I would like to introduce you to our Annual Environmental Statement, which provides an overview of how the upstream operations of Shell U.K. Limited performed during 2013.

Every year we measure, appraise and report our performance, as well as engage with our many stakeholders reflecting the broad range of our activities and impacts.

In Shell we are committed to protect the environment, to play a leading role in promoting best practice in our industry, and to use material and energy efficiently to provide our products and services to the market. In doing this we balance the need to meet the growing demands for energy and security of supply against the operational challenges.

This document looks back at our environmental performance, the challenges we faced and how we addressed them. In terms of environmental performance this was a mixed year for us with both achievements and areas where we clearly could have done better.

We have made positive progress integrating the new permit portal requirements into our processes and have also successfully recertified for ISO 14001. On our Shearwater installation we have seen greatly improved Oil in Produced Water results by trialing and introducing a new Corrosion Inhibitor.

During 2013 we have regrettably seen an increase in the number of spills to sea during our operations and as a result we have increased our vigilance around our activities to help avoid loss of containment and environmental spill incidents. Shell continues to participate in the Step Change in Industry safety initiative which includes a focus on hydrocarbon release reduction.

The year has also seen a number of developments for our UK Continental Shelf (UKCS) business including the transfer of the Curlew FPSO to Shell ownership and a programme of improvements related to integrity and reliability of the vessel. We witnessed the successful restart of Brent Charlie and the linked Penguins field. The platform had been shut-down since January 2011.

The integrity and safe working of our installations remains our number one priority. A maintenance focused campaign at Gannet achieved some notable results with a 300,000 man hour investment on fabric maintenance and some 22,278m² coating and insulation completed.

The Peterhead Carbon Capture and Storage (CCS) project made significant progress leading to the recent Feed Contract signing which sees the start of a period of Front-End Engineering and Design (FEED) for the project, which is expected to continue until 2015. Subject to positive final investment decisions by Shell and the UK Government, and the receipt of all relevant consents and permits, the project could be up and running by the end of the decade.

For ourselves and the wider industry UKCS Production levels in 2013 decreased and this issue continues to be a focus as we progress through 2014.

The recent publication of the Wood Review saw recommendations focusing on how to maximise the development of the estimated 24 billion barrels of oil and gas resources remaining in the UK North Sea.

We will work to support this collaborative effort and to help move forward a sustainable future for the industry while seeking to have minimal impact on our environment – both on and offshore.

Glen Cayley
Upstream Director, Shell U.K. Limited
May 2014
Our Environmental Management System (EMS) covers all the upstream activities and locations involved in exploring for, producing, and processing gas and oil in the UK and UK waters.

Our business is divided into organisational units called Assets and Functions. We use these terms in this report. Assets are locations or groups of locations supported by onshore teams, and cover all our physical facilities including offshore fields, installations and associated wells, the onshore gas plants, and all associated pipelines. See the map of our UK facilities on page 6.

Functions typically provide a service to the Assets such as operations and planning support, engineering and maintenance, development planning, project planning and execution, logistics for vessels and helicopters, laboratory services, drilling wells, and the management of our offices. Additionally acronyms and abbreviations in the text are described in Appendix 4.

Shell U.K. Limited ("Shell") is a leading operator in the UK sector of the North Sea, where our upstream business explores for and extracts natural gas and crude oil. In the UK sector of the North Sea Shell produces over 11% of UK oil and gas on behalf of Shell and its joint venture partners.

Shell has interests in more than 50 fields, operating more than 30 offshore installations, 30 subsea installations, two FPSO’s (Floating Production Storage and Offloading vessels), three onshore gas plants and a marine terminal for distribution of NGL’s (Natural Gas Liquids) globally.

Shell holds a key strategic position in enabling security of energy supply to the UK through infrastructure operated by us, which is capable of meeting 35% of UK gas demand.

We have strong energy links across Europe with the Norske Shell operated Ormen Lange field in Norway having the potential to meet 20% of the UK’s gas needs. Much of the North Sea’s hydrocarbons are processed onshore at Shell operated gas plants at St. Fergus, Bacton and Massmorran.
The Shearwater Platform is a fixed manned Installation comprising a wellhead platform connected by an 80m bridge to an integrated process, utilities and living quarter platform.

The Wellhead was installed in 1997, with the process, utilities and living quarters being installed a couple of years later in 1999. The installation processes oil and gas from The Scoter field, The Merganser field and the Starling satellite well. Gas is exported through the 34 inch Shearwater Elgin Area Line Pipeline to Bacton Gas Terminal in Norfolk. Since 2012 Shearwater has reduced its oil discharged in produced water by 82%.

Brent Charlie is a fixed, manned drilling and production Installation for the Brent Field. It was installed in 1978 and started production in 1981. It consists of a four leg concrete gravity structure with a base of 36 reinforced concrete cells, which stand in about 141m of water. This supports a deck which supports drilling, process, utility and accommodation modules.

The installation is the operational centre for control and production of fluids from the Penguins field sub-sea facilities located north of Brent Charlie. The Penguins facilities consist of 5 drilling centres connected to Brent Charlie via a sub-sea tieback.
The Curlew field system comprises a floating production storage offloading unit (FPSO), the Curlew, connected via flexible flowlines and risers to three fields (Curlew B, C, and D).

Processed crude is stored in internal storage tanks on the vessel; these are periodically offloaded into visiting shuttle tankers. Produced water is routed to hydrocyclone units for further polishing. The produced water is then routed to a slops tank where additional oil can be skimmed off following settlement and then water is batch discharged from this tank. Gas is compressed and then exported through a 26km export gas pipeline, which is tied into the Fulmar Gas pipeline and transported to St Fergus.

The Goldeneye field is located in the UK Central North Sea area 100km north east of St Fergus in a water depth of 119 metres. It is no longer producing gas, however the reservoir is an excellent site for storing CO2. The aim is that around one million tonnes a year of carbon dioxide will be collected from the exhaust gas from SSE’s power station at Peterhead before being compressed and transported offshore. It will then be injected into the Goldeneye gas reservoir for deep, long-term storage.
UPSTREAM INTERNATIONAL EUROPE

ACTIVITIES AROUND THE NORTH SEA

This map is for illustrative purposes and has not been drawn to scale.
Policy and Strategic Objectives
Contains our Commitment and Policy on Health, Security, Safety, Environment and Social Performance (HSSE & SP) and provides a framework for setting our environmental objectives. One of our HSSE & SP commitments (see page 8) is to protect the environment. Our policy is to have a systematic approach to HSSE & SP management designed to ensure compliance with the law and to achieve continuous performance improvement. Our environmental objectives are shown on page 8.

