

**Public Statement on Environmental  
Management and Environmental  
Performance for 2012**



WELCOME TO ENQUEST'S PUBLIC STATEMENT  
ON ENVIRONMENTAL MANAGEMENT AND  
ENVIRONMENTAL PERFORMANCE FOR 2012



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 2012. The statement covers environmental performance, describes the extent to which we are meeting our environmental goals and outlines our future objectives.

Our environmental performance remains in line with the industry average. Across all assets, the volume of liquid waste produced remains within our yearly permitted allowance. Though maintaining the average oil in water concentration within consent limits on Heather has been a challenge during 2012, a number of actions have been taken to resolve the issue, including optimization trials, the fitting of a bypass line and operator training on the produced water equipment. 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 2012. Flaring across our assets is unavoidable and although CO<sub>2</sub> emissions were marginally higher than last year, overall emissions remained within permitted limits.

As a mature province the UKCS presents itself as a challenging place to work. Nevertheless, we are committed to maintaining the integrity of our assets and in 2013 EnQuest is committed to further improving its environmental performance. For any enquiries please contact [enquiries@enquest.com](mailto:enquiries@enquest.com).

We hope you find this statement interesting and informative.

- **Overview**
- **Our Activities**
- **Production and Development**
- **Our Environmental Management System**
- **Our Environmental Performance**
- **Our Environmental Improvements**
- **Our Environmental Aspects**
  - **Liquid Waste**
  - **Waste Management**
  - **Atmospheric Emissions**
  - **Accidental Spills**
- **Looking Forward**

# HSE&A Policy

Health, Safety, Environment & Assurance



EnQuest is the UK's largest independent oil & gas development and production company. We are committed to operating responsibly and will never knowingly compromise our health, safety or environmental standards to meet our operational 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
- Meet or surpass statutory requirements and best practice
- 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, January 2013

ENQ-COR-HS-000-POL-0001 Rev. 5

[www.enquest.com](http://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*

In the UK at the end of December 2012, including the assets it was offered in the UK's 27<sup>th</sup> Licensing Round, EnQuest had working interests in 39 production licences covering 55 blocks or part blocks in the UKCS and was the operator of 31 of its 39 licences. EnQuest's principal assets at the end of 2012 were its interests in Heather/Broom, Thistle/Deveron, West Don, Don Southwest and Conrie producing oilfields, the Alma and Galia development, the new Kraken development and further development opportunities in the Southwest Heather, Peik, Crawford/Porter, Cairngorm, Crathes/Scolty/Torphins and Kildrummy discoveries.

### *Operational Scale*

With a direct workforce of around 500, and 1,600 including offshore contractors, EnQuest has a breadth and depth of expertise matched by few if any UK oil companies of its size.

### *Delivering Sustainable Growth*

EnQuest is proving that it can deliver sustainable growth through increasing production and reserves. Whilst the UK North Sea will continue to be our main focus, there are also potential opportunities to pursue EnQuest's strategy outside the UK. We have taken our first steps internationally, in Norway and Malaysia and will retain a focused approach to our international expansion.

### *Financial Strength*

With a strong balance sheet and strong cash flow generation, combined with its technical skills and operational scale, EnQuest is increasingly becoming the natural partner of choice for major integrated development projects in the UK North Sea.

