations is captured in the North Sea Transition Deal, which targets a basin-wide 50% reduction in emissions by 2030 versus a baseline of 2018. Against this target we have reduced our emissions by over 25% since 2018, a 15% reduction year on year, which is also contributing to Shell's new absolute emissions reduction targets.

There continues to be public scrutiny on the role of oil and gas in the UK's energy system. I welcome this scrutiny; we operate in one of the most highly regulated basins in the world. I am also proud that as an industry we have committed through the North Sea Transition Deal which details the commitments by industry and Government required for the UK industry to become a net zero basin by 2050, one of the first countries in the world to have such a commitment.

Thanks for taking the time to read this report.

CONTENTS

This report has been produced in order to meet the requirements of OSPAR Recommendation 2003/5, as advised by the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED).

Where the words "Shell UK", "we", "us" and "our" are used in this report they refer specifically to Shell U.K. Limited's business and those who work for it. "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 Shell plc directly and indirectly owns investments are separate legal entities.

In this report, the expressions "Shell", "Group" and "Shell Group" are sometimes used for convenience where references are made to Shell plc and its subsidiaries in general.

INTRODUCTION

This is the 2021 annual environmental statement for Shell U.K. Limited Upstream (Shell UK). The statement summarises the environmental performance of our upstream offshore and onshore facilities operated by Shell UK in 2021.

The data used in the statement has been previously reported to the relevant UK environmental regulators. The offshore facilities reporting is done via the Environmental Emissions Monitoring System (EEMS) to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED). For onshore facilities in Scotland reporting is via the Scottish Pollutant Release Inventory to the Scottish Environment Protection Agency (SEPA), and, in England, via the Pollution Inventory to the Environment Agency (EA).

Shell UK Upstream has been producing oil and gas from the North Sea for over 50 years, providing the UK with reliable and secure energy. We currently provide approximately 10% of the UK's total oil and gas supply as well as a range of fuels, chemicals and services, and have a substantial presence on the UK Continental Shelf (UKCS). Offshore, we have interests in over 50 fields, 25 platforms and one Floating Production and Storage Offshore (FPSO) vessel which is operated on our behalf. Onshore, we operate two gas plants (located at Bacton and St Fergus), and one liquids process plant at Mossmorran. These, in combination with the associated pipeline systems, are responsible for delivering more than 20% of the UK's gas supply.

TERMINOLOGY USED IN THIS STATEMENT

""Installations" refers to:

- Shell UK operated oil and gas offshore production platforms;
- 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.

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

A number of other services are also 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 real estate management.

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

David Bunch
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.

WHAT WE DO

Installations operated by Shell UK in 2021

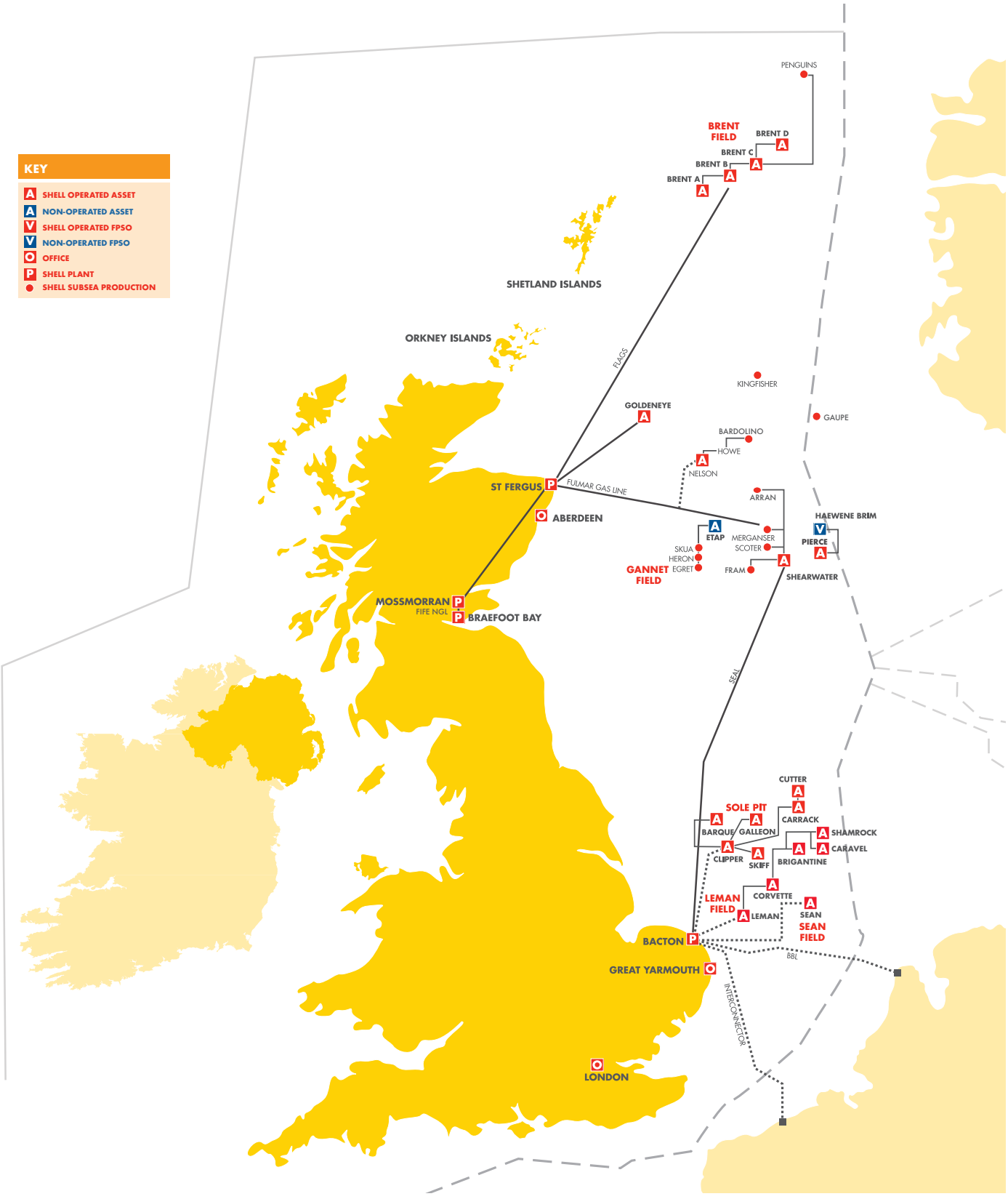
OFFSHORE

- **BRENT:** the Brent Field in the Northern North Sea consisted of four installations, Alpha, Bravo, Charlie and Delta. Brent Bravo and Delta ceased production and topside dismantlement has been completed. Brent Alpha's topside and upper jacket have been removed and transported to shore for dismantling. Brent Charlie ceased production on 31 March 2021, marking the end of 45 years of production in the Brent field. The Brent Charlie decommissioning is ongoing.
- **CLIPPER:** six fixed bridge linked platforms in the Sole Pit field located in the Southern North Sea. The Clipper installation processes and produces 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.
- **GANNET:** a fixed drilling and production platform in the Central North Sea which processes and produces oil and gas from the Gannet A, B, C, D, F and G fields via subsea wellhead tie-backs.
- **GOLDENEYE:** following the cessation of production in 2011 the topside and jacket of the Goldeneye platform in the Central North Sea was removed in September 2021 and transported to shore in Norway for dismantling and recycling. The Goldeneye marine pipeline to St Fergus will remain in place for potential reuse for the transportation of CO2 as part of the Acorn carbon capture and storage project.
- **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.
- **NELSON:** a fixed drilling and production platform in the Central North Sea which processes and produces oil and gas from a cluster of subsea satellite wells from the Nelson field and the Howe and Bardolino fields via subsea tie-backs.
- **PIERCE:** an FPSO (the Haewene Brim) producing, storing and offloading crude oil from the Pierce North and South fields in the Central North Sea. Shell is a License holder for the Pierce Field and operates the wells and pipelines. The responsibility for the management of the Haewene Brim and the installation operator is the Pierce Production Company Limited. (Pierce Production Company Limited is a wholly owned subsidiary of Bluewater Services UK Ltd – referred to as Bluewater in this document).
- **SHEARWATER:** a high pressure, high temperature (HPHT) gas/condensate reservoir produced via 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) is a pipeline that transports sales quality gas from the Elgin- Franklin platforms to the Shell UK operated Bacton Gas Plant on the Norfolk coast. Shearwater was disconnected from this line in August 2021 and now exports via the Fulmar Gas Line to St Fergus.
- **IN ADDITION:** a number of mobile rigs/vessels were contracted to Shell UK in 2021 to drill new wells, conduct well interventions and well plug and abandonment operations. These included the Ocean Endeavor MODU, the Valaris122 mobile jack-up rig, the Light Well Intervention Vessel and the Island Constructor. In addition, the DeepOcean vessel Edda Freya was utilised to conduct environmental plug campaigns.