Organisation, Responsibilities, Resources, Competency
Describes the organisational structure and the roles and responsibilities for environmental management. The competency of personnel carrying out roles within the EMS is addressed as are the resources necessary to ensure the EMS is in place and maintained. Communication processes around environmental issues both within and outside of Shell are detailed.

Risk Management
Covers the identification of environmental aspects and legal and other requirements related to them. It also contains the operational framework for managing significant environmental aspects. “Environmental aspects” are those elements of our activities that can interact with the environment.

Processes, Assets and Standards
Describes the processes that are undertaken to support our assets and the relevant standards. Processes and standards contain environmental information to ensure that the EMS is effectively implemented in the assets.

Planning
Contains our Health, Safety and Environmental (HSE) Plans, which contain objectives, targets and improvement programmes. In preparing our HSE Plans, we take into account our environmental aspects and legal and other requirements.

Implementation (Reporting and Monitoring)
Covers the monitoring of activities that can have a significant environmental impact as well as environmental performance.

Assurance (including Management Review)
Covers the audit and assurance process by which we check that the EMS continues to be effectively implemented. This section also covers the periodic evaluation of compliance with legal and other requirements. Management reviews are also conducted annually to ensure the EMS is effective and delivering improvements.
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
Erik Bonino
UK Country Chairman

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.
Figure 3 - Environmental Aspects of Our Operations

INPUT

NOISE, DUST, ODOUR OR LIGHT
GASEOUS EMISSIONS

RAW AND AUXILIARY MATERIAL
ENERGY
MATERIALS
WATER

PRODUCT EXTRACTION

OUTPUT

RADIATION (NATURALLY OCCURING)
PRODUCT
WASTE
LIQUID FLOWS TO WATER

MATERIALS TO DEEP SUBSOIL
LIQUID FLOWS TO THE SOIL/SEDIMENT
OUR ENVIRONMENTAL GOALS AND OBJECTIVES

Shell U.K. Limited has implemented an environmental management system (EMS) for upstream operations, which is certified to the ISO14001 standard and works for continual improvement focused on the following policy objectives:

- Protect the environment
- Use material and energy efficiently to provide our products and services
- Set targets for improvement and measure, appraise and report performance
- Play a leading role in promoting best practice in our industries
- Engage effectively with stakeholders

These objectives are translated into relevant programmes and internal targets and limits that drive continual improvement in our UK operations.

The main focus areas in 2013 were related to:

- Environmental compliance
- Safely recovering oil and gas production on our installations. This work aims to increase oil and gas production and also to have the consequence of improving the efficiency of our installations based on energy use per tonne of oil equivalent,
- Overall integrity management
- Spill contingency planning
- Increasing staff involvement in environmental management through the Workforce Environmental Representatives (E-Reps)

The 2013 performance of Shell’s upstream operated assets located within the UKCS is summarised in the sections below. In this report the term ‘installation’ is used to refer to offshore oil and gas production platforms and onshore gas processing plants which are operated by Shell and our contractors, as well as third party fields that produce to these platforms, plus mobile drilling rigs in the UK whilst on contract to Shell and logistics (covering air and sea operations). Additional environmental data for the years 2009-2013 are provided in Appendix 1. The majority of the data used has been reported to the regulators via the UK Environmental Emissions Monitoring System (EEMS), for offshore, and the Pollution Inventory (England) and Scottish Pollutant Release Inventory (Scotland), for onshore.

Our achievements in 2013 included:

- Successfully recertified for ISO14001
- For the Cap and Contain system, full maintenance plan reviewed by DECC and first annual statement provided to DECC
- Shearwater improved their OIW results by trialing and introducing a new Corrosion Inhibitor
- Improvement in Brent Charlie produced water management processes to further reduce the potential for oil carry over from the oil/water separation cells
- The Bacton site commissioned a water holding basin to provide better control of discharges under normal and emergency conditions of a major incident
- Transferring ownership of the Curlew FPSO to Shell and undertaking significant improvements related to integrity and reliability.
- Undertaking a major top side integrity programme on Gannet and replacing subsea flow lines
- Shell personnel undertook an Incident Command System (ICS) 3 day emergency response exercise (Oakmont), that included SOSREP and MCA involvement
- More robust OPEP exercises performed with increased focus on spills to sea. As per a requirement from DECC, all spill exercises are now at least a Tier 2 - this has been incorporated into the OPEPs
- Increased focus on Process Safety highlighting barrier awareness and verification, which has increased rig crew awareness to the importance of preventing loss of containment and environmental spills
- Integrating the new Environmental permit portal requirements into our processes
- Increased the number of environmental graduates to 3, with the aim of ensuring a sustainable skill pool. Additionally we employed 2 student interns from Aberdeen University to support the team and also provide valuable experience for future development
- HSE training pack for legal compliance for new rig intakes formalised and implemented.
- Improved communications and shared learnings between Projects and Assets.
MANAGING EMISSIONS AND DISCHARGES

Greenhouse Gas (GHG) Management

Shell establishes annual GHG targets and these are translated into internal marks for each asset to measure performance against.

Our installations operate against permits issued under the; Pollution Prevention and Control (PPC) legislation, Environmental Permitting Regulations (England) and Phase III of the mandatory EU Emissions Trading Scheme for CO2 (EU-ETS). The EU-ETS legislation is the mechanism that the EU are using to reduce CO2 emissions to the atmosphere by requiring operators to account for our CO2 emissions and subsequently purchase allowances to cover releases.

Overall GHG Performance

In 2013, direct GHG emissions from operations were approximately 2.42 million tonnes CO2 equivalents (CO2e).

This is an increase of approximately 15% compared to 2012 (2.09 million tonnes CO2e). There was a 6% decrease in production overall (total oil, gas and condensate). The reason for this is that there was a reduction in production generally on less energy intensive installations, whilst we started up production on more energy intensive installations like Brent Charlie. In particular for Brent Charlie and Nelson the return of sustained production led to increased CO2 emissions due to an increase in energy requirements for normal process operation and flaring. The specific change in CO2 emissions between 2013 and 2012 at each installation can be seen in Figure 4. Two notable changes are;

- The production increase seen for Shearwater was due to coming back to full production in 2013 following an extended shut-in during the Elgin Franklin gas release in 2012
- Brent Charlie came back on stream following an extended shut-in due to critical maintenance works

As shown in Figure 5 approximately 77% of our total GHG emissions came from burning gas and diesel for power generation (including, mechanical drive of compressors and electricity generation) on our locations, with flared and vented gases accounting for the majority of the remaining 23%. The percentage of CO2 from burning of gas for power generation is similar to that recorded in 2012, as we still had a number of installations running on diesel whilst shut-in.

