

# UKCS ENVIRONMENTAL STATEMENT 2014



WELCOME TO ENQUEST'S PUBLIC STATEMENT ON ENVIRONMENTAL MANAGEMENT AND ENVIRONMENTAL PERFORMANCE FOR 2014 THIS STATEMENT HAS BEEN PREPARED IN FULFILLMENT OF THE DEPARTMENT OF ENERGY AND CLIMATE CHANGE (DECC) REQUIREMENT UNDER OSPAR RECOMMENDATION 2003/5 FOR OPERATORS WHO HAVE AN ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) WHICH IS NOT ACCREDITED TO INTERNATIONAL STANDARDS SUCH AS ISO 14001:2004 OR EMAS, TO PRODUCE AN ANNUAL EMS PERFORMANCE STATEMENT.

It represents an open & transparent picture of our environmental performance across our offshore activities for the year 2014. The statement covers environmental performance, describes the extent to which we are meeting our environmental goals and outlines our future objectives.

Across all assets, the volume of liquid waste produced remains within our yearly permitted allowance. In addition, all assets achieved yearly average oil in produced water concentrations within the 30 mg/l limit as set by the Regulator. Individually, the assets performed at the following levels:

Kittiwake - 28 mg/l Heather Alpha - 27 mg/l Thistle Alpha - 11 mg/l Northern Producer - 23 mg/l

EnQuest strives to minimise the overall volume of chemicals we use. Throughout the year we worked with our contractors to replace, where possible, chemicals with more environmentally acceptable alternatives.

Identifying ways to minimise the risk of potential unplanned spills to the marine environment remained a focus during 2014, with the number of accidental spills to the marine environment totaling 9.

In early 2015, EnQuest completed a successful external verification of its greenhouse gas emissions as required under the Companies Act 2006 (Strategic and Directors' Reports) regulations 2013. Total CO<sub>2</sub> emissions resulting from flaring and power generation totaled 502,862 tonnes.

As a mature province the UKCS presents itself as a challenging place to work. Nevertheless, we are committed to improving the environmental performance of our assets. For any enquiries please contact environment@enquest.com.



# HSE&A Policy Health, Safety, Environment & Assurance



EnQuest is the UK's largest independent oil & gas development and production company, operating in the North Sea and internationally. We are committed to operating responsibly and will not compromise our health, safety or environmental standards to meet our business objectives.

Through respect for our people, our contractors, our customers, our stakeholders and the environment, we will operate to achieve our principal aim: safe results, with no harm to people and respect for the environment.

To achieve this we will manage our business such that we:

- . Demonstrate strong leadership and visible commitment to HSE&A
- · Comply with all applicable legislation and industry standards
- · Maintain high-quality systems and processes
- · Assess and manage risks
- Maintain safe and healthy workplaces
- · Manage and mitigate our impact on the environment
- · Provide trained and competent resources
- · Encourage open and honest communication
- · Ensure our contractors and suppliers comply with our policies and procedures
- · Maintain the integrity of our assets over their life cycles
- Assess and manage change
- · Plan and be prepared for potential emergencies
- · Investigate and learn from incidents
- · Strive for continual improvement in our performance

Should operational results and safety ever come into conflict, we all have a responsibility to choose safety over operational results. This includes the responsibility to stop a job whenever activities may conflict with this policy.

Amjad Bseisu

Chief Executive Officer

EnQuest PLC, May 2015

ENG-COR-HS-000-POL-0001 Rev. 7

www.enquest.com

#### **OVERVIEW**

ENQUEST IS AN OIL AND GAS DEVELOPMENT AND PRODUCTION COMPANY: THE LARGEST UK INDEPENDENT PRODUCER IN THE UK NORTH SEA.

#### **PRINCIPAL ASSETS**

EnQuest's principal UK assets at the end of 2014 were its interests in the producing operated oil fields Heather/Broom, Thistle/Deveron, West Don, Don Southwest, Conrie, Kittiwake, Goosander, Gadwall, Grouse and Mallard along with the producing non-operated Alba oil field, also in the Alma/Galia, Kraken and Ythan developments, with further development opportunities in the Scolty/Crathes and Avalon discoveries.

#### **DELIVERING SUSTAINABLE GROWTH**

EnQuest is proving that it can deliver sustainable growth through increasing production and reserves. Production averaged 27,895 Boepd, up 15.2%, over 2013. Net 2P reserves were 220.0 MMboe as at the end of 2014, up 25.2 MMboe on the prior year.