ONSHORE

- **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 (Balgzand Bacton line) and Sean pipelines. Processed gas is transferred to the national grid via the adjacent Transco transmission facilities.
- **ST FERGUS GAS PLANT:** a gas reception and processing plant near Peterhead in North East Scotland that receives gas from multiple North Sea fields via the Fulmar Gas pipeline and from Norway via the Far North Liquids and Associated Gas System (FLAGS) 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 the 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 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.
- For more information on Shell UK, visit our website at **www.shell.co.uk/about-us/what-we-do**

SHELL UPSTREAM OPERATED AND NON-OPERATED ACTIVITIES IN THE UK



RESPECTING NATURE

Protecting the environment has been an integral part of the way we do business for many years as set out in the Shell General Business Principles and Shell Commitment and Policy on Health, Security, Safety, Environment and Social Performance.

In 2021, as part of our Powering Progress strategy, we launched Respecting Nature, which sets out our environmental ambitions around biodiversity, water, circular economy and waste, and air quality. Our Respecting Nature commitments step up our approach to managing the impacts of our operations on the environment. They also aim to extend our approach with our supply chain, for example, with commitments around plastics and circular economy.

Shell's commitment and policy on Health, Safety, Security, Environment and Social Performance (HSSE & SP) is included on page 5. The processes and procedures we follow, and resources deployed, are designed to comply with the Shell Group's global standards and UK environmental regulations. Our environmental management system, which is integrated into the Upstream UK HSSE Management System, is certified to ISO 14001:2015, the current international environmental management standard (see Appendix 4). The management system covers all of our upstream activities and locations involved in exploration and production. It provides a structured approach to continuously improving and managing our environmental performance and has the following objectives:

- The identification of environmental risk and management of potential impacts throughout the life cycle of our activities;
- Preparing for future challenges and opportunities; Regulatory compliance;
- Using materials and energy efficiently; Monitoring performance and setting targets for improvement;
- Effective engagement with our stakeholders;
- Playing a leading role in promoting good practice in our industry.

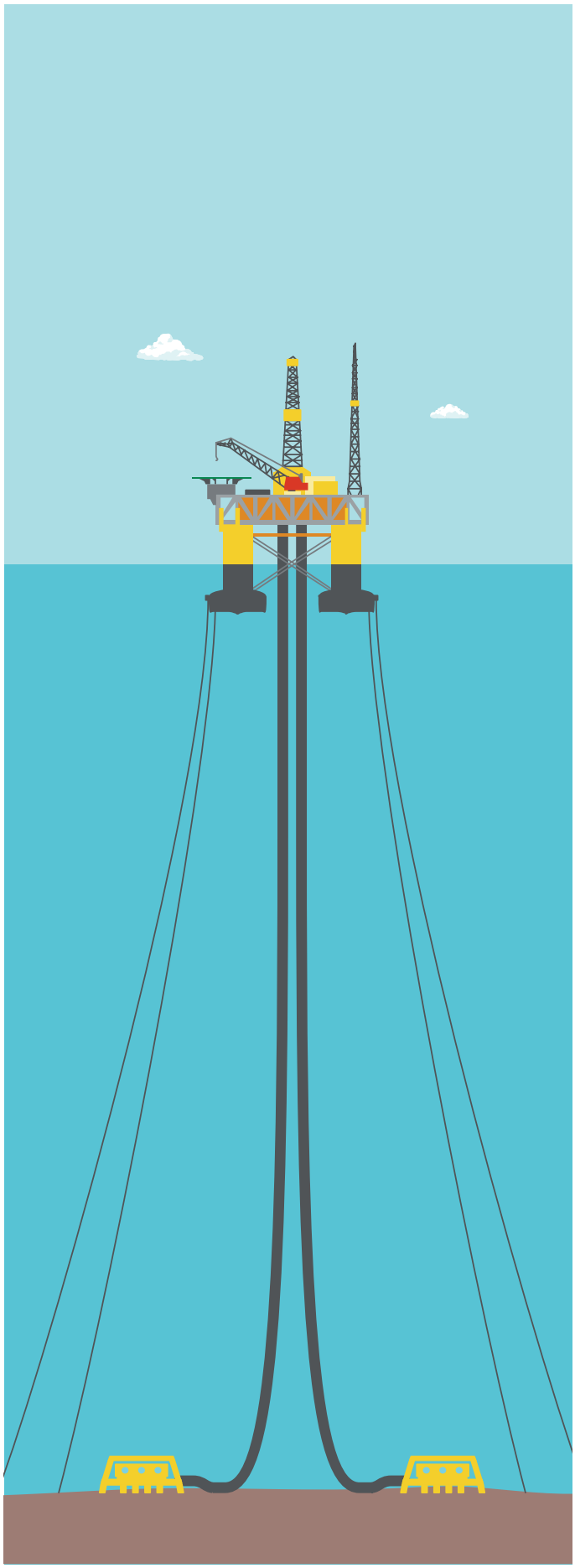
Shell supports the goals of the Paris Agreement and the UK Government's target of net zero emissions by 2050 (2045 in Scotland). At the beginning of 2020, Shell UK set up a dedicated energy transition team in support of our upstream business to seek new opportunities and investments in energy transition in support of our net- zero target. During 2021, this team continued to progress our decarbonisation initiatives relating to carbon capture utilisation and storage (CCUS), hydrogen production and electrification amongst other opportunities as well as supporting our ongoing work to reduce the emissions from our existing operations.

Other key environmental focus areas in 2021 included:

- Developing and updating our decarbonisation strategy, underpinned by a delivery programme, aimed at meeting Shell global targets and the North Sea Transition Deal's (NSTD) basin- wide targets for operational emission reductions up to 2030.
- Identifying and evaluating asset emissions reductions, both short and long term, covering energy use optimisation, operating procedures and minor and major asset modifications relating to power supply and flare reduction.
- Focusing on operational excellence and minimising outages to improve emissions and GHG intensity. Planning for execution of mature abatement opportunities and running feasibility studies on future emissions reductions opportunities.
- Supporting the assessment of environmental risks and impacts related to the Acorn carbon capture and storage project and other potential energy transition projects.
- Managing methane emissions and planning in alignment with the Oil and Gas Methane Partnership (OGMP) 2.0.
- Finalising our environmental impact assessment programme for the Jackdaw project ahead of the final investment decision.
- Supporting preparations for the decommissioning programmes including the Brent field, Goldeneye, Scoter/Merganser, Leman Foxtrot and Golf and subsea infrastructures.
- Planning of operational phase commitments for the Fram Environmental Statement.
- Commencing a flaring and venting study to establish a management plan to help reduce flaring and venting at our facilities.
- Maintaining the ISO 14001:2015 environmental management system.