Flaring

Flaring from our installations is managed under consents obtained from the government, and in 2013 we maintained flaring within the limits contained in these consents on all installations. The regulator granted increases in our consented flare gas volumes for the;
Brent Field as a result of instability following the restart of Brent Charlie after an extended shut-in. There were problems with the high pressure condensate system and the Penguins field that led to a number of cold starts. Shearwater due to a number of unplanned trips and flash gas compressor issues.

Pierce as a result of the gas injection riser being removed from service prior to the FPSO going to dry dock for a major turnaround.

In total we flared hydrocarbon gas that resulted in the release of approximately 446.7 kilotonnes of CO₂e across our UK installations (Figure 6). This represents an increase of approximately 170 kilotonnes (61% increase) from 2012, mainly due to increased flaring from Brent Charlie and Shearwater. This difference in flare was noticeable as both those installations were shut-in for extended periods in 2012, significantly reducing flared gas volumes, but were back producing for the majority of 2013.

Our CNNS assets are designed to have a flare for safety and technical reasons; flaring has mainly been as a result of plant upsets, trips, equipment outage and shut-down/start-up. The remainder is linked to the flare pilot/purge that is required to maintain a small flame to ignite gases should there be a safety need.

As fields near end of life, flaring generally increases as a percentage of total production. This is due to lower gas flows and pressures in certain parts of the operations that cannot be handled by the gas compressors. It is generally not viable to modify the existing equipment, or install new equipment, at this late stage of operations. This is the situation for the Brent field as it is starting to enter its decommissioning phase (Brent Delta ceased production on the 31st December 2011). Also on the Shearwater installation some continuous flaring is required to dispose of acid gas containing minor amounts of H₂S scrubbed from the gas before it is exported to shore.

**Venting**

Some of our installations are designed to vent gas for safety and certain operational reasons and we have venting consents from the government to cover this. Our Leman installation saw an increased in the amount of gas vented in 2013 (Figure 6) as compared to 2012, this increase was as a result of the installation of a new generation package that had initial reliability problems. Tripping of the generator...
resulted in shut down of all compression with subsequent process depressurisation through the vent system. Additionally venting from the Shearwater installations increased compared to 2012 due to relatively higher production from that installation in 2013 following extended shut-ins in 2012.

**Oil In Produced Water**

Water is co-produced with the extraction of oil and gas and this comes to the surface with the hydrocarbons, this is called production water. Oil reservoirs tend to produce significantly more water with the hydrocarbons than gas reservoirs and as the reservoirs mature, the proportion of water also increases. The production water is separated from the hydrocarbons before they are transported to shore. In the raw production water there are dissolved and dispersed (colloidal) oils and these need to be treated before discharge to the environment. The treated water can only be discharged through permitted discharge points and should meet the permit conditions that regulate the concentration and mass of oil released to the environment.

In the UK oil in produced water discharges are regulated in line with the OSPAR Commission recommendations through the Offshore Petroleum Activities (Oil Pollution Prevention and Control) Regulations 2005 as amended (OPPC). Shell aims to maintain the total quantity (tonnes) of oil in the produced water discharged into the sea, within the OSPAR target set for contracting parties at 15% below the total quantity of oil in produced water discharged to sea in the year 2000. We have maintained our total oil discharges from produced water below this level since the target was introduced in 2006, and the level has reduced consistently over the past 5 years, see Appendix 1.

Throughout 2013 Shell worked to ensure its offshore installations complied with the 30mg/l monthly average for dispersed oil in produced water discharges. Overall the results reported to DECC throughout 2013 show that our produced water discharges were in compliance with the exception of 6 isolated incidents which stemmed from upsets in operations associated with installation start up. Figure 7 shows present annual average oil in produced water concentrations for our offshore installations.

Between 2009 to 2013 the volume of produced water discharged from our installations has reduced significantly (see Appendix 1). This is mainly as a result of reduced hydrocarbon production on 3 of our installations (Nelson, Brent Charlie and Brent Delta which is now in decommissioning). Three installations (Nelson, Brent Charlie and Brent Bravo) discharge greater than 80% of Shell UK’s total produced water, and therefore their availability significantly affects the volume of produced water discharged and consequently the mass of oil discharged.

Between 2009 to 2013 the volume of produced water discharged from our installations has reduced significantly."

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**Figure 7:** Annual average dispersed oil concentrations in produced water from each Shell operated offshore installation. It is recognised that the annual are not directly comparable, but they provide an indication of overall 2013 performance.

**Figure 8:** Total volume of produced water and mass of oil discharged to sea from each Shell operated offshore installations 2013
Figure 8 shows the amount of oil, in tonnes, discharged to sea in produced water in 2013 from installations in the UKCS which we operate. In 2013 total discharges of oil to sea from our installations increased by 85%, from 142 tonnes in 2012 to 263 tonnes in 2013. This increase, as indicated above, is mainly due to increased production on the Brent Charlie and Nelson installations. Produced water volumes on Brent Charlie increased from 225,000m$^3$ in 2012 to 6,600,000m$^3$ in 2013 and on Nelson from 3,800,000m$^3$ to 7,800,000m$^3$. The discharge concentrations were broadly similar to the previous year. Additionally Nelson did not re-inject production water in 2013 due to unavailability of the water injection system. The injection pumps require an onshore overhaul and the current plan is to have this completed in 2016.

To maintain compliance with the discharge limits we have shut-in oil production, found alternative disposal routes for the water and also maintained 100% produced water reinjection availability on 2 of our installations in the southern North Sea. Efforts are still ongoing on both Gannet and Shearwater to install upgrades to the water treatment systems, as well as improvements to the dosing of corrosion inhibitors, used to secure the integrity of subsea pipelines, that can lead to oil being entrained in the produced water that our treatment systems can struggle to separate.

The mass of oil and presence of other components are also important factors and we are aware that the contracting parties to OSPAR are considering future changes to the way produced water is regulated. These issues will be taken into consideration in developing our future environmental improvement plans.