#### **FINANCIAL STRENGTH**

With a strong balance sheet and strong cash flow generation, combined with its core competency in controlling costs and managing operations efficiently, EnQuest are well placed for the future.

#### RESPECT FOR THE ENVIRONMENT

As a responsible operator, we work towards reducing the environmental impact from all our operations.

- In EnQuest, respect is paramount for our people, our environment and the safety of others.
- Effective management of Health, Safety and Environmental performance is a key objective.

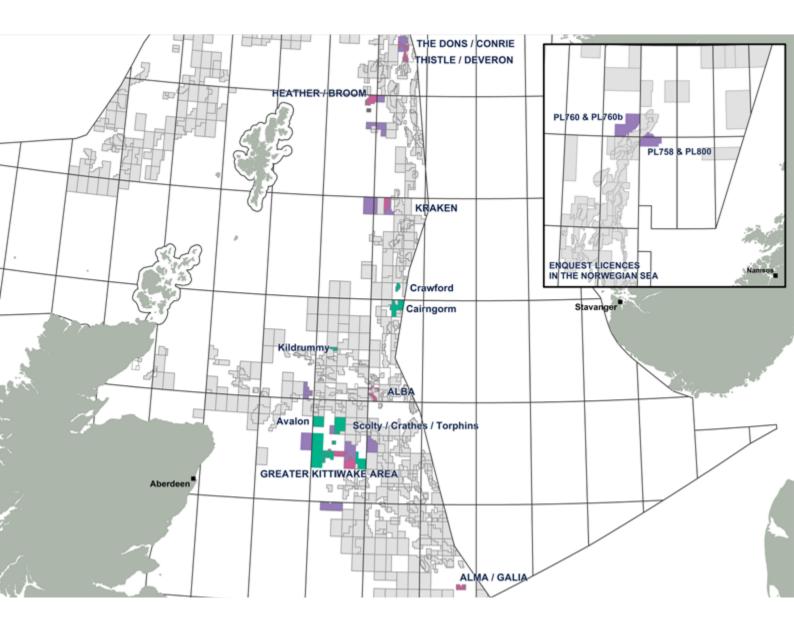
### GUIDING ALL OUR ACTIVITIES IS OUR PRINCIPAL AIM:

SAFE RESULTS, NO HARM TO PEOPLE AND RESPECT FOR THE ENVIRONMENT.



#### **OUR ACTIVITIES**

AT THE END OF DECEMBER 2014 ENQUEST HAD WORKING INTERESTS IN 34 UK PRODUCTION LICENCES, COVERING 45 BLOCKS OR PART BLOCKS IN THE UKCS AND WAS THE OPERATOR OF 29 OF THESE LICENCES.



The figure detailed shows our present areas of production and development, along with discoveries and areas in which we hold a licence.



#### **HEATHER**

Discovered in 1973, with first oil production in 1978, the Heather field lies in the East Shetland Basin. Oil is exported from the platform to the Ninian pipeline system and hence to the Sullom Voe Terminal. The Heather platform acts as the host for the nearby Broom field subsea development providing services to the Broom wells and processing the produced fields. Production delivered 4,081 Boepd in 2014, this was down slightly following a strong performance in 2013.



#### **NORTHERN PRODUCER**

In the Don field, oil was discovered in the sandstone of the Middle Jurassic Brent Group in 1973. The discovery was subsequently appraised by Shell/ESSO in 1976 and then developed by BP in the 1990s. EnQuest's redevelopment began production in 2009. The development consists of three sub-sea tie- backs: Don South West, West Don and Conrie. During 2014, production delivered 8,835 Boepd, down from 11,014 Boepd in 2013.



#### **THISTLE**

The Thistle was discovered in 1973. A single steel jacket platform was installed in 1976 and production began in February 1978 for BNOC/Britoil/BP. The licence operatorship subsequently changed to DNO in 2003, then to Lundin in 2004 before the demerging of Lundin's UK assets in 2010, when EnQuest became the operator. During 2014, production delivered 9,024 Boepd, up from 7,925 Boepd in 2013.