ENVIRONMENTAL IMPROVEMENT PROGRAMMES AND ACHIEVEMENTS IN 2021:

- Set up of a dedicated Shell Operated asset carbon abatement team and dedicated budget allocation to support the operated hubs with brownfield abatement opportunities.
- Establishment of the asset carbon abatement projects funnel to align with Shell's emission reduction ambition.
- Creation of a Greenhouse Gas Reduction Action Plan to help support the North Sea Transition Authority (NSTA) Net Zero Stewardship Expectation 11 and Shell's ambition to be a net-zero emissions energy business by 2050 or sooner.
- Completion of a methane level 4 source-level quantification methodologies pilot program in December 2021 at the Nelson platform to support OGMP 2.0. The testing and measurement conducted provided the data to directly quantify methane emissions from fugitive leak and vent sources and to develop source-level emissions factors.
- Completion of brownfield abatement projects at Gannet, Pierce and SolePit Clipper assets achieving savings of around 66kt CO2e.
- Completion of the transfer of attic oil from 13 of the Brent Delta cells connected to the concrete gravity-based legs into the receiver cell ready for future removal.
- Submission of reports identifying risk reduction measures for Gannet and Nelson under the UK Risk Based Approach for produced water implementation phase.
- Completion of a nesting birds assessment at the Goldeneye platform prior to lift and removal of the topside and jacket.
- Dismantlement and recycling of the Curlew FPSO topsides and at the dismantling yard in Norway.
- Completion of Goldeneye topside demolition and Goldeneye jacket dismantlement under way with completion in 2022.
- Completion of a survey for invasive species in the Fjord of the dismantlement yard in Norway asplanned risk management, following the arrival of the Curlew FPSO.
- Cessation of production of the Brent Charlie on 31 March 2021, switching to diesel for power supply.



ENERGY TRANSITION

NET ZERO AMBITION

Shell aims to be net zero on emissions generated by our own operations by 2050 or sooner, in step with society. Also committed to the North Sea Transition Deal (NSTD) targets, Shell UK's ambition is to achieve a 50% absolute emissions reduction by 2030 relative to the 2018 baseline.

We are making significant progress in a long-term plan. In October 2021 Shell announced a new target to reduce absolute emissions from our operations by 50% by 2030, compared with 2016 on a net basis. This new target covers all Scope 1 and 2 emissions under Shell's operational control and complements our existing carbon-intensity targets. By the end of 2021, we had achieved a reduction of 18%. We achieved our short-term target to reduce the net carbon intensity of the energy products we sell by 2-3% by the end of 2021, also compared with 2016. Shell UK is aiming to meet both Shell's target on a Group level and NSTD targets, via collaboration across supply chains, and, where appropriate, with the UK Government and the North Sea Transition Authority (NSTA).

In line with the NSTA Net Zero Stewardship Expectation 11, Shell UK has developed Greenhouse Gas Reduction Action Plans, one for central north sea and one for southern north sea assets, which provide an overview of the GHG emissions from the Shell Operated Upstream facilities, their sources, and forecasts under a set of assumptions. These plans detail the near-term brownfield abatement opportunities that Shell UK plans and intends to implement by 2025 in line with the basin wide 10% reduction target.

Brownfield abatement projects focused on five key themes (rotating equipment, power management, vent and flare systems, energy saving maintenance and fuel gas saving opportunities), together with other major decarbonisation projects, will aim to form important building blocks to support Shell UK Upstream to achieve its NSTD 2027 and 2030 targets. The plans will be reviewed and updated on an annual basis in line with the business planning cycle and joint venture partners' approval.

GHG management is embedded in Shell's annual business planning process. Abatement opportunities are typically identified by the operating facilities and the Shell UK Energy Transition team. Feasible abatement opportunities are identified, screened, and prioritised to fill the abatement project funnel. Prioritised projects are put through a scalable maturation process to be fully defined and prepared for execution.

Throughout 2021 the Shell UK Energy Transition team developed a coherent decarbonisation strategy and roadmap in support of the Upstream business in the UK. The road map has been developed with the first critical milestone aiming to achieve 10% emission reduction by 2025. To achieve this near-term target, a dedicated asset Carbon Abatement team was set up in 2021 in support of the upstream operated business.

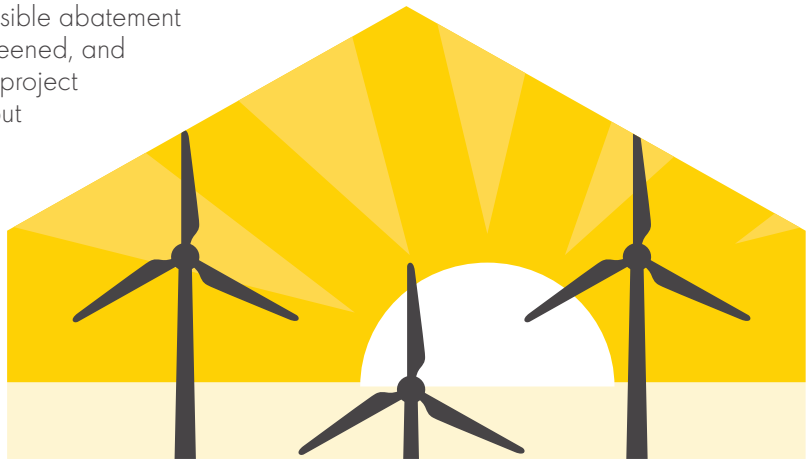
Across the Carbon Abatement and Energy Transition teams, brownfield abatement projects, together with other major projects, are being matured to close the gap to the 2030 50% reduction target. Further work across the business is being done to identify what is needed to close the gap to the net zero emissions commitment in 2050.

Contributors to Shell UK emissions reductions to date include but are not limited to:

- Efforts to reduce plant trips through reliability and availability improvements
- Process system tuning leading to reduced flaring
- Flare efficiency improvements resulting in a reduced number of unlit flare events
- Application of Leak Detection and Restoration (LDAR) programme
- Energy saving maintenance work; and
- Production decline

METHANE

In November 2020 Shell publicly announced its commitment to attaining Gold Standard according to the Oil and Gas Methane Partnership (OGMP). In December 2021, Shell UK successfully carried out a pilot on the Nelson platform to test Level 4 source-level quantification methodologies. The testing and measurement conducted provided the data to directly quantify methane emissions from fugitive leak and vent sources and to develop source-level emissions factors. In 2022 Shell UK plans to conduct field measurement aiming to reach Level 4 Gold Standard in line with Shell commitments.



ENVIRONMENTAL PERFORMANCE

GREENHOUSE GAS EMISSIONS

We monitor our greenhouse gas (GHG) emissions and convert the data into carbon dioxide equivalents (CO_2e). We use the data to manage the emissions from our own operations and illustrate our performance and progress against targets.

The sources of direct GHG emissions from our activities in Upstream Shell UK in 2021 are shown in ***Figure 1***. The principal contributor to the direct GHG emissions from our operations are the combustion emissions generated from the burning of fuel gas in turbines for power generation and compression duty, and in facility boilers and heaters. In 2021, fuel gas combustion contributed 72% of the total GHG emissions. Other contributors to the total include emissions from flaring at our installations which contributed 12% and from venting which contributed 8%. Emissions from the combustion of diesel contributed 7% 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.

Combustion emissions from fuel gas, flaring and diesel use were reported under the UK Emissions Trading System following independent verification. All emissions from all sources are reported to OPRED for offshore facilities, SEPA for onshore plants in Scotland and the EA for onshore plants in England.

The total scope 1 direct GHG emissions from Shell UK facilities in 2021 was 1.6 million tonnes of CO_2e, a reduction of almost 300,000 tonnes or 15% of the total emitted in 2020 (1.9 million tonnes CO_2e). Scope 2 emissions (indirect emissions from the generation of electricity supplied to our facilities) from Shell UK facilities have been eliminated since 2019 when we started to purchase our electricity from certified renewable resources. Emissions by source at each Shell UK facility are shown in ***Figure 2.***