**Operational Spills**

We continually strive to prevent the occurrence of oil spills (we use the term ‘releases’ in this section as this is the term that DECC use for accidental spills of oil and chemicals) from our operations. However, in the event that a release does occur we have contingency plans in place designed to minimise environmental impacts. Shell has fostered a heightened awareness on reducing hydrocarbon leaks. This stems from an increased focus on managing asset integrity and operational excellence.

We record and report all oil and chemical releases from our operations to the relevant authorities. In 2013 we reported 76 releases to the sea from our UK upstream activities (there were 3 additional permitted discharge PON1s, which relate to reportable releases from one of our permitted discharge points), of which 56 were classified as oil and 20 as chemicals.

The total number of notified releases (hydrocarbon and chemicals) was higher than 2012. The total mass released in 2013 was 197 tonnes (17 tonnes hydrocarbons and 180 tonnes of chemicals) compared to 13 tonnes released in 2012 (see Table 1). More than 80% of all releases are smaller than 100 kg with 70% of releases less than 10kg. We have provided more detail on all releases greater than 2 tonnes, see Appendix 2.

![Table 1: Number and Mass of Spills to Sea (2009-2013)](image)

There were 2 spills > 2 tonnes and one permitted discharge incident that resulted in >1 tonne of oil being released to the sea in a 12 hour period (see Appendix 2). The details of these incidents are as follows;

- **Clipper** – 177.6 tonnes of monoethylene glycol (MEG) mixture (MEG; water, corrosion inhibitor and salts): released as a result of overfilling the MEG storage tank.
- **Brent Bravo** – 13.9 tonnes of diesel during bunkering operations.
- **Brent Charlie** – Permitted discharge notification of 5 tonnes of hydrocarbons released with the produced water due to incomplete separation of oil from water.
Shell supports the Step Change in Safety hydrocarbon leak reduction initiative where the offshore oil and gas industry aim for a 50% reduction in hydrocarbon leaks by 2012, based on a baseline set in 2009. Analysis of the release data indicates that overall industry met this target and have now set themselves a target of a further 50% reduction by 2016.

Chemical Management

i) Production Chemicals

Our use and discharge of chemicals in production and drilling operations is controlled by the Offshore Chemicals Regulations 2002 as amended (OCR), and Shell’s environmental requirements. The type and volume of production chemicals used and discharge varies across our installations. Oil installations generally use more chemicals to process crude oil than gas installations use to process gas. This is mainly due to the relatively high quantities of produced water associated with oil production. Table 2 shows the historical use of offshore chemicals across our UK Production operations, along with the percentages of those used that were discharged to the sea.

<table>
<thead>
<tr>
<th>Production Chemical Use (Tonnes)</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Discharged</td>
<td>67</td>
<td>59</td>
<td>56</td>
<td>52</td>
<td>60</td>
</tr>
</tbody>
</table>

The overall trend in production chemical use has declined over the last 5 years (see Table 2), as has the percentage of those discharged to the sea. This trend is the sum of a number of counteracting factors;

- Our efforts to use more efficient chemicals that reduce treatment concentrations.
- Having access to more recent partitioning studies that more accurately determine the percentage of chemical being discharged in their respective phases.
- The effects of divesting platforms, and greater consumption due to increasing water production as fields age.

In 2013 there was an increase in production chemical use due to the effects of a number of our oil producing installations coming back on stream which has resulted in higher volumes of produced fluids that required treatment and therefore an increased volume of production chemicals required to treat them.

The regulator (DECC) has highlighted certain hazardous chemicals for phase out from use by means of Substitution Warnings (Sub Warnings). Reducing the use of these chemicals can be challenging, especially for those that have been engineered for specific fields or applications. Approximately 16% of the production chemicals used by Shell have Sub Warnings, however their use has declined over the last 5 years in line with our phase out plan agreed with DECC (Figure 9). The overall reductions have been achieved through a combination of factors:

1. Replacement of chemicals by less hazardous versions
2. Removal of unused products from permits
3. Divestment/decommissioning of the installations where particular product was used, and
4. Reclassification as chemicals gain or lose the Sub Warning as new data become available.

<table>
<thead>
<tr>
<th>Well Chemical Use (Tonnes)</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Discharged</td>
<td>15</td>
<td>25</td>
<td>17</td>
<td>15</td>
<td>17</td>
<td>28</td>
</tr>
</tbody>
</table>
**Wells Chemicals**

In 2013 we used a total of 17,163 tonnes of chemicals in wells activities, see Table 3. Of this figure approximately 28% of chemicals were discharged to the marine environment. The volume of chemicals used and discharged is directly related to the type and number of wells activities undertaken, and 2013 saw an increase in activity.

A large part of the Wells activity and associated chemicals usage is related to; well suspension work on Shearwater, well abandonment work associated with the Brent decommissioning programme and drilling of wells on in the Fram and Carrack fields. Further details on wells drilled can be seen in Appendix 3.

Most of our energy use is from power generation on our offshore installations where we burn fuel gas or diesel to run pumps, compressors, engines, heaters and general platform services. The energy intensity of our operations are generally increasing due to the maturity of our fields, which produce and process more associated water and require only marginally less energy to export reducing hydrocarbon volumes. Additionally in 2013 continued shut-ins in some of our fields affected the overall energy intensity of our UK operations, as the associated installations still needed to keep parts of their operations running. Returning production to Brent Charlie after almost a one and a half year shut-in and returning production on Nelson and Shearwater has had a positive effect on the energy intensity of our operations. This was offset by the effects of having to bring Haewene Brim, (Pierce) FPSO, into dry dock for a major refurbishment, transferring ownership of Curlew to Shell with subsequent integrity improvements and undertaking significant work on Gannet to replace flow lines and improve the topside integrity. All 3 of these installations were not producing for extended periods in 2013.

**USE OF ENERGY, RESOURCES AND WASTE MINIMISATION**

**Energy Use and Resource Management**

Increasing the stability of production from all our assets is the single most important lever to increase energy efficiency. In 2013 we continued with initiatives to sustainably improve the integrity and reliability of our installations. These initiatives integrate with our overall GHG Strategy that focuses on reliability operations and improving energy efficiency within projects.

When developing new reserves, our focus is on making best use of existing infrastructure (Shell and third party) so we use resources more efficiently and disturbance to the environment is minimised. In new developments the effective minimisation of GHG emissions is a key element of our project screening criteria.

**Waste Management**

Waste is closely controlled across all our UK operations with our installations actively segregating their waste streams to ensure legal compliance and allow for more environmentally acceptable routes of disposal. Our Environmental Representatives (E-Reps, see section below) are involved with the checking of compliance and working with the people on site so that they understand the requirements for segregating wastes during activities at the installations.