#### **OCEAN PRINCESS**

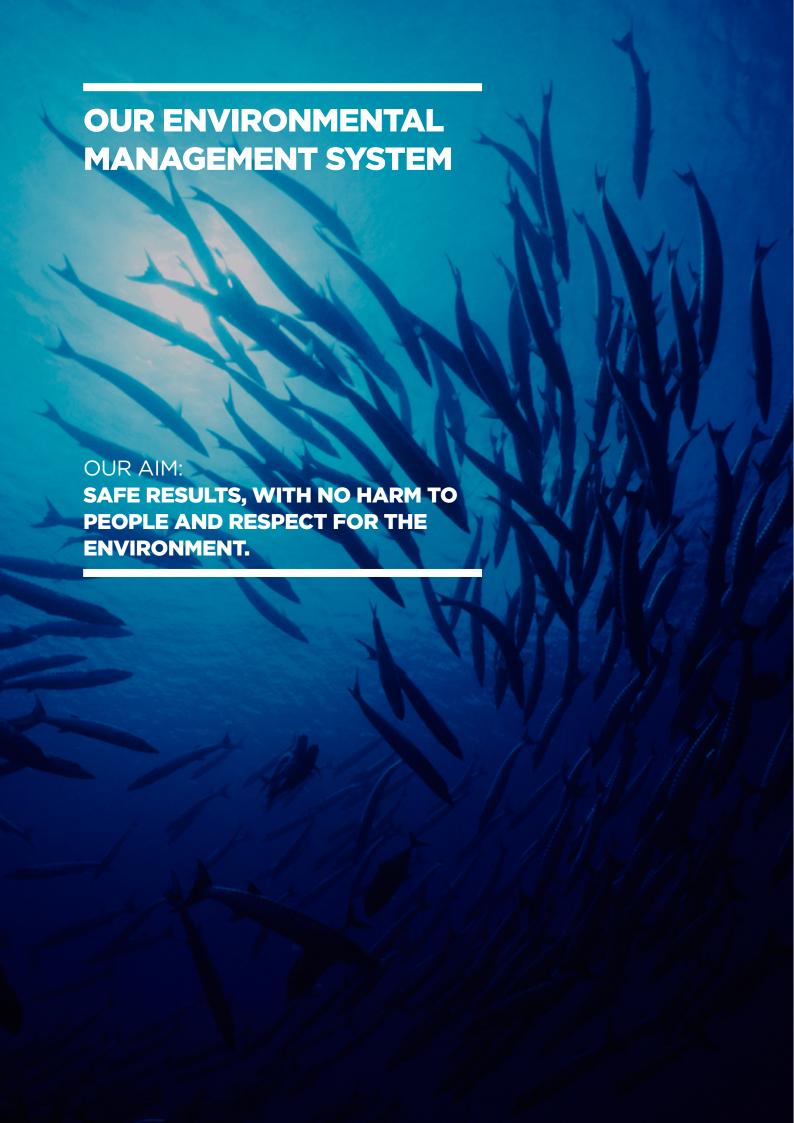
The Ocean Princess is an 'Aker H-3 Modified' semi-submersible drilling rig owned by Diamond Offshore and built in 1975. The rig has been on hire to EnQuest to batch drill subsea wells in the Alma field since early 2012. It has also been used to drill the Kildrummy appraisal well in the central North Sea.



#### **STENA SPEY**

The Stena Spey is a 'Friede & Goldman L-907 Enhanced Pacesetter' semi-submersible drilling rig, owned by Stena Drilling Ltd and built in 1983. The rig has been on hire to EnQuest to drill subsea wells since early 2012 in the Don SW and West Don fields.





### ACROSS ALL OUR OPERATIONS, WE MANAGE OUR ENVIRONMENTAL ACTIVITIES VIA OUR ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

EnQuest has established a framework for the effective management of environmental issues relating to activities and to achieve company aims. The EMS has been established to ensure company activities are conducted in such a way that minimises risks to the environment throughout our operations. The system operates as part of the company's broader integrated Business Management System ("BMS").

The overall purpose of the EMS is to:

- Describe arrangements for a consistent approach to environmental management
- Provide a framework for the achievement of objectives in order for EnQuest to manage risk in accordance with the requirements of company policies, applicable legislation, national/international standards and contractual or partnership commitments and achieve continual improvement.

As the EMS is subject to auditing & review, our goal of complying with statutory requirements is repeatedly challenged. Furthermore, as we apply our EMS across all our operations, we are able to share and learn from best practice and to achieve our goal of minimising risk of damage to the environment.

Our EMS is structured in line with the requirements of the international standard for environmental management and has been externally verified to meet the requirements of OSPAR Recommendation 2003/5 (May 2014).



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Enguest PLC, May 2015 EHECON FO DE POLIDET FIN. T

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HSE&A is EnQuest's top priority and HSE&A is deeply embedded in our culture and values. It is integral to how we manage our business, with regard to people, installations and the environment in which we operate.

Our HSE&A policy underpins how our environmental goals are progressed throughout our business operations. We are fully committed to operating responsibly so that environmental risks are minimised.