Figure 1: GHG Emissions by source in 2021*

**(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)*

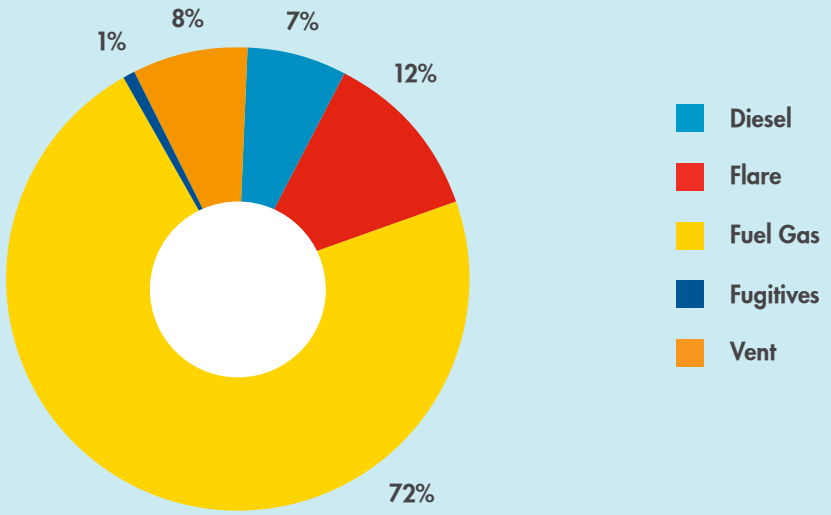
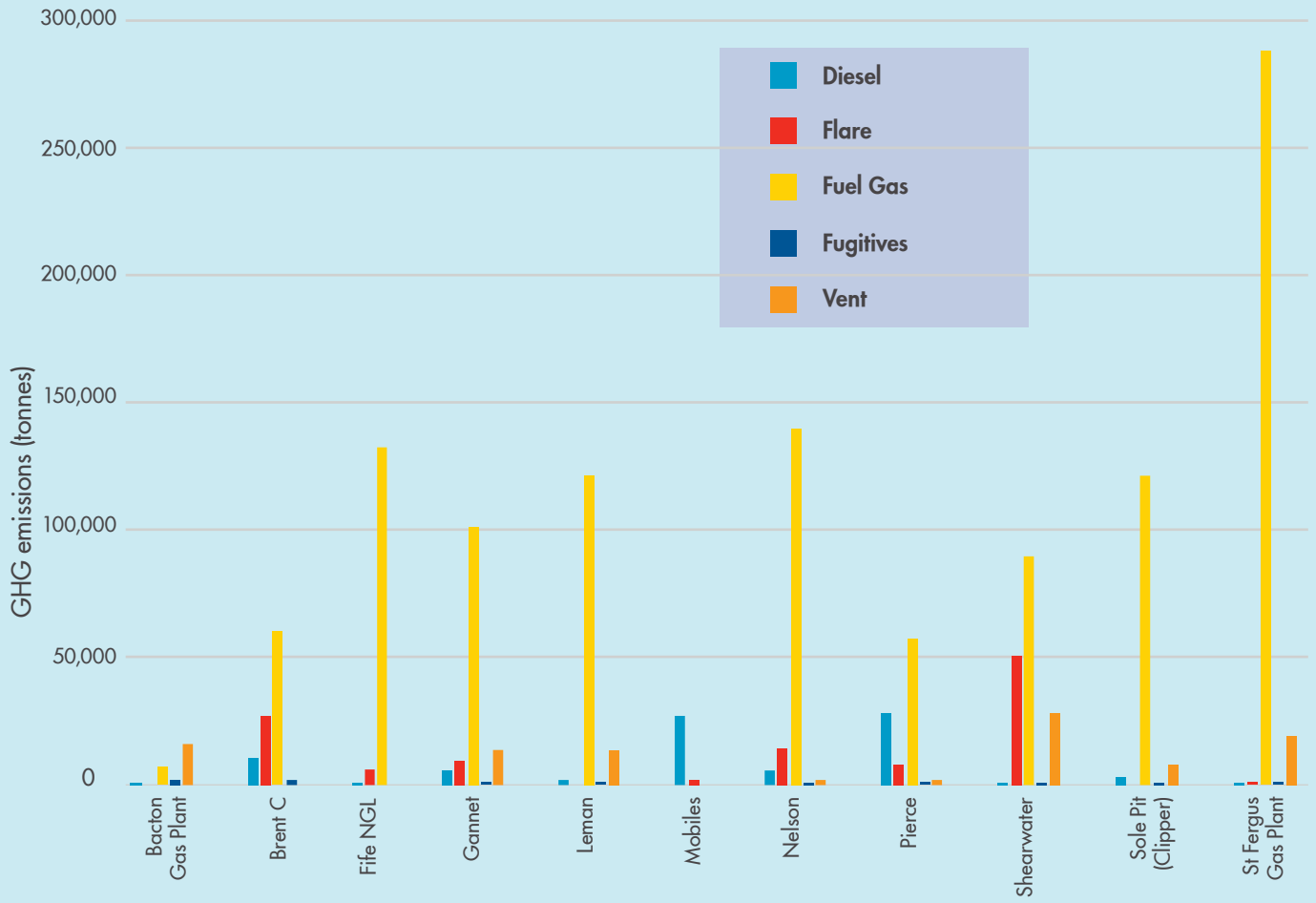


Figure 2: GHG emissions by source per facility in 2021 (tonnes CO_2e)

**(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)*



NOTE: GHG emissions for Pierce may be duplicated within the Bluewater annual environmental statement.

Key contributors to the reduction in GHG emissions in 2021 were as follows -

DIESEL

Less diesel was consumed in 2021 as the Curlew FPSO ceased operations and was towed off station in August 2020. The Pierce FPSO was offline in Q4 2021 as part of the Pierce Depressurisation Project. Shell UK has also had reduced vessels and rigs on hire in 2021 compared to 2020.

FLARE

Flaring emissions were reduced in 2021 compared with 2020. One of the main contributors was the Brent Charlie cessation of production on March 31 2021. In 2021 Shearwater saw a spike in flaring emissions due to an extended turnaround in the summer. Shearwater also had the start-up of some new fields which caused increased flaring whilst production stability was achieved.

FUEL GAS

Brent Charlie decommissioning, the Pierce FPSO being offline due to the Depressurisation project and the Shearwater turnaround also contributed to the reduction in fuel gas related emissions in 2021. SolePit Clipper halved its compressor usage as part of an abatement initiative, whilst also completing a turnaround in August 2021. Additionally, in May 2021 the Gannet platform implemented a compressor rewheel abatement project which further reduced Shell UK's total emissions associated with fuel gas combustion.

FUGITIVES

The fugitive emissions decreased due to the cessation of production of Brent Charlie and less f-gas related emissions compared with the 2020 performance.

VENT

Another abatement project executed at SolePit Clipper, installing an N2 vent purge in August 2020, contributed to the decrease to our venting emissions for 2021.

OIL IN PRODUCED WATER

Water produced with oil and gas offshore is separated from hydrocarbons during processing. The produced water is treated before discharge to the sea in accordance with the Offshore Petroleum Activities (Oil Pollution Prevention and Control) Regulations 2005 (as amended).

The amount of produced water and residual oil discharged with the produced water in 2021, from Shell UK operated installations, is shown in ***Figure 4.*** Details for the Pierce FPSO are included in Bluewater's Annual Environmental Statement as the Bluewater organisation Pierce Production Company Limited operates the Pierce FPSO on Shell's behalf.

The water treatment systems onboard Shell UK's offshore platforms are designed to handle the volumes and types of fluids expected in the field, although there are occasions where equipment can malfunction or treatment may be affected by changes in produced fluid content, for example, during the start-up of a well. On these occasions, oil in water levels may exceed limits for a short duration and can result in a non-compliance with permitted limits.

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) is reported to the regulator. Annual average concentrations of residual oil in the produced water discharges from each installation in 2021 are presented in ***Figure 5.*** The total amount of residual oil discharged was 231 tonnes, a decrease from 291 tonnes in 2020.

In 2021, we experienced difficulties with the produced water treatment system at the Leman installation. In January, Leman reduced the oil/water separation efficiency of the system which led to a non-compliance in the monthly average 30 ppm limit. In November and December, the monthly average 30 ppm limit was also exceeded due to well treatment and start up activities.

In January, February and September 2021, the monthly average of 30 ppm for Shearwater was exceeded due to well return flowback and biociding activities causing instability, process issues after restart and the start of the Arran well.

All other Shell UK facilities were in compliance with the 30ppm average oil in water discharge in 2021.