Overall waste mass was higher than 2012 (an increase of 55%), with an increase in both hazardous waste and...
non-hazardous waste mass in 2013. Drilling related activities and tanker lifts of produced water off both Curlew and the Haewe Brim have pushed the annual tonnage up.

The Integrated Drilling Waste Management Project had reduced risk (manual handling, lifting and hoisting). Due to operational issues in 2013 there was, at that point, no significant reduction in waste to shore.

Bacton Gas Terminal continues to create waste water in significant volumes, this is classified as waste and requires offsite treatment. A new waste water treatment plant is being constructed to treat this water and is expected to be online in 2014.

Hazardous waste, which includes drilling mud and cuttings from our drilling activities, contaminated water and sludge from onshore and offshore operations, waste oil, paint and chemicals, increased by approximately 8,500 tonnes compared to 2012. The main contribution comes from process water removed from Bacton Gas Plant which is mainly categorised as hazardous waste and is treated and disposed of offsite, as mentioned above.

Overall the non-hazardous waste, which includes scrap metals, wood, paper, plastics, cans, general waste and also produced water from on and off-shore installations, also increased in 2013. A considerable element of this was soil and rubble removal by the Bacton Rejuvenation project in preparation for construction works.

In summary, waste tonnage increased in 2013 with Waste Water treatment and disposal the highest volume from Bacton and Curlew.
BIODIVERSITY AND SENSITIVE AREAS

UK regulations and Shell Group HSSE & SP control framework set standards for managing risks to biodiversity and ecosystems arising from our activities. Biodiversity and presence of critical habitats is a key consideration in our environmental impact assessments for new projects and significant modifications to existing facilities.

Assessment of impacts is particularly important for activities in or close to proposed or established protected areas and other sensitive habitats. Some of our infrastructure is located in or near the offshore Sites of Community Importance (SCIs): “North Norfolk Sandbanks and Saturn reef” and “Haisborough, Hammond and Winterton”, as well as newly proposed Scottish Marine Protected Area (MPA) “East Gannet and Montrose Field”. In 2013 we carried out detailed habitat investigations in and near these areas to inform assessment of potential impacts that our proposed activities may have to habitats and species protected by law, eg. biogenic reefs formed by Sabellaria spinulosa in the Southern North sea (Figure 12) or submarine structures made by leaking gases, also known as Methane Derived Authigenic Carbonate (MDACs) found in the Central North Sea (Figure 13). Furthermore, our seabed monitoring program at Gannet was modified to investigate potential presence of Arctica Islandica, a long lived bivalve species protected by OSPAR and one of the features of conservation importance of the proposed Scottish MPA. In fact, assessment of potential presence of sensitive species or habitats has become a standard practice for any of our drilling or project activities. With this information we can look for ways to minimise our impacts, support the management of such areas and inform consultations with relevant local and national agencies.

MONITORING SEABED IMPACTS

It is important for us to have scientific evidence to evaluate the environmental impacts, around our installations and especially those in proposed or established conservation areas. Our existing programme of environmental seabed surveys, agreed with DECC and JNCC, monitors the longterm impacts of our activities, as there is the potential for contaminants to accumulate in seabed sediments. We monitor the sediment chemistry and health of seabed-dwelling (benthic) organisms around our installations to understand the effect we may be having on the environment near the installations. We use this evidence to support assessments of actual and potential environmental impacts when applying for licenses and permits.

In 2013 we completed four environmental monitoring surveys at Nelson, Gannet, Pierce and Shearwater fields in the Central North Sea with the aim of evaluating temporal changes in the benthic environment and communities. In general, results of monitoring seabed surveys for the past seven years indicate a reduction and in some cases a redistribution of contaminant levels around our installations and an improvement in biological diversity indicators.

The results of a large post decommissioning environmental survey conducted at the Indefatigable field in 2012 suggest that the sediments around the former Indefatigable platform locations have largely recovered from historic inputs of oil based mud/low toxicity oil based mud with sediments returning to the background condition. The observed data and trends also show that the decommissioning operations did not have a significant effect on the sediment chemistry, or the benthic community structure.

The raw data from all seabed sampling surveys is reported into the UK Benthos database, maintained by Oil and Gas UK.

Figure 12: Sabellaria sp. aggregations near Leman A (North Norfolk Sandbanks and Saturn reef SCI)

Figure 13: Methane Seeps (MDAC) in Sublittoral Sediments (Block 29/3, Central North Sea)
PLATFORM DECOMMISSIONING

Brent Decommissioning

The decommissioning of the Brent field and facilities is one of the most significant projects in the North Sea and is likely to span over a decade. Shell began decommissioning studies in 2006, well before cessation of production, and communication and engagement with a wide range of stakeholders has continued since 2007. Our stakeholders include local and national environmental groups, fishermen’s associations, key government agencies, national and local government, unions, industry bodies, academics and think-tanks. Through the consultation process, we aim to identify optimal solutions for decommissioning Brent facilities, driven by what is safe, technically achievable, environmentally sound, societally balanced and financially responsible.

A wide range of communication methods have been used to engage stakeholders including fourteen stakeholder dialogue sessions. We are keen to hear stakeholders’ views on our studies to inform the decision making process for each of the decommissioning options.

The dedicated Brent Decommissioning website will be further developed and enhanced as the Project progresses (www.shell.co.uk/brentdecomm) towards the submission of the Decommissioning Programme to DECC and the regulatory process that follows. This website already has a contact facility whereby any stakeholder can contact the stakeholder engagement team directly with issues and comments, or requesting information.

Brent Delta ceased production on December 31st 2011. Work continues with the plug and abandonment of the wells and general operational/engineering preparations for the topsides removal. The Cell Survey Project is progressing with preparations to investigate the contents within the Brent Delta Gravity Based Structure. A specialist stakeholder task group was convened to assist in the assessment of the cell content management options.

An Independent Review Group (IRG) of ten eminent academics review the science and conclusions of the many technical studies that have been commissioned. Their final report will be available along with the Decommissioning Programme.

The Environmental Impact Assessment (EIA) process, that supports the overall Brent field decommissioning programme, is well underway and the EIA scoping report is now available to stakeholders to read. This scoping report represents the first stage in the preparation of the detailed Environmental Impact Assessment for the project. It defines the scope of the project, describes the environments in which activities may take place, outlines the options which the project is considering and identifies the potential environmental impacts that should be evaluated in more detail in the EIA.