# OUR ENVIRONMENTAL PERFORMANCE

# EFFECTIVE MANAGEMENT OF ENVIRONMENTAL PERFORMANCE IS A KEY OBJECTIVE.

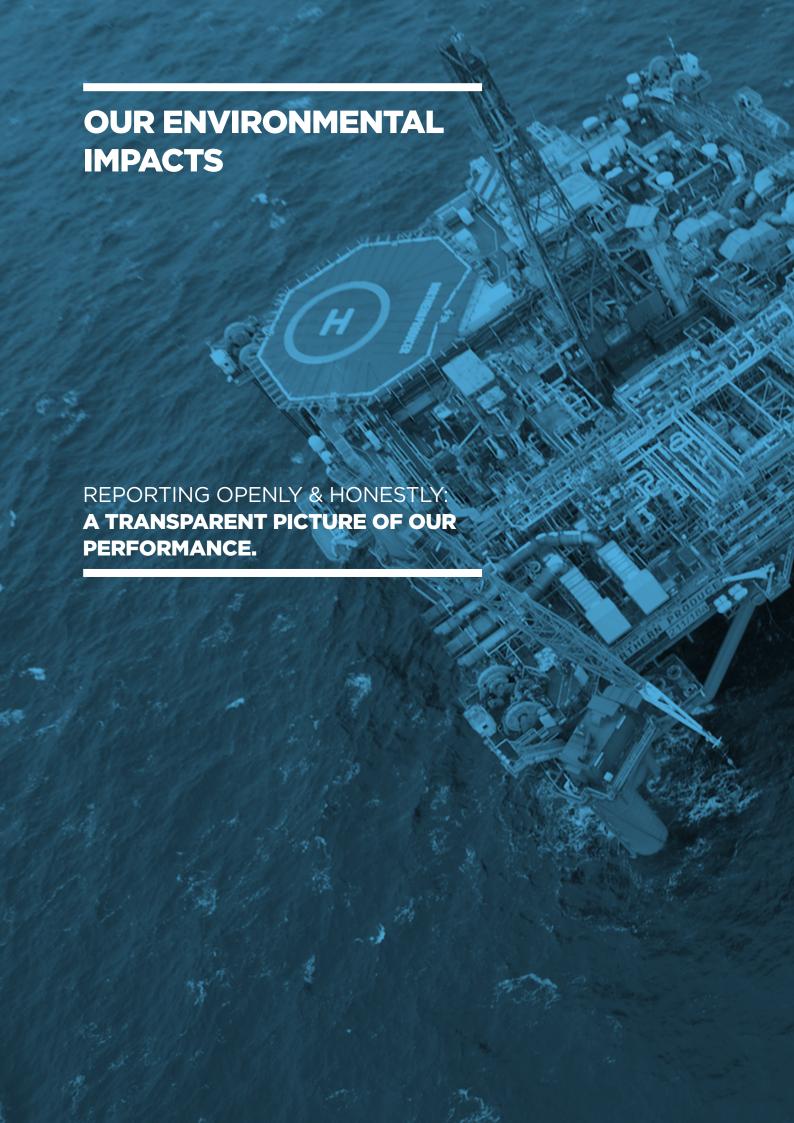
Across all assets, the volume of liquid waste produced (including the oil content of produced water, produced water volumes and chemicals discharged to sea) remain within all permitted allowance levels as agreed by the Regulator. Additionally, at EnQuest we strive to minimise the overall volume of chemicals we use. Throughout the year we worked with our contractors to replace, where possible, chemicals with more environmentally acceptable alternatives.

Identifying ways to minimise the risk of potential of unplanned spills to the marine environment also remained a focus during 2014. During 2014 there were 9 unplanned releases of hydrocarbons or chemicals from EnQuest production and drilling operations. Of the two releases from Heather, one was chemical related (180kg of pipeline chemical released to sea as a result of a pipeline failure) and the other was hydrocarbon related (a 0.001 kg release of diesel from a damaged breakaway coupling). The sole incident from Thistle was in relation to 0.001kg release of diesel from a pinhole leak in a bunkering hose. There were 4 unplanned releases to sea from the Northern Producer, 2 were chemical related (19.8kg release as a result of a failure of chemical distribution pipework and 37kg subsea release of base oil). The remaining releases were

hydrocarbon related (0.2kg release of diesel from an engine fuel pump and 20kg release of crude from the platform flare system). There were 2 unplanned releases from drill rigs, both occurred on the Ocean Princess and were chemical related (1.4kg release of hydraulic oil from a damaged seal on a grinder unit and 0.8kg release, again of hydraulic oil, from a loose hose fitting).