Figure 4: Total volume of produced water and mass of oil discharged to sea from each Shell UK operated offshore installation in 2021

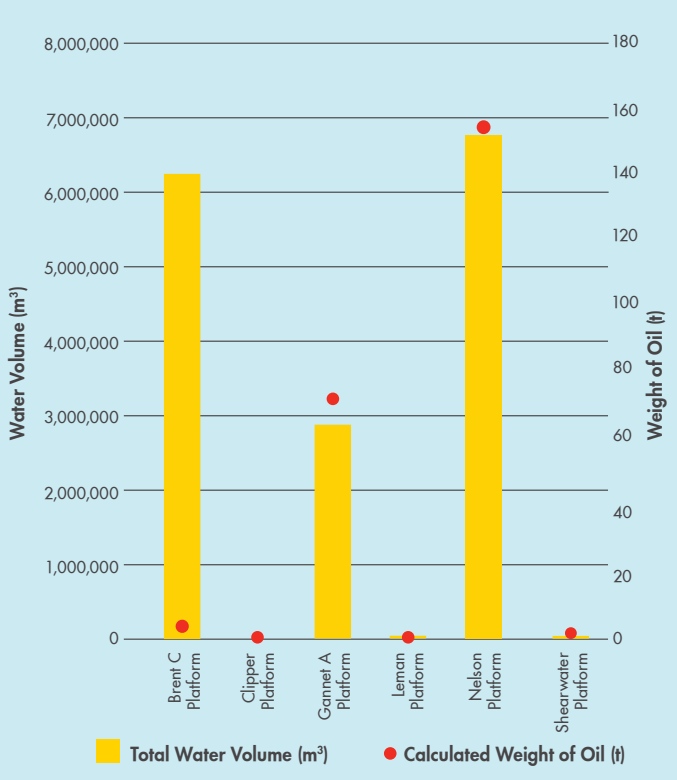
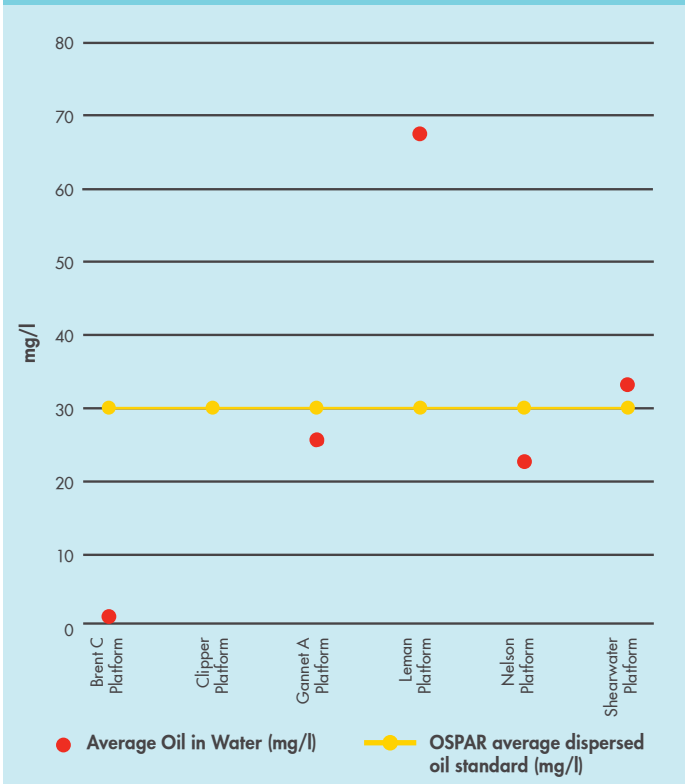


Figure 5: Annual average dispersed oil concentrations in produced water from Shell UK operated offshore installations in 2021



UNPLANNED RELEASES

Shell UK has a range of controls and procedures in place aimed at preventing the unplanned release of hydrocarbons or chemicals to the sea. Maintenance programmes are conducted to improve facility reliability and to ensure the integrity of equipment used in the production, processing or transfer of liquid materials to keep unplanned releases to a minimum. Barriers are installed around hydrocarbon processing, chemical skids and storage areas which act as secondary containment for any unplanned releases to help prevent any losses to the environment. Unplanned releases to sea can, however, still take place during the course of conducting operations and there can be varying reasons for these events, including operational upsets, minor equipment failures, human error, or because of unusual degradation of ageing infrastructure.

All unplanned releases are closely monitored and recorded internally regardless of volume and investigated. Releases that enter the sea are reported to the regulator at the time of the release using a Petroleum Operations Notice (PON1).

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***. Details of any unplanned releases from the Pierce FPSO installation are included in Bluewater's Annual Environmental Statement as the Bluewater organisation Pierce Production Company Limited operates the Pierce FPSO on Shell's behalf.

In 2021, a total of 44* unplanned releases of oil and chemicals from our operations were recorded and reported.

Of that total, 26 were oil related with a total mass of just under 3 tonnes and the remaining 18 were chemical releases which amounted to 17 tonnes. The total mass released to sea in 2021 (20 tonnes) was lower than in 2020 (35 tonnes).

Of the total unplanned releases recorded in 2021, 33 were individually less than 100 kg (<0.1 tonne), with 28 of these being releases at less than 10 kg (<0.01 tonne) each. A total of 11 releases were recorded at over 100 kg and of these, four were individually greater than 2 tonnes – further details are shown below:

- Plate pack failure caused a glycol release of 6 tonnes via the seawater system instead of produced water system. The release was rectified by replacing the plate packs
- Release of 4 tonnes of glycol through pressure relief pipework to closed drains system
- A leak of hydraulic fluid from a subsea safety valve package. Repair options are under evaluation. The potential cumulative losses at end of 2021 are estimated to be 2.5 tonnes
- Low daily rate condensate release from a well with a cumulative total of 2.5 tonnes at the end of 2021. Forward well intervention plan in development in consultation with the regulator

The above four spills amounted to a total of 15 tonnes which is almost 80% of the total volume of unplanned releases in 2021. At the time of publication, 6 of the 44* PON1s submitted in 2021 were still under review by the regulator. This may result in a future adjustment to our figures.

	2017	2018	2019	2020	2021
Number of oil & chemical spills (includes spills <100kg)	53	42	31	38	44
Mass of oil & chemical spills (tonnes)	56	2	52	35	20

Table 1: Number and mass of spills to sea (2017-2021)*

*The release events and volumes above are consistent with the BEIS website at time of publication. However, there were 3 additional unplanned releases of OSPAR PLONOR (posing little or no risk to environment) defined substances which have been reported to and are under review by BEIS, are not included in the totals given above and which are subject to ongoing investigations. The maximum volume of those releases is currently estimated at 860t. The release events and volumes will be included in the 2022 statement.

CHEMICAL MANAGEMENT

PRODUCTION CHEMICALS

The type and volume of production chemicals used in our operations varies across our facilities depending on the requirements. Production chemicals' 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 way chemicals are 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, their use and discharge are 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. Details of production chemical use and discharge at the Pierce FPSO are included in Bluewater's Annual Environmental Statement as the Bluewater organisation Pierce Production Company Limited operates the Pierce FPSO on Shell UK's behalf.

The data in *Table 2* shows that production chemical use in 2021 has increased compared to 2020. This recorded increase is related to a single chemical used in the Southern North Sea sector. The chemical usage on our assets in the central and northern North Sea reduced by around 500 tonnes for 2021. The percentage of production chemicals that have been discharged has decreased to 59% because they are more likely to enter the water phase and be released with the produced water stream. This is due to changes in chemical applications for operational reasons.

	2017	2018	2019	2020	2021
Production chemicals (Tonnes)	5,631	3,923	3,130	3,174	3,813
Estimated percent discharged	60	37	75	82	59

Table 2: Production chemicals use and estimated discharge (2017-2021)

Approximately 50% of the chemicals discharged 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.