### *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.

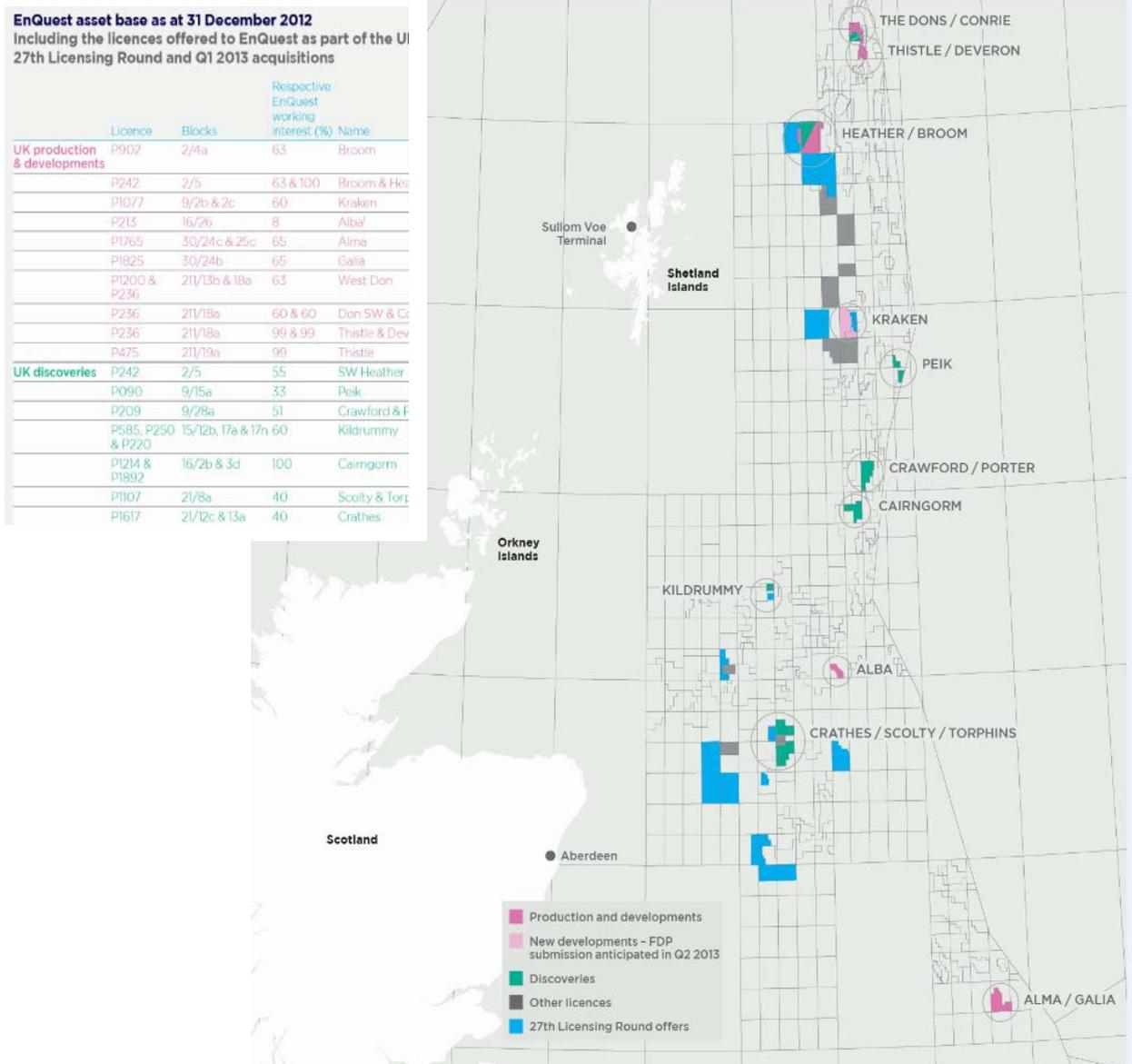
Guiding all our activities is our principal aim:

**Safe results, no harm to people and respect for the environment.**



## OUR ACTIVITIES

AT THE END OF DECEMBER 2012 ENQUEST HAD WORKING INTERESTS IN 39 PRODUCTION LICENCES COVERING 55 BLOCKS OR PART BLOCKS IN THE UKCS AND WAS THE OPERATOR OF 31 OF ITS 39 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 currently produced from 20 production wells, using gas lift. Oil is exported from the platform to the Ninian pipeline system and thence 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 achieved a net 3,752 Boepd in 2012, down 31.7% on 2011.



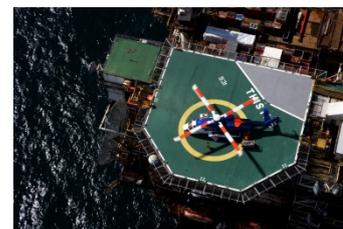
### **Northern Producer**

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 and field life is expected to be up to 15 years. The development consists of three sub-sea tie-backs: Don South West, West Don and Conrie. During 2012, production achieved a net 10,992 boepd down 13.9% on 2011.



### **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 2012, production achieved a net 8,058 boepd, up 48.2% on 2011.



### **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.

**OUR ENVIRONMENTAL MANAGEMENT SYSTEM**  
**OUR AIM: SAFE RESULTS, WITH NO HARM TO PEOPLE**  
**AND RESPECT FOR THE ENVIRONMENT**



**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 annual 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 (October 2012).