In addition to the unplanned releases, there were a total of 6 permitted discharge notifications from the Northern Producer in 2014. A permitted discharge notification is submitted when an activity, in this case the release of oil in produced water is permitted, however the discharge either falls outside the limits given in the permit or gives rise to a sheen on the sea surface that is unusual and is outwith the platform 500 metre safety zone.

CO<sub>2</sub> emissions resulting from the burning of fuel gas and diesel for the purpose of generating power totaled 282,704 tonnes, with the flaring of gas accounting for an additional 220,158 tonnes of CO<sub>2</sub>.



IN COMMON WITH OTHER OFFSHORE OIL AND GAS OPERATORS, ENQUEST HAS IDENTIFIED THE FOLLOWING AS SIGNIFICANT ENVIRONMENTAL IMPACTS OF ITS OPERATIONS. ENQUEST REGULARLY MONITORS AND REPORTS ITS ENVIRONMENTAL PERFORMANCE IN RELATION TO THESE ASPECTS IN LINE WITH THE REQUIREMENTS OF EU & UK LAW

#### **LIQUID WASTE**

Oil & gas extraction has associated produced water. On EnQuest's offshore installations, hydrocarbons are separated from produced water as part of the production process. However as traces of oil inevitably remain, the discharge of produced water is strictly controlled by the Offshore Petroleum Activities (Oil Pollution Prevention & Control) Regulations 2005 (as amended). These regulations set a limit on the average oil content of the water discharged. Liquid waste also consists of production chemicals discharged to water in the extraction process. Production chemicals have a number of functions. Any chemical used offshore during oil and gas production must be approved by the Centre for Environment, Fisheries and Aquaculture Science (CEFAS). The use and discharge of production chemicals is controlled under the Offshore Chemical Regulations 2002 (as amended). In collaboration with our chemical suppliers, EnQuest strives to use environmentally acceptable alternatives where possible in our operations through the chemical management process.

#### **ACCIDENTAL SPILLS**

Given the nature of our activities, there is always a risk that accidental spills may occur. All spills to sea, regardless of volume, must be reported to DECC via a Petroleum Operations Notice (PON1). At EnQuest we take our responsibilities to prevent accidental spills very seriously. We have processes and risk assessments in place to minimise the risk of accidental spills. In addition to statutory reporting

requirements, we internally record and investigate any releases of unpermitted chemical or oil. This helps improve our understanding of the root causes and identify actions to prevent similar incidents occurring in the future.

#### **MATERIAL WASTE**

Our operations consume natural resources and other material which generate a range of wastes. EnQuest must ensure that the segregation, transportation and eventual disposal of waste are managed in accordance with legislative requirements. EnQuest works closely with its onshore waste management contractors to identify recycling routes for as much of its waste as possible and conducts regular audits to evaluate waste management practices.

#### ATMOSPHERIC EMISSIONS

EnQuest uses energy in extracting, processing and exporting oil & gas. Atmospheric emissions generated by these activities across are regulated by the Greenhouse Gases Emission Trading Scheme (ETS) and the Offshore Combustion Installation (Prevention and Control of Pollution) Regulations 2013. EnQuest seeks to use energy efficiently within our facilities, and continually looks to identify opportunities that may reduce emissions from its operations. In addition, EnQuest report their annual greenhouse gas (GHG) emissions in their directors' report as per the Companies Act 2006 (Strategic and Directors' Reports) Regulations 2013.

#### **LIQUID WASTE**

ENQUEST AIMS TO MINIMISE THE ENVIRONMENTAL IMPACT OF THE DISCHARGE OF PRODUCED WATER. TREATMENT PLANTS AT OUR ASSETS REMOVE THE MAJORITY OF HYDROCARBONS, CHEMICAL AND SOLIDS PRESENT IN THE PRODUCED WATER STREAM. ALL OUR WASTE WATER IS TREATED AND MONITORED PRIOR TO DISCHARGE.

#### **OIL IN WATER**

As produced water contains traces of hydrocarbon, the Offshore Petroleum Activities (Oil Pollution, Prevention & Control) Regulations 2005 (as amended) sets the daily permitted average oil content of produced water at 30 mg/L.