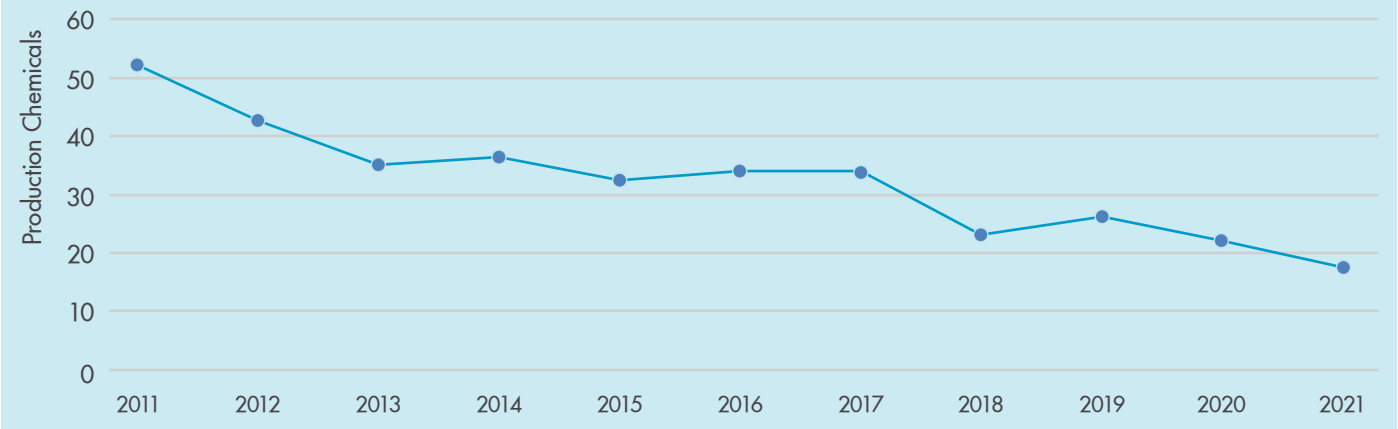
The regulator has highlighted certain chemicals to be phased out by means of substitution warnings (known as 'sub-warning chemicals'). Reducing the use of these chemicals can be challenging, especially for those that have been engineered for specific fields or applications. Shell UK has been working 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 technically viable alternatives. Their total removal remains technically challenging at present but we expect a reduction over time through a combination of factors:

- Replacement with alternative chemicals as they enter the market;
- Decommissioning of the installations where particular product is used;
- The reclassification of risks by the regulator. As new chemical data becomes available, the number of sub-warnings can increase or decrease as old substitution warnings are removed or new ones applied.

The use of chemicals with sub-warnings by Shell UK has declined as shown in *Figure 6* with 18 sub-warning chemicals being used across our operated sites in 2021.

Figure 6: Trend in Numbers of Production Chemicals used by Shell UK with Substitution Warnings (2011-2021)



WELLS CHEMICALS

In 2021 we used a total of 17,507 tonnes of chemicals in well activities as shown in ***Table 3***. Of this figure approximately 8% 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 and completed in 2021. Details on well operations can be seen in ***Appendix 2***.

The increase in chemical usage compared with 2020 levels was due to drilling on the Ocean Endeavor with several complicated open hole completions and the HTHP sequence on the Valaris 122.

The use and discharge from the two drilling rigs accounted for 94% of the total chemical use and 93% of the total discharge. The remainder of usage and discharge was split across well abandonment operations on the Brent Charlie platform and a number of well intervention activities across UK wells.

In 2021, approximately 2.25% of the total weight of well chemicals used was made up of chemicals which carry sub-warnings. The majority of the sub-warning chemicals discharged are from cementing operations. Therefore, this figure is expected to remain relatively stable while drilling and abandonment operations continue. The tonnage of sub rated chemicals used in 2021 was 395 tonnes. This is an increase of 18.5% from 2020 levels and Shell UK will continue efforts to phase out sub-warning chemicals.

	2017	2018	2019	2020	2021
Wells chemicals (tonnes)	13,505	7,138	10,589	12,223	17,507
Estimated percent discharged	9	9	19	12	8

Table 3: Wells chemicals use and discharge (2017-2021)

WASTE MANAGEMENT

In 2021, the volume of hazardous waste decreased by 48% compared to 2020. It 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. A reduction in overall activities combined with the decommissioning of assets have led to a reduced volume of hazardous waste generated in comparison to previous years.

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

Effective segregation of waste also allows for more environmentally acceptable routes of disposal. All waste from our offshore installations is shipped to shore from our offhore operations. We employ contractors who are involved with the checking, ensuring compliance with the regulations and for working with the operators on site, so that they understand the requirements for segregating waste 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 work to reduce waste volume at the source and minimise waste generated.

The overall waste mass for 2021 was lower than in 2020, primarily because of the reduced number of assets due to decommissioning and a reduction in drilling activity that generates hazardous waste. ***Table 4*** shows the total amount of hazardous and non-hazardous waste disposed over the last 5 years. Details of waste management at the Pierce FPSO in 2021 are included in Bluewater's Annual Environmental Statement as the Bluewater organisation Pierce Production Company Limited operate the Pierce FPSO on Shell's behalf.

Disposal options include waste to energy, discharge under consent, incineration and as the final option, landfill.

Figure 7 shows the ratio of hazardous to non-hazardous waste disposals by location in 2021. The largest producers of hazardous waste were mobile rigs due to the volume of wet bulk waste generated at these installations. The largest producer of non-hazardous waste was Bacton Gas Plant due to liquid waste.

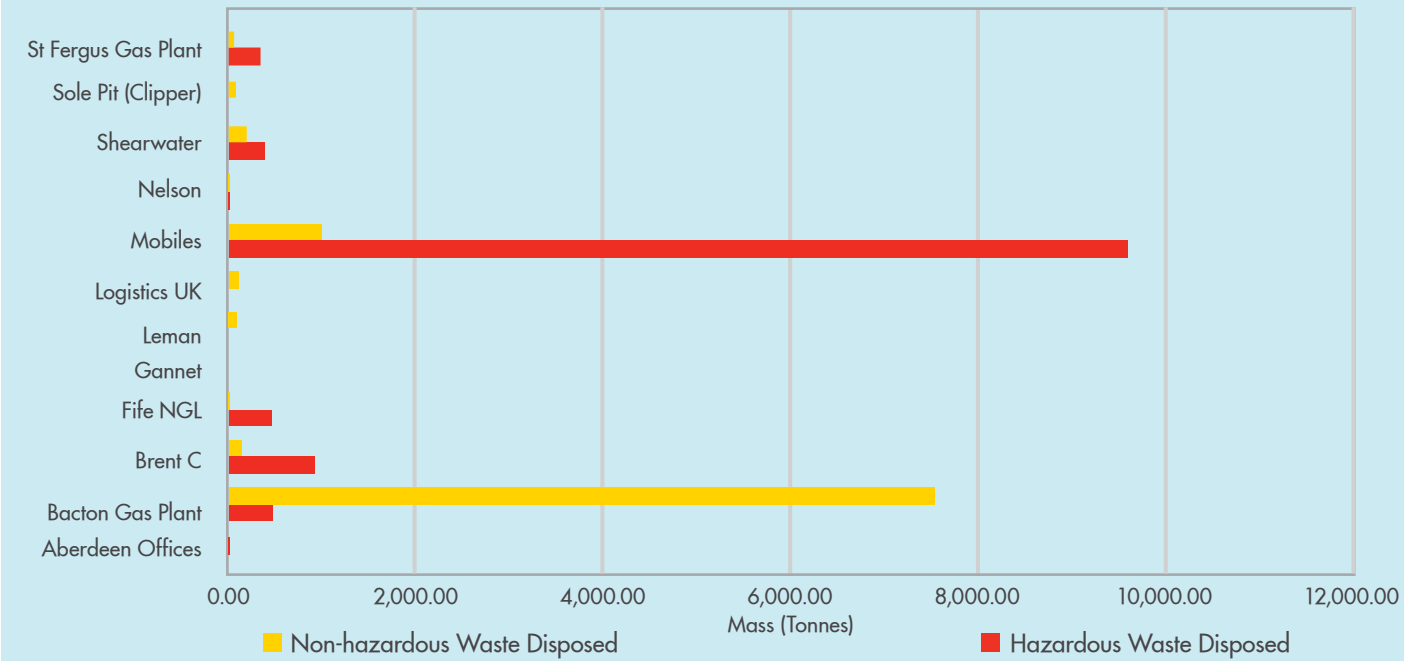
In 2021 the volume of non-hazardous waste decreased by 48%. It included liquid production residues, scrap metals, wood, paper, plastics, cans and other general waste such as office waste. Again, this reduction is primarily due to decommissioning of assets and some improvements implemented at our onshore sites.