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 REMAINS IN LINE WITH INDUSTRY AVERAGE***

Across all assets, the volume of liquid waste produced remains within our yearly permitted allowance. Though maintaining the average oil in water concentration within consent limits on Heather has been a challenge during 2012, a number of actions have been taken to resolve the issue, including optimization trials, the fitting of a bypass line and operator training on the produced water equipment. 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 2012. The benefits of a project undertaken in 2011 to reduce accidental spills during the transfer of fluids from supply vessels was realised, where the number of incidents decreased by 72% during 2012. Flaring across our assets is unavoidable and although CO<sub>2</sub> emissions were marginally higher than last year, overall emissions remained within permitted limits.

***Overview of Environmental Non-Conformances***

- The Northern Producer had 3 incidents that required notification to the regulator in 2012. Each incident involved an accidental spill to sea reportable via a PON1 to DECC. This is a decrease in the overall number of incidents compared to 2011.
- Heather had 12 incidents that required notification to the regulator during 2012. Three incidents involved accidental spills to sea reportable via PON1s, while 9 involved oil in water concentrations above the permitted threshold.
- Thistle had 8 incidents that required notification to the regulator during 2012. All incidents involved accidental spills to sea reportable via PON1s to DECC.

***Improving Performance***

At EnQuest we are committed to improving our environmental performance. Our Late Life Extension (LLX) project on our Thistle platform is a key example of our commitment to investing in our infrastructure with an emphasis on removing or reducing risk to the environment.

The following section details environmental improvements made across our assets during 2012.

## OUR ENVIRONMENTAL IMPROVEMENTS

WITH RESPECT TO CONTINUAL IMPROVEMENT, OUR 2011 REPORT DETAILED EXAMPLES OF ENVIRONMENTAL IMPROVEMENTS THAT WERE BEING INVESTIGATED. THE FOLLOWING DETAILS THE OUTCOME OF THESE INVESTIGATIONS AND ANY IMPROVEMENTS PROGRESSED



### *Thistle*

Improving environmental performance is a key objective of the Thistle LLX project. As a result of poor power generation uptime, a new 30 MW power generation turbine was sanctioned. This turbine was commissioned during 2012 and has significantly improved combustion efficiency. In addition, reducing the volume of redundant equipment continues apace – this streamlining of process and plant helps to reduce avenues for unplanned leaks. 2011 saw a significant effort to reduce environmental incidents occurring during bunkering operations – new bunkering stations have been installed, a bunkering hose initiative has been rolled out along with new bunkering procedures.

### *Heather*

Improving oil in water performance on the Heather remained a key objective during 2012. Optimization trials, the fitting of a bypass line and operator training on the produced water equipment helped to bring ~ 22% decrease in total volume of oil discharged to sea compared to 2011. That being said, as the overall average concentration of oil in water remained just above the permitted volume for 2012, further reducing the average oil in water concentration remains a key objective for 2013. Other environmental improvements include a purpose built waste oil storage tanks to aid waste oil management and a number of drilling upgrades which aim to reduce or mitigate environmental impacts as part of the Heather return to drilling initiative (R2D2).

### *Northern Producer*

Maximizing of gas export from Northern Producer was a key objective during 2012. A gas export pipeline was installed with the aim of reduce flaring, however, the availability of this pipeline has been lower due to operational issues at the 3<sup>rd</sup> party platform. Fuel gas metering upgrades have been carried out to ensure monitoring of gas use on the platform is in line with EU ETS requirements. Finally, commissioning of the Dry Low Emissions generator is ongoing, this will help to displace our diesel backup system.

### *Looking Forward*

We are committed to continually improving our environmental performance. Please see our Looking Forward section on page 17 for an overview of actions being taken with a view to mitigating risks and improving our environmental performance.

**OUR ENVIRONMENTAL IMPACTS**  
REPORTING OPENLY AND HONESTLY:  
A TRANSPARENT PICTURE OF OUR PERFORMANCE



**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 European Union Emissions Trading Scheme (EUETS) and the Offshore Combustion Installation (Prevention and Control of Pollution) Regulations 2001 (as amended). EnQuest seeks to use energy efficiently within our facilities, and continually looks to identify opportunities that may reduce emissions from its operations.

**THESE ASPECTS ARE EXPLAINED IN MORE DETAIL BELOW, WHERE EXAMPLES OF GOOD PERFORMANCE ARE HIGHLIGHTED ALONG WITH AREAS IN WHICH IMPROVEMENTS ARE BEING MADE.**

## LIQUID WASTE

ENQUEST AIMS TO MINIMISE THE ENVIRONMENTAL IMPACT OF DISCHARGES OF PRODUCED WATER. TREATMENT PLANTS AT OUR ASSETS REMOVE ANY HYDROCARBONS, CHEMICAL AND SOLIDS PRESENT IN THE PROCESS WASTE WATERS. ALL OUR WASTE WATER IS TREATED AND MONITORED AS NECESSARY BEFORE DISCHARGE



**Figure 1** shows the total volume of liquid waste produced across our assets for 2012. Produced water has a complex chemistry. It contains reservoir water, traces of oil and traces of chemicals added during the production /separation process.