#### AVERAGE OIL CONCENTRATION OF PRODUCED WATER BY ASSET

FIG.1

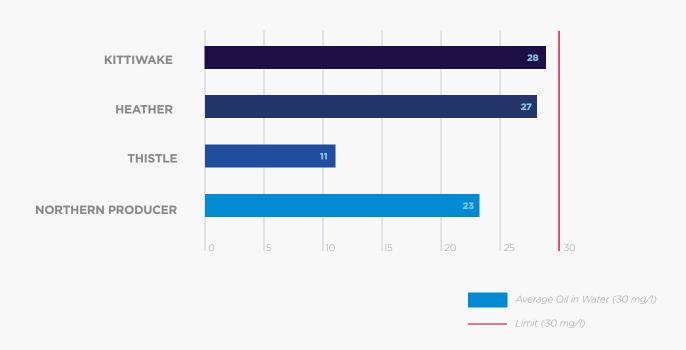


Figure 1. above shows average oil concentration of produced water across our assets for 2014. All assets have demonstrated yearly average oil concentrations that sit within the 30 mg/l legal limit.

#### **LIQUID WASTE CONTINUED**

### PRODUCED WATER DISCHARGED TO SEA (M³)

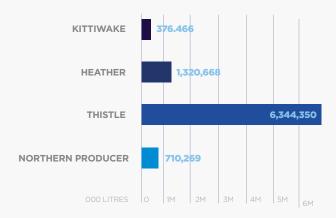


Figure above shows total volume of produced water discharged to sea during 2014.

## OIL IN PRODUCED WATER DISCHARGED TO SEA (TONNES)

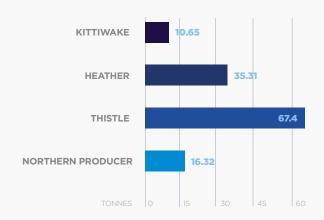


Figure above shows oil discharged to sea via the produced water stream during 2014.

#### **TOTAL CHEMICAL USE (TONNES)**

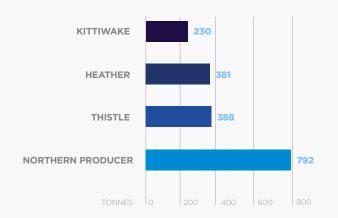


Figure above shows total chemical use during 2014.

## CHEMICALS DISCHARGED TO SEA IN PRODUCED WATER (TONNES)

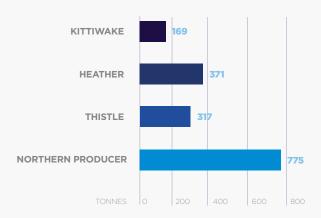


Figure above shows total mass of chemicals discharged to sea via the produced water stream during 2014.

#### **ACCIDENTAL SPILLS**

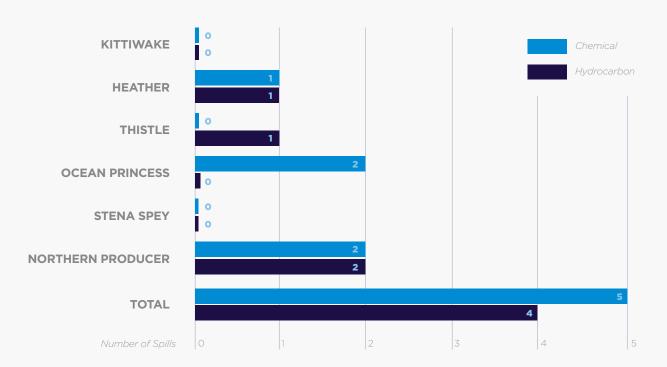
AS ACCIDENTAL SPILLS AT SEA CAN HAVE CONSEQUENCES FOR THE MARINE ENVIRONMENT, WE WORK TO MINIMISE THE RISK WITH A FOCUS ON PREVENTION. WE HAVE DECC APPROVED OIL EMERGENCY POLLUTION PLANS IN PLACE ACROSS ALL OUR ASSETS AND ARE A MEMBER OF OIL SPILL RESPONSE, THE WORLD'S LARGEST SPILL RESPONSE ORGANISATION

#### **NUMBER OF SPILLS**

All spills to the marine environment, regardless of volume, must be reported to DECC via a Petroleum Operations Notice (PON1). Figure 2 (below) details the number of PON1s submitted to DECC during 2014 that have been investigated and subsequently closed by the Regulator.

#### **ACCIDENTAL SPILLS DURING 2014**

FIG.2



At EnQuest we take our responsibility to prevent accidental spills seriously. Where spills have occurred we report timeously, and undertake detailed investigations where appropriate.