In 2021, we also re-used or recycled approximately 6,500 tonnes of waste (not shown in table 4), which includes waste produced from decommissioning activities. Examples of the types of waste re-used and recycled from our operations include drums/containers, and scrap metal.

	2017	2018	2019	2020	2021
Hazardous waste (tonnes)	22,601	22,909	21,575	23,243	12,115
Non-hazardous waste (tonnes)	14,280	27,160	17,476	18,032	9,438
Totals	36,881	50,069	39,051	41,275	21,552

Table 4: Mass (tonnes) of hazardous and non-hazardous wastes disposed of by our UK Upstream operations (2017 -2021)

Figure 7: Hazardous and Non-Hazardous Waste Disposed in 2021



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 was a prolific national asset and since 1976 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 (CoP) from Brent Delta in 2011, and Alpha and Bravo at the end of 2014. Brent Charlie ceased production on 31 March 2021, marking the end of 45 years of production in the Brent field.

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 over 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 DP 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, the UK regulator, 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 GBS 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 agreed that the decommissioning proposals for the Brent Alpha jacket could be separated from the remaining Field DP. This was approved in July 2020, which included a derogation for the Leave in Place of the Alpha jacket footings. A decision is awaited from OPRED on the remaining Brent Field DP at time of publication.

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 and the processes documented. In December 2019 the final close-out report was submitted to OPRED 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 described the installation of the caps and Aids to Navigation on top of the legs of the GBS.

Brent Bravo was de-manned in March 2019, and the 25,000 tonnes topside was removed in a single lift by the Pioneering Spirit in June 2019 and transported to Able UK's facility for dismantling and recycling. Over 97% of the topside was recycled, and a close out report was submitted to OPRED in 2021. In March 2020 OPRED approved a separate DP for the Brent Field pipelines.

The "plug and make safe campaign" for the Brent Alpha wells 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 topside was removed in a single lift by the Pioneering Spirt in June 2020. The topside was transported to Able UK's facility for dismantling and recycling. In August 2020 the upper jacket and conductors were removed in a single lift by Heerema Marine Contractor's heavy lift crane vessel Sleipnir, and transported to AF Decom's VATS facility in Norway for dismantling and recycling during 2021.

Decommissioning of the Brent Charlie wells started in late 2017 and will continue through 2022. Brent Charlie was being prepared for decommissioning throughout 2021 following cessation of production on the 31st March 2021. The bulk export of oil was successfully completed by August 2021.

UKCS – OTHER DECOMMISSIONING ACTIVITIES

In 2021, the following decommissioning activities were ongoing for Shell UK in the Central North Sea.

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 consisted of a central processing FPSO vessel, with three subsea field tie-backs, and was connected into the Fulmar pipeline for gas export to the St Fergus onshore facility.

The Curlew Decommissioning Programme was approved by OPRED in March 2019. Cessation of production 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 suspended and scheduled to be plugged and made safe at the time of publishing. The Curlew FPSO was towed to Forth Ports' Dundee facility for cleaning in June 2019 and moved to the dismantlement facility in Norway in August 2020 for final cleaning and recycling.

All process topsides were dismantled and recycled onshore during 2021 and the FPSO hull remains on location for dismantling in 2022 & 2023.

GOLDENEYE FIELD

The Goldeneye field 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 5th December 2018.

Following the public consultation, Shell UK entered discussions with OPRED and Carbon Capture, Utilisation and Storage 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 carbon capture, utilisation and storage, including identification of infrastructure with recognised potential for re-use, is ongoing.

The previously submitted Decommissioning Programme has now been split into two documents:

- 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 the platform topside and jacket was removed and shipped to the dismantlement yard in Norway in 2021. The topside dismantlement was completed in 2021. Dismantlement of the jacket and recycling of the topside and jacket are yet to be completed in 2022. The subsea infrastructure will be decommissioned in 2022. Shell UK is aiming to reuse or recycle over 97% of the materials brought to shore.
- 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 2021, there was significant progress with decommissioning preparatory work on a portfolio of Shell UK's UKCS subsea assets. DPs for Gaupe and Kingfisher completed statutory 30-day public consultation in 2020. OPRED approvals were received in May and June 2021 respectively. It is anticipated that the Gaupe pipelines flushing and decommissioning will be aligned with adjacent fields and executed in 2022 with the central north sea scope. Wellhead severance of Heron H1, Heron H3 and Curlew CP1S were completed in February 2021. Flushing and disconnection of the Scoter and Merganser infrastructure was successfully completed in October 2021. A Brent subsea trenching pipeline survey (including Brent Charlie) was completed in November 2021.

CONTACT US

This report summarises our environmental performance in relation to our HSSE & SP policy, goals and objectives in Shell U.K.'s upstream operations and activities in 2021.

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 Corporate Relations department:

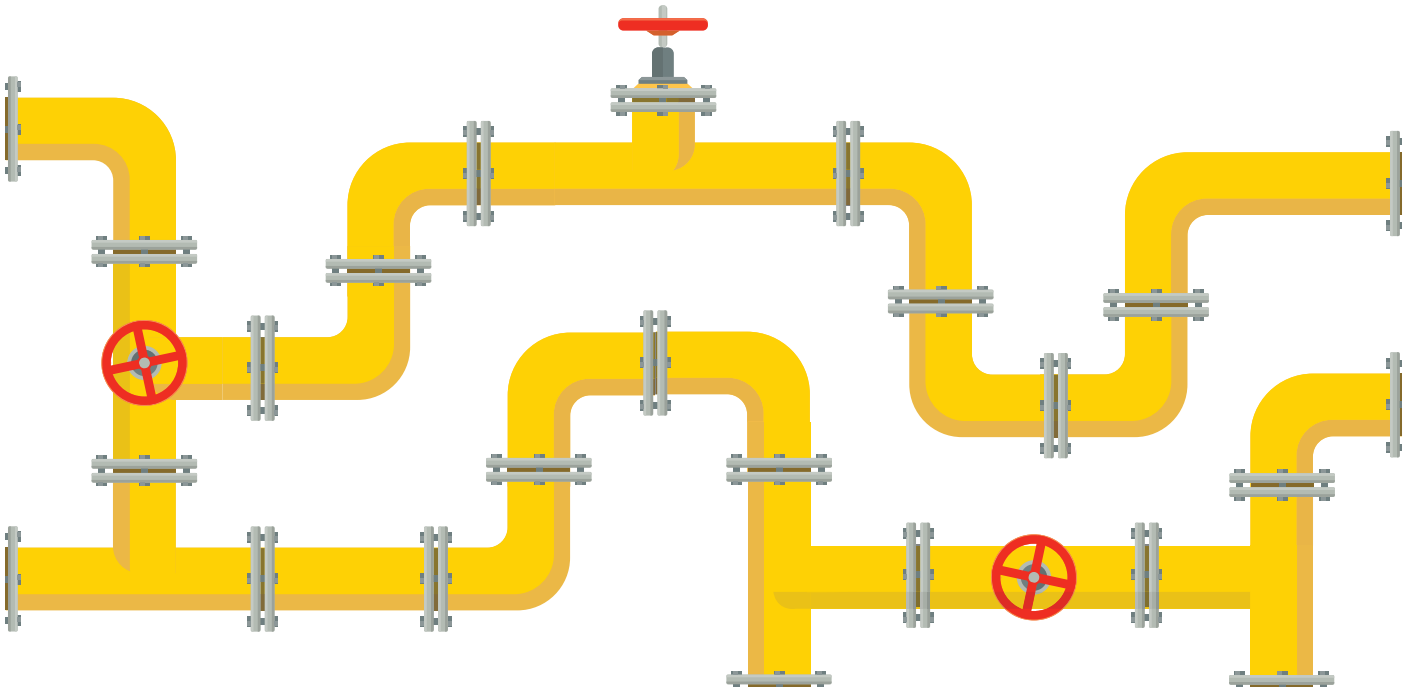
Shell U.K. Limited

1, Altens Farm Road

Aberdeen

AB12 3FY

01224 882000



APPENDIX 1
SUMMARY OF ENVIRONMENTAL DATA (2017 - 2021)

	2017	2018	2019	2020	2021
Greenhouse Gases (GHG) (tonnes CO2 equivalent)	2,571,161	2,227,523	2,096,676	1,897,309	1,616,878
Oil to Sea (tonnes) (discharged in produced water)	213	242	244	291	231
Hazardous Waste Generated (tonnes)	22,601	22,909	21,575	23,243	12,115
Non-Hazardous Waste Generated (tonnes)	14,281	27,160	17,476	18,032	9,438
Production Chemical Use (tonnes) % Discharge	5,631 60	3,923 37	3,130 75	3,174 82	3,813 59
Wells Chemical Use (tonnes) % Discharge	13,505 9	7,138 9	10,589 19	12,223 12	17507* 8
Unplanned Releases/Spills (volume in tonnes)	53 (56)	42 (1.9)	31(52.5)	38 (35)	44(20)

Data may have changed compared with previous years' reports as revisions of the data can happen after the reports are 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 to the regulator.