Shell has awarded Allseas the contract to remove and bring to shore the platforms’ topsides and Brent Alpha’s steel jacket using the Pieter Schelte vessel. Once built, the single-lift vessel will be 382 metres long and 117 metres wide, and the first vessel ever built to have the ability to remove topsides in one lift.

The contract for recycling the topsides and Brent Alpha jacket has been awarded to Able Seaton Port near Hartlepool, UK. The target is for at least 95% of the facilities to be recycled. Able anticipate the creation of 100 jobs over an 18 month period to support the strengthening of the quay in advance of the first topside being received with a further 100 jobs required when the recycling work begins.
CARBON CAPTURE AND STORAGE (CCS)

Throughout 2013 Shell with the support of SSE Generation Limited (SSE), worked towards developing the world’s first full chain gas fired carbon capture and storage (CCS) demonstration project at the existing SSE power station in Peterhead, Aberdeenshire, Scotland. The Peterhead CCS Project (the Project) aims to demonstrate full chain CCS technology at an industrial scale in the UK, as well as helping decarbonise the UK’s power sector.

If it proceeds to completion, the Project is expected to be up and running by the end of the decade.

The Project broadly consists of three main components:

- Constructing and operating a CO₂ capture plant at the existing Peterhead Power Station. This plant will capture CO₂, which would otherwise be released to the atmosphere from the exhaust gases from one of the station’s existing gas turbines. It will then compress and dry the captured CO₂ in preparation for onward transportation.

- Transporting the CO₂ via a combination of new and existing pipelines to the Shell operated Goldeneye platform in the North Sea some 100 km to the north east of Aberdeen. A new direct offshore pipeline approximately 20 km and in length will tie-in to the existing 100 km pipeline to the Goldeneye platform (that runs from the Shell St. Fergus Gas Terminal north of Peterhead).

- Injecting the CO₂ into the depleted Goldeneye gas reservoir for permanent geological storage. The Goldeneye reservoir has the key geological features required for storing CO₂ permanently: a body of high quality porous rock overlain and surrounded by layers of impermeable rock, which provide effective barriers to keep the CO₂ securely contained deep beneath the seabed.

Figure 14: Peterhead power station from where CO₂ will be captured

ENVIRONMENTAL REPRESENTATIVES

Environmental Representatives or “E-reps”, are volunteer members of the worksite community on all of Shell’s oil and gas installations, both onshore and offshore, who step forward as champions for environmental performance.

Since publication of the Maitland report in 2012 there has been an industry wide drive in the UK to increase the workforce involvement with environmental management. This has also included increasing interconnection and cross-learning from E-reps across the industry initially focused around industry training programmes and an annual “E-Rep Forum”. Shell has supported the training programme and has had active representation at all the forums.

The E-rep programme has been an integral part of Shell UK’s environmental management for a number of years and there has been a concerted effort in 2013 to build and strengthen this network so that it will be one of the cornerstones for delivering compliance and future improvements.

The Shell E-Rep forum gained momentum in 2013 with steady increases in numbers attending the onshore events and the commencement of two monthly E-Rep Committee teleconference meetings.

The E-Reps have been involved in activities related to; spill reduction, waste segregation, identifying improvements for the control and storage of chemicals and bunkering improvements. It is expected that they will play a more prominent role in environmental management going forward, that will drive grassroots commitment to environmental responsibility.

LATERAL LEARNING AND COOPERATION

Shell expects to participate in various stakeholder, government and industry forums to support processes that lead to consistent environmental improvement in the oil and gas activities in the UKCS. These include contributions to government consultation processes, both individually and as part of the industry associations such as Oil and Gas UK (OGUK).

We participate in a number of OGUK working groups and forums which include the Oil Spill Response Group, Environment Forum and Well Fluids Working Group, as well as taking an active part in the steering committee for the Upstream Environment Group of the Energy Institute (EI). The EI have been working on various industry-wide projects related to environmental performance improvement, one of these is to develop guidance for bunding requirements offshore.

In addition we jointly funded, with government and industry, research and technology programmes. Research supported by Shell in 2013 included; OGUK, OGP and EI projects and working with the North Sea Bird Club on data gathering on migratory birds. We are part of the steering committee that is setting up the INSITE JIP that will investigate the impact of offshore structures on the ecosystem of the North Sea. This will be a multi-year programme of work that will be science-led.
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.

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

For further information, please call the Shell office in Aberdeen on **01224 882000** and ask for the Communications department.

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

**SUMMARY OF ENVIRONMENTAL DATA (2009-2013)**

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHG (Tonnes CO₂ equivalent)</td>
<td>2,786,884</td>
<td>2,748,043</td>
<td>2,306,496</td>
<td>2,092,394</td>
<td>2,417,160</td>
</tr>
<tr>
<td>Total Fuel Gas (Tonnes)</td>
<td>739,173</td>
<td>789,908</td>
<td>580,049</td>
<td>486,240</td>
<td>552,055</td>
</tr>
<tr>
<td>Total Diesel (Tonnes)</td>
<td>30,381</td>
<td>64,466</td>
<td>42,621</td>
<td>100,864</td>
<td>96,548</td>
</tr>
<tr>
<td>Total Hydrocarbon to Flare (Tonnes)</td>
<td>186,382</td>
<td>177,074</td>
<td>141,750</td>
<td>107,599</td>
<td>173,936</td>
</tr>
<tr>
<td>Oil to Sea (Tonnes) (discharged in produced water)</td>
<td>506</td>
<td>445</td>
<td>238</td>
<td>142*</td>
<td>263</td>
</tr>
<tr>
<td>Hazardous Waste Generated (tonnes)</td>
<td>24,818</td>
<td>27,625</td>
<td>28,085</td>
<td>30,020</td>
<td>38,485</td>
</tr>
<tr>
<td>Non-Hazardous Waste Generated (tonnes)</td>
<td>12,684</td>
<td>15,550</td>
<td>19,047</td>
<td>28,769</td>
<td>53,274</td>
</tr>
<tr>
<td>Production Chemical Use (tonnes)</td>
<td>4,831</td>
<td>4,500</td>
<td>3,433</td>
<td>2,246</td>
<td>2,680</td>
</tr>
<tr>
<td>% Discharge</td>
<td>67</td>
<td>59</td>
<td>56</td>
<td>52</td>
<td>60</td>
</tr>
<tr>
<td>Wells Chemical Use (tonnes)</td>
<td>28,293</td>
<td>9,778</td>
<td>9,046</td>
<td>8,102</td>
<td>17,163</td>
</tr>
<tr>
<td>% Discharge</td>
<td>25</td>
<td>17</td>
<td>15</td>
<td>17</td>
<td>28</td>
</tr>
</tbody>
</table>

*Amended from 2012 report as reported data updated

The figures shown above relate to all offshore installations operated by Shell U.K. Limited, and 3rd Party fields that produce to them, plus onshore plants and mobile rigs in the U.K. – all as reported by Shell to the U.K. Environmental Emissions Monitoring System EEMS.