Formation water is naturally trapped in oil and gas reservoirs and despite all efforts to produce the hydrocarbons selectively, a fraction of this water is brought to the surface admixed with oil and gas. Additional water is also injected into the reservoir to help raise oil to the surface for extraction. As a result both formation and injected water are eventually produced along with the hydrocarbons.

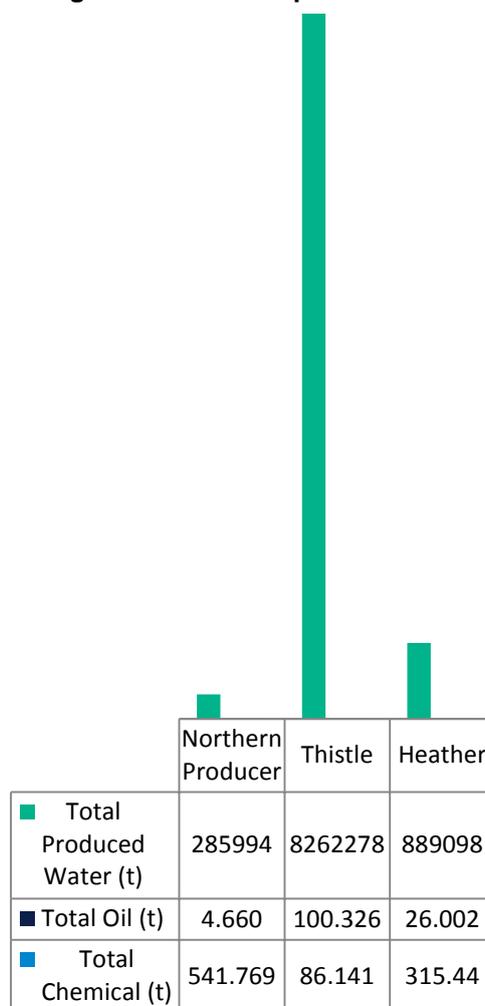
The large volume of produced water on the Thistle is attributed to the way the field is developed, requiring a large volume of water injection to extract oil from the reservoir.

### Chemicals

EnQuest carries out risk assessments in relation to any chemical used as part of the chemical permitting process in accordance with the Offshore Chemicals Regulations 2002 (as amended). During 2012, EnQuest used 55 chemicals with substitution warnings which were permitted for use during drilling, intervention and production operations on the UKCS. During 2013, 14 substitution chemicals will be phased out of EnQuest's operations.

This is in line with the policy of EnQuest, to, in consultation with their chemical suppliers, minimise overall chemical use and, where possible, replace chemicals with more environmentally acceptable alternatives which fulfill the same function. The use of all other chemicals have been fully justified to the regulator, DECC and are permitted for continued use.

**Fig. 1 Volume of Liquid Waste**





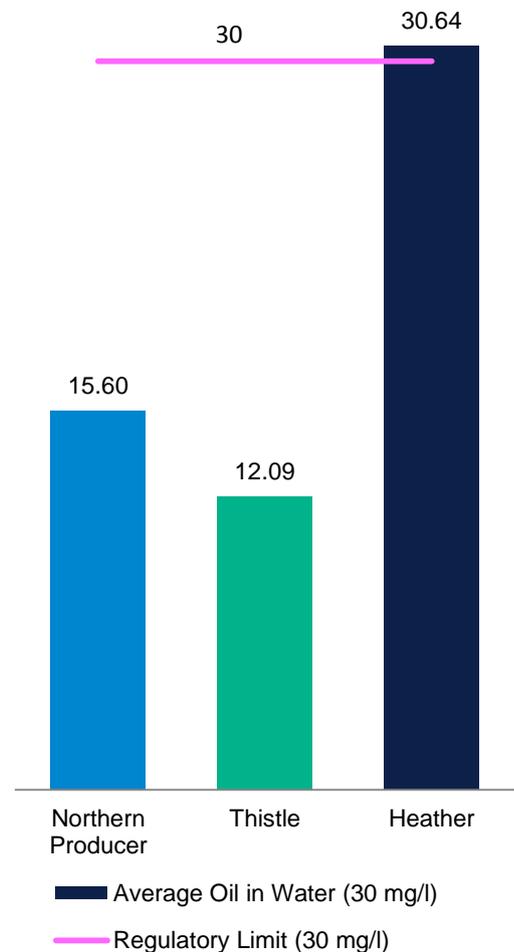
**Oil in Water**

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.