Shell is a license holder for the Pierce Field. Shell appointed Pierce Production Company Limited (Bluewater) as the Installation Operator as defined by Safety Case Regulations for the Haewene Brim FPSO operating in the Pierce Field. Shell retains operatorship of wells and pipelines on the Pierce Field. For the purpose of this Annual Environmental Statement, since 2019, Shell has included performance data for Pierce associated to GHG emissions and unplanned releases from wells and subsea infrastructure. In addition, environmental performance data associated to operatorship of the FPSO will be found in the Annual Environmental Statement issued by Pierce Production Company Limited (Bluewater).

* It should be noted that the amount of Wells Chemicals Used relates to Well activities undertaken and completed in 2021. Appendix 2 shows well activity in 2021 but some of the associated chemical permits do not expire until 2022. Therefore, the chemicals used will not be submitted into EEMS until 2022.

APPENDIX 2
WELL ACTIVITIES IN 2021

DRILLED

Installation / Rig	Shell Well Name	Well Start Date	BEIS Permit Reference
V122	SW08s3	18/10/2020*	CP/2355
V122	SW09s4	05/07/2021	CP/2430
V122	22/12d-13 (Jaws)	13/11/2021	CP/2573
Ocean Endeavor	Arran AS3	12/08/2020*	CP/2188
Ocean Endeavor	Arran AS2	19/08/2020*	CP/2170
Ocean Endeavor	Arran AN1	09/01/2021	CP/2386
Ocean Endeavor	Arran AN2	17/01/2021	CP/2387
Ocean Endeavor	Gannet GB02	15/07/2021	CP/2542
Ocean Endeavor	Penguins Tybalt	07/10/2021	CP/2083
Maersk Resilient	Galleon PN09	01/08/2021	CP/2539
Ocean Valiant	Gannet GF01s1	01/11/2019	CP/2134

*Note the well start dates that show as 2020 have gone through into 2021

ABANDONED

Installation / Rig	Shell Well Name	Well Start Date	BEIS Permit Reference
V122	SW09s3	03/01/2021	CP/2430
Brent Charlie	BC06	17/12/2020	CP/2474
Brent Charlie	BC15	29/01/2021	CP/2474
Brent Charlie	BC13	04/02/2021	CP/2474
Brent Charlie	BC07	21/02/2021	CP/2474
Brent Charlie	BC09	16/03/2021	CP/2474
Brent Charlie	BC08	30/03/2021	CP/2474
Brent Charlie	BC37	22/05/2021	CP/2474
Brent Charlie	BC11	30/05/2021	CP/2474
Brent Charlie	BC05	09/06/2021	CP/2474
Brent Charlie	BC31	17/06/2021	CP/2474
Brent Charlie	BC25	29/06/2021	CP/2474
Brent Charlie	BC36	10/07/2021	CP/2474
Brent Charlie	BC06	17/12/2020	CP/2474
Brent Charlie	BC05	11/11/2020	CP/2210/6
Brent Charlie	BC35	03/12/2020	CP/2210/6

APPENDIX 3
ABBREVIATIONS AND TERMINOLOGY

BBL	Balgz and Bacton line
BEIS	Department of Business, Energy and Industrial Strategy
CCS	Carbon capture and storage
CCUS	Carbon capture, utilisation and storage
CNS	Central North Sea
CO2e	Carbon dioxide equivalent is a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO2e signifies the amount of CO2 which would have a climate change global warming impact
CoP	Cessation of Production
DP	Decommissioning Programme
EA	Environment Agency
EEMS	Environmental Emissions Monitoring System
FEP	Fife Ethylene Plant
F-gas	Fluorinated greenhouse gases
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)
HPHT	High Pressure High Temperature
HSSE & SP	Health, Safety, Security, Environment and Social Performance
INSITE	Influence of man-made Structures In the Eco-system
LP	Low Pressure
MODU	Mobile Offshore Drilling Unit
NGL	Natural Gas Liquids
NSTA	North Sea Transition Authority
NSTD	North Sea Transition Deal
NUI	Normally Unattended Installation
OGMP	Oil and Gas Methane Partnership
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 Environment Protection Agency
UKCS	United Kingdom Continental Shelf
UN	United Nations

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 Shell plc directly and indirectly owns investments are separate legal entities. In this statement "Shell", "Shell Group" and "Group" are sometimes used for convenience where references are made to Shell plc and its subsidiaries in general. Likewise, the words "we", "us" and "our" are also used to refer to Shell plc and its subsidiaries 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 statement refer to entities over which Shell plc either directly or indirectly has control. Entities and unincorporated arrangements over which Shell has joint control are generally referred to as "joint ventures" and "joint operations", respectively. "Joint ventures" and "joint operations" are collectively referred to as "joint arrangements". Entities over which 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 Shell in an entity or unincorporated joint arrangement, after exclusion of all third-party interest. This statement contains forward-looking statements (within the meaning of the U.S. Private Securities Litigation Reform Act of 1995) concerning the financial condition, results of operations and businesses of 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 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'', "milestones", ''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 Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this statement, including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for 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, judicial, 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 statement 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 Shell plc's Form 20-F for the year ended December 31, 2021 (available at www.shell.com/investor and www.sec.gov).

These risk factors also expressly qualify all forward-looking statements contained in this statement and should be considered by the reader. Each forward-looking statement speaks only as of the date of this statement, 1st June 2022. Neither Shell plc nor 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 statement.

Also, in this statement we may refer to Shell's "Net Carbon Footprint" or "Net Carbon Intensity", which include 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" or "Net Carbon Intensity" are for convenience only and not intended to suggest these emissions are those of Shell plc or its subsidiaries. Shell's operating plan, outlook and budgets are forecasted for a ten-year period and are updated every year. They reflect the current economic environment and what we can reasonably expect to see over the next ten years. Accordingly, they reflect our Scope 1, Scope 2 and Net Carbon Footprint (NCF) targets over the next ten years. However, Shell's operating plans cannot reflect our 2050 net-zero emissions target and 2035 NCF target, as these targets are currently outside our planning period. In the future, as society moves towards net-zero emissions, we expect Shell's operating plans to reflect this movement. However, if society is not net zero in 2050, as of today, there would be significant risk that Shell may not meet this target. This statement may contain certain forward-looking non-GAAP measures such as cash capital expenditure and divestments. We are unable to provide a reconciliation of these forward-looking Non-GAAP measures to the most comparable GAAP financial measures because certain information needed to reconcile those Non-GAAP measures to the most comparable GAAP financial measures is dependent on future events some of which are outside the control of Shell, such as oil and gas prices, interest rates and exchange rates. Moreover, estimating such GAAP measures with the required precision necessary to provide a meaningful reconciliation is extremely difficult and could not be accomplished without unreasonable effort. Non-GAAP measures in respect of future periods which cannot be reconciled to the most comparable GAAP financial measure are calculated in a manner which is consistent with the accounting policies applied in Shell plc's consolidated financial statements. The contents of websites referred to in this statement do not form part of this statement.

We may have used certain terms, such as resources, in this statement 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.