### 2009-2013 Emissions: Total GHG (CO₂ Eq. Tonnes), Total Fuel Gas (Tonnes), Total Diesel (Tonnes), Total Flare (Tonnes)

[Graph showing emissions data]

### Annual Production Chemicals Used (tonnes) and Percentage Discharged (2009-2013)

[Graph showing production chemicals and percentage discharged]
APPENDIX 1

SUMMARY OF ENVIRONMENTAL DATA (2008-2012)

Oil to Sea (Tonnes) (Discharged in Produced water)
Annual totals 2009-2013

Hazardous Waste (Tonnes) Non-Hazardous Waste (Tonnes)

Annual Wells Chemicals Used (Tonnes) and
Percentage Discharged (2009-2013)

Total Hazardous and Non Hazardous Waste 2009-2013
APPENDIX 2

E-PON1S REPORTED 2013 AND DETAILS
OF RELEASES >2 TONNES

<table>
<thead>
<tr>
<th>Incidents and Response*</th>
<th>Tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clipper (Sole Pit Asset Group), Monoethylene Glycol (MEG) discharged to Sea due to overfilling tank</td>
<td>177.6</td>
</tr>
<tr>
<td>Brent Bravo, Diesel release to sea during bunkering operations</td>
<td>13.9</td>
</tr>
<tr>
<td>Brent Charlie, Oil in Produced Water (OPPC regulation non compliance) that requires reporting to the regulator using the e-PON1 form. Instability in the water column in the water storage columns led to carry over of oil in the produced water discharge.</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Notifiable (PON 1) Oil and Chemical Spills - Number | 76
Notifiable (PON1) Oil and Chemical Spills - Total Mass (tonnes) | 197

PON 1 = Petroleum Operations Notice No.1
We are required to notify the relevant authorities of all visible sheens and accidental/unplanned discharges or spills of oil or chemicals to sea, regardless of volume, using a PON1 to:
- Nearest Coastguard Station
- Department of Business, Enterprise and Regulatory Reform; DECC
- Joint Nature Conservation Committee (JNCC)
- Any relevant statutory Nature Conservation Agency

The list of spills above shows only those greater than 2 tonnes, this figure was used in previous reports and retained for 2013 to maintain consistency.
# APPENDIX 3

## WELL ACTIVITIES IN 2013

### Wells Drilled in 2013

<table>
<thead>
<tr>
<th>Installation / Rig</th>
<th>Shell Well Name</th>
<th>Well Start Date</th>
<th>DECC Permit Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ocean Guardian</td>
<td>Guillemot P5*</td>
<td>17 November 2013</td>
<td>PON15B/744</td>
</tr>
<tr>
<td>Ocean Guardian</td>
<td>FRAM P2</td>
<td>06 April 2013</td>
<td>PON15B/788</td>
</tr>
<tr>
<td>Ocean Guardian</td>
<td>FRAM G2</td>
<td>23 May 2013</td>
<td>PON15B/792</td>
</tr>
<tr>
<td>Noble Hans Deul</td>
<td>SW09s1*</td>
<td>01 October 2013</td>
<td>PON15B/861</td>
</tr>
<tr>
<td>Noble Al White</td>
<td>Sean PD02*</td>
<td>22 November 2013</td>
<td>PON15B/870</td>
</tr>
<tr>
<td>Nelson</td>
<td>N20X</td>
<td>09 March 2013</td>
<td>PON15B/769</td>
</tr>
<tr>
<td>Nelson</td>
<td>N33y</td>
<td>31 January 2013</td>
<td>PON15B/744</td>
</tr>
<tr>
<td>Nelson</td>
<td>N40</td>
<td>22 August 2013</td>
<td>PON15B/813</td>
</tr>
<tr>
<td>Nelson</td>
<td>N41</td>
<td>13 November 2013</td>
<td>PON15B/813</td>
</tr>
<tr>
<td>Nelson</td>
<td>N41Z</td>
<td>13 November 2013</td>
<td>PON15B/860</td>
</tr>
<tr>
<td>Swift-10</td>
<td>Carrack West</td>
<td>21 August 2013</td>
<td>PON15B/763</td>
</tr>
<tr>
<td>Swift-10</td>
<td>Carrack East</td>
<td>06 May 2013</td>
<td>PON15B/789</td>
</tr>
</tbody>
</table>

Although operation began in 2013, the operation was not completed until 2014

### Wells Drilled in 2013

<table>
<thead>
<tr>
<th>Installation</th>
<th>Shell Well Name</th>
<th>Completed/Abandonment Date</th>
<th>DECC Permit Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ocean Guardian</td>
<td>Commander</td>
<td>15 November 2013</td>
<td>PON15F/620</td>
</tr>
</tbody>
</table>

There is a possibility that some or all of these wells will be re-entered to carry out further abandonment workscope.
**APPENDIX 4**