**Figure 2** shows average oil concentration of produced water across our assets for 2012. Both the Thistle and Northern Producer yearly average oil concentration sit comfortably within the 30 mg/L.

The concentration of oil in produced water has been an ongoing issue for Heather during 2012, with 9 OPPC non-conformances across the two produced water streams. As a result, the average concentration of oil in water is above the permitted allowance, at 30.64 mg/L for 2012. However, the average concentration has decreased significantly from 39.14 mg/L in 2011, and Heather has experienced no excursions over 100 mg/L in 2012. Several investigations and specific projects to tackle the average oil in water concentration, including optimization trials, the fitting of a bypass line and operator training on the produced water equipment have helped improve oil in water performance.

**Fig. 2 Average Oil in Water (mg/L)**



## ACCIDENTAL SPILLS

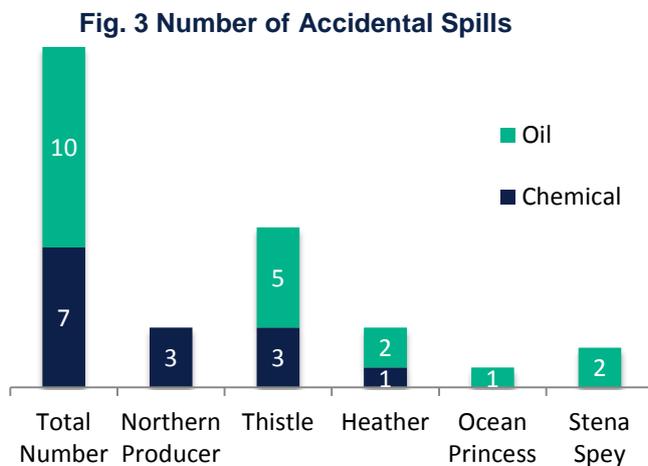
AS ACCIDENTAL SPILLS AT SEA CAN HAVE CONSEQUENCES FOR THE MARINE ENVIRONMENT, WE WORK TO MINIMISE THE RISK WITH A FOCUS ON PREVENTION. WE HAVE DECC APPROVED OIL EMERGENCY POLLUTION PLANS IN PLACE ACROSS ALL OUR ASSETS AND ARE A MEMBER OF OIL SPILL RESPONSE, THE WORLD'S LARGEST SPILL RESPONSE ORGANISATION



### Number of Spills

All spills to the marine environment, regardless of volume, must be reported to DECC via a Petroleum Operations Notice (PON1). **Figure 3** (below) details the number of PON1s submitted to DECC during 2012 across all assets, including our drilling operations.

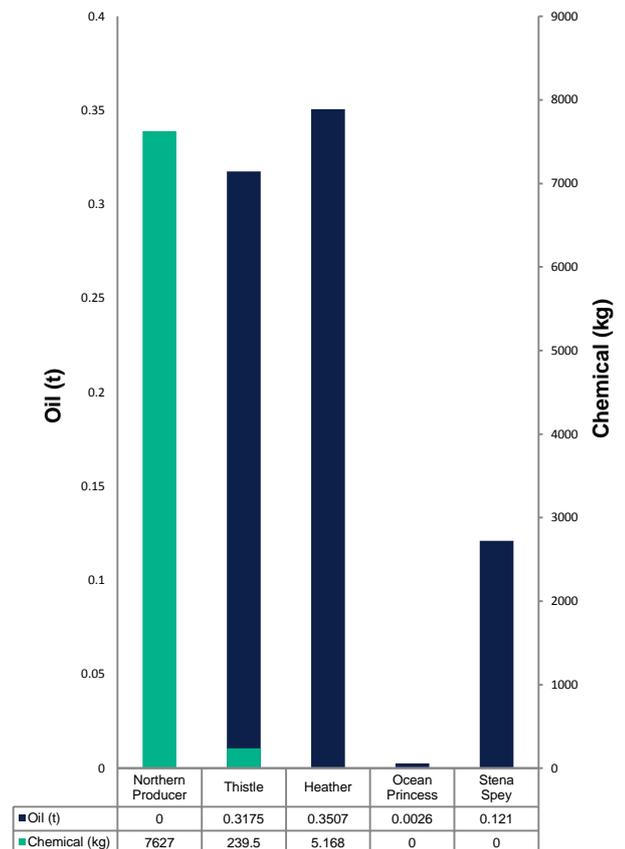
At EnQuest we take our responsibility to prevent accidental spills seriously. Where spills have occurred we report timeously, and undertake detailed investigations where appropriate. Overall the total number of PON1s submitted to DECC has remained the same between 2012 and 2011, despite an increase in the number of EnQuest operated assets.