#### **SPILL QUANTITIES**

#### **MASS OF SPILLS DURING 2014**

FIG.3

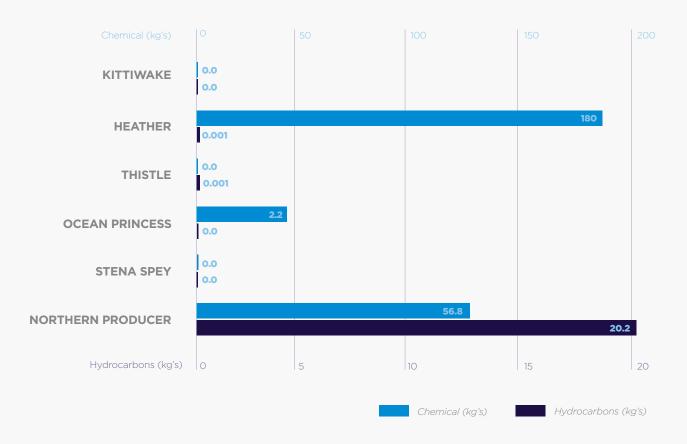


Figure 3 (above) details the total volume of hydrocarbon or chemical spills originating in 2014 from across our activities.

**Note 1** - There were 3 spills in 2013 that were not reported in the 2013 Annual Report as they remained under consideration by the Regulator at the end of 2013. They were as follows:

- Thistle 1 hydrocarbon spill (100kg).
- Northern Producer 1 chemical spill (12600kg). The leak of base oil (a drilling lubricant) had occurred during well start up when the rate of thermal expansion of the base oil contained within a well void had resulted in the opening of a leak path to sea. New well operating procedures now ensure that the rapid thermal expansion no longer occurs thereby eliminating the leak.
- Stena Spey 1 chemical spill (37kg)

**Note 2** - As at the end of 2014, EnQuest had notified the Regulator of three release incidents, the reporting of which had not been finalised by the Regulator. These will be disclosed in EnQuest's next reporting cycle following closure by the Regulator.

# **ATMOSPHERICS**

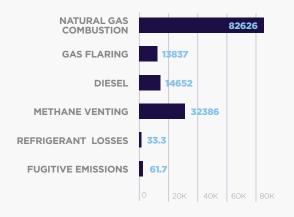
ALL OUR OPERATIONS USE ENERGY IN EXTRACTING, PROCESSING AND EXPORTING OIL AND GAS. WE MANAGE OUR ENERGY CONSUMPTION EFFICIENTLY TO REDUCE EMISSIONS FROM OUR OPERATIONS.

#### MANDATORY CARBON REPORTING

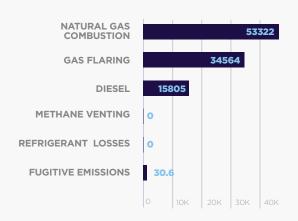
Under the Companies Act 2006 (Strategic and Director's Reports) Regulations 2013, EnQuest for the first time were required to report its annual greenhouse gas (GHG) emissions in its Directors' report. Carbon reporting is the first vital step for companies to make reductions in emissions. EnQuest's 2014 GHG emissions were externally verified in January 2015. The charts below provide detail of all our assets GHG emissions expressed as a CO<sub>2</sub> equivalent.

#### **GHG EMISSIONS BY ASSET**

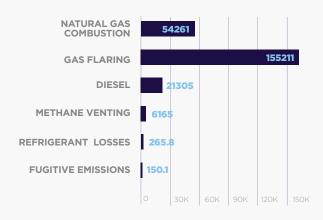
#### **HEATHER CO, EQUIVALENT (T)**



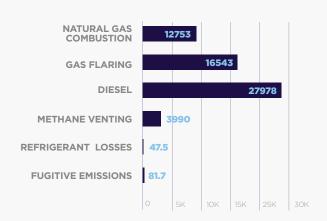
#### NORTHERN PRODUCER CO, EQUIVALENT (T)



#### THISTLE CO, EQUIVALENT (T)



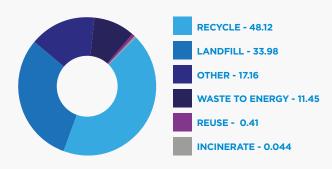
#### KITTIWAKE CO, EQUIVALENT (T)