**ABBREVIATIONS AND TERMINOLOGY**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset</td>
<td>Used internally in Shell to describe a collection of locations and supporting services; also includes onshore plants and interconnecting pipelines.</td>
</tr>
<tr>
<td>Associated Gas</td>
<td>Gas liberated from oil as the pressure is reduced from subsurface conditions to the surface separation facilities.</td>
</tr>
<tr>
<td>Benthos / Benthic</td>
<td>Flora (plants) and fauna (animals) found at the bottom of ocean, sea or lake.</td>
</tr>
<tr>
<td>Bentonite</td>
<td>Natural clay used to thicken well engineering and completion fluids.</td>
</tr>
<tr>
<td>CCS</td>
<td>Carbon Capture and Storage</td>
</tr>
<tr>
<td>CEFAS</td>
<td>Centre for Environment, Fisheries &amp; Aquaculture Science</td>
</tr>
<tr>
<td>CFC</td>
<td>Chloro-Fluoor-Carbon. A substance containing chlorine, fluorine and carbon, used in refrigeration systems.</td>
</tr>
<tr>
<td>CI</td>
<td>Corrosion Inhibitor</td>
</tr>
<tr>
<td>CMS</td>
<td>Corporate Management System</td>
</tr>
<tr>
<td>CNNS</td>
<td>Central and Northern North Sea Assets</td>
</tr>
<tr>
<td>COMAH</td>
<td>Control of Major Accident Hazards Regulation</td>
</tr>
<tr>
<td>CoP</td>
<td>Cessation of Production</td>
</tr>
<tr>
<td>DECC</td>
<td>Department of Energy and Climate Change (formerly BERR)</td>
</tr>
<tr>
<td>De-oiler</td>
<td>Chemical used in the production process to promote separation of oil from produced water</td>
</tr>
<tr>
<td>EEMS</td>
<td>Environmental Emissions Monitoring System (Oil &amp; Gas U.K.)</td>
</tr>
<tr>
<td>EMS</td>
<td>Environmental Management System</td>
</tr>
<tr>
<td>EP</td>
<td>Exploration and Production</td>
</tr>
<tr>
<td>EPR</td>
<td>Environmental Permitting Regulations (England and Wales)</td>
</tr>
<tr>
<td>EU ETS</td>
<td>Council Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading with the community</td>
</tr>
<tr>
<td>F-Gas</td>
<td>Fluorinated greenhouse gases</td>
</tr>
<tr>
<td>FPSO</td>
<td>Floating Production, Storage and Offloading vessel</td>
</tr>
<tr>
<td>GHG</td>
<td>Greenhouse gases (mainly carbon dioxide, methane, nitrous oxide and HFC’s)</td>
</tr>
<tr>
<td>HCFC</td>
<td>Hydro-Chloro-Fluo-Carbon. A substance containing hydrogen, chlorine, fluorine and carbon, used in refrigeration systems.</td>
</tr>
<tr>
<td>HSSE &amp; SP</td>
<td>Health, Safety, Security, Environment and Social Performance</td>
</tr>
<tr>
<td>HQ</td>
<td>Hazard Quotient</td>
</tr>
<tr>
<td>IPPC</td>
<td>Integrated Pollution Prevention and Control (Scotland)</td>
</tr>
<tr>
<td>KPI</td>
<td>Key Performance Indicator</td>
</tr>
</tbody>
</table>
**ABBREVIATIONS AND TERMINOLOGY**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>JNCC</td>
<td>Joint Nature Conservation Committee. Public body that advises the U.K. Government and devolved administrations on nature conservation</td>
</tr>
<tr>
<td>MCA</td>
<td>Maritime and Coastguard Agency</td>
</tr>
<tr>
<td>MEG</td>
<td>MonoEthylene Glycol</td>
</tr>
<tr>
<td>NUI</td>
<td>Normally Unmanned Installation</td>
</tr>
<tr>
<td>NSP</td>
<td>Northern Systems and Plant</td>
</tr>
<tr>
<td>OCNS</td>
<td>Offshore Chemical Notification Scheme</td>
</tr>
<tr>
<td>OGUUK</td>
<td>Oil and Gas U.K., U.K. offshore oil industry association</td>
</tr>
<tr>
<td>OIPW</td>
<td>Oil in Produced Water</td>
</tr>
<tr>
<td>OPEP</td>
<td>Oil Pollution Emergency Plan</td>
</tr>
<tr>
<td>OPPC</td>
<td>Offshore Petroleum Activities (Oil Pollution Prevention and Control) Regulations 2005</td>
</tr>
<tr>
<td>OSPAR</td>
<td>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).</td>
</tr>
<tr>
<td>PON1</td>
<td>Petroleum Operations Notice type 1. DECC requires Operators to report any oil or chemical spills, sheens, or excessive discharges to their Offshore Inspectorate using a PON1 form available on their website at <a href="https://www.og.berr.gov.uk/regulation/pons/index.htm">https://www.og.berr.gov.uk/regulation/pons/index.htm</a></td>
</tr>
<tr>
<td>PPC</td>
<td>Pollution Prevention and Control Act 1999 and Offshore Combustion Installations (Prevention and Control of Pollution) Regulations 2001</td>
</tr>
<tr>
<td>PWRI</td>
<td>Produced Water Re-Injection</td>
</tr>
<tr>
<td>SAC</td>
<td>Special Area of Conservation</td>
</tr>
<tr>
<td>SEPA</td>
<td>Scottish Environmental Protection Agency</td>
</tr>
<tr>
<td>SERPENT</td>
<td>Scientific and Environmental ROV Partnership using Existing iNdustrial Technology</td>
</tr>
<tr>
<td>SICI</td>
<td>Scale Inhibitor/Corrosion Inhibitor</td>
</tr>
<tr>
<td>SNS</td>
<td>Southern North Sea Assets</td>
</tr>
<tr>
<td>SOSREP</td>
<td>Secretary of States Representative for Maritime Salvage and Intervention</td>
</tr>
<tr>
<td>SP</td>
<td>Social Performance</td>
</tr>
<tr>
<td>TEG</td>
<td>TriEthylene Glycol (antifreeze)</td>
</tr>
<tr>
<td>UKCS</td>
<td>United Kingdom Continental Shelf</td>
</tr>
<tr>
<td>WBM</td>
<td>Water Base Mud</td>
</tr>
</tbody>
</table>
The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate 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” refer specifically to Shell’s Upstream businesses in the UK. Likewise, the words “we”, “us” and “our” are also used to refer to Shell’s Upstream business in the UK in general or to those who work for them. These expressions are also used where no useful purpose is served by identifying the particular company or companies. “Subsidiaries”, “Shell subsidiaries” and “Shell companies” as used in this report refer to companies over which Royal Dutch Shell plc either directly or indirectly has control. Companies over which Royal Dutch Shell has joint control are generally referred to “joint ventures” and companies over which Royal Dutch Shell has significant influence but neither control nor joint control are referred to as “associates”. In this report joint ventures and associates may also be referred to as “equity-accounted investments”. The term “Shell interest” is used for convenience to indicate the direct and/or indirect (for example, through our 23% shareholding in Woodside Petroleum Ltd.) ownership interest held by Royal Dutch Shell in a venture, partnership or company, after exclusion of all third-party interest.

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 “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 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; and (m) changes in trading conditions. 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 20-F for the year ended December 31, 2013 (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, 31st December 2013. Neither Royal Dutch 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 report.

We may have used certain terms, such as resources, in this report that United States Securities and Exchange Commission (SEC) strictly prohibits us from including in our filings with the SEC. U.S. 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. You can also obtain these forms from the SEC by calling 1-800-SEC-0330.