### Volume of Spills

**Figure 4** (right) details the total volume of oil or chemical spills originating in 2012 from across our activities.

**Fig. 4 Volume of Accidental Spills**



Northern Producer recorded a decrease in total volume of chemical/oil lost to sea compared to 2011, while spills originating from Heather and Thistle saw a slight increase in total volume over 2012.

## ATMOSPHERIC EMISSIONS

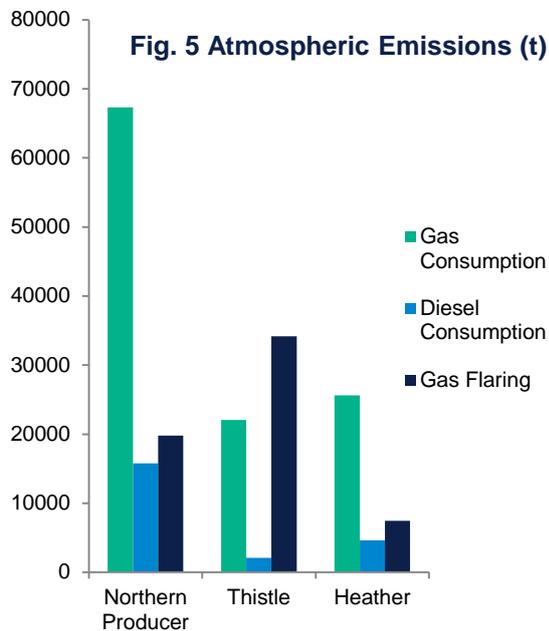
ALL OUR OPERATIONS USE ENERGY IN EXTRACTING, PROCESSING AND EXPORTING OIL AND GAS. WE MANAGE OUR ENERGY CONSUMPTION EFFICIENTLY TO REDUCE EMISSIONS FROM OUR OPERATIONS



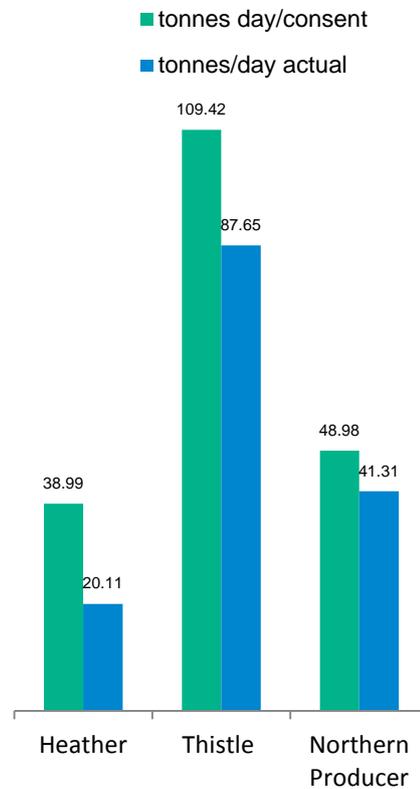
### Atmospheric Emissions by Source

Atmospheric emissions on all of our facilities are dominated by CO<sub>2</sub> created by gas flaring and power generation. The primary fuel for power generations is natural gas produced as a by-product of our operations. Diesel is used as a backup fuel source. EnQuest strives to increase energy efficiency and decrease emissions.

The percentage of CO<sub>2</sub> & CO<sub>2</sub> equivalent emissions generated for gas, diesel and flaring across all assets for 2012 are detailed in **Figure 5** (below).



**Fig 6. Flare Consent**



### Flare Consent

Flaring throughout the year remained within our permitted allowance across all assets. See **Figure 6** (above).

## WASTE MANAGEMENT

OUR OPERATIONS CONSUME NATURAL RESOURCES AND OTHER MATERIAL WHICH GENERATES A RANGE OF WASTES. WE MANAGE OUR WASTE ACCORDING TO THE WASTE MANAGEMENT HIERARCHY – REMOVE, REDUCE, REUSE AND RECYCLE. WE SEEK TO MINIMISE THE QUANTITY OF WASTE DISPOSED TO LANDFILL