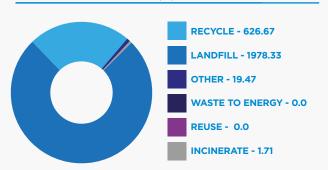


#### **OPERATIONAL WASTE**

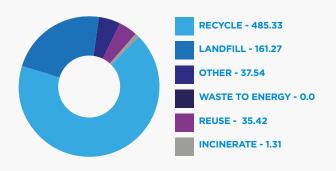
#### **KITTIWAKE - WASTE (T)**



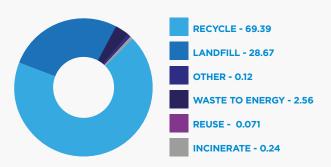
#### **HEATHER - WASTE (T)**



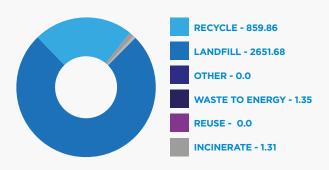
#### THISTLE - WASTE (T)



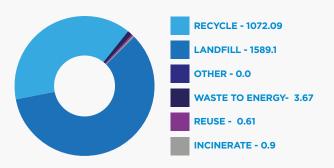
#### **NORTHERN PRODUCER - WASTE (T)**



#### **STENA SPEY - WASTE (T)**

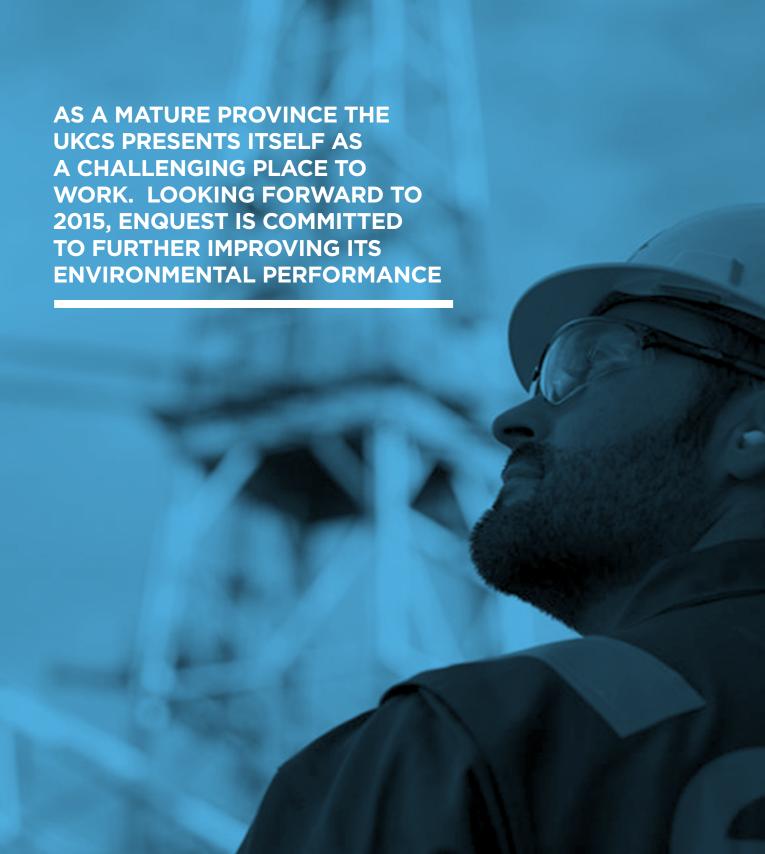


#### **OCEAN PRINCESS - WASTE (T)**



The charts above show the fate of waste that is generated on the EnQuest assets, including the drilling rigs.





#### **2015 CONTINUAL IMPROVEMENT PLAN**

# THOUGH WE ARE EXPANDING, ENQUEST REMAINS COMMITTED TO IMPROVING ITS ENVIRONMENTAL PERFORMANCE.

Within the Environmental Section of the 2015 HSEA Continual Improvement Plan activities planned for this year to cement and improve on current environmental performance across assets include:

- Continue to raise awareness across the business of environmental legislation and permit conditions to attempt to minimise permit non-compliances
- Conduct analysis of any spills to sea and permit non-compliances to identify root causes and implement improvement actions
- Improve environmental performance reporting to ensure environmental issues and non-compliances are communicated effectively across the business to facilitate prompt resolution
- Continue to implement and deliver on our Environmentally Critical Equipment (ECE)
   Strategy which will result in the compilation of a list of ECEs for EnQuest's offshore operated assets. The compilation of the list and subsequent entry into the Maintenance Management Database will ensure ECE's are adequately maintained to reduce the risk of any environmental incident occurring as a result of component failure
- Reduce waste to landfill from our operating assets by the implementation of a new offshore Waste Management Procedure.

# **CONTACT**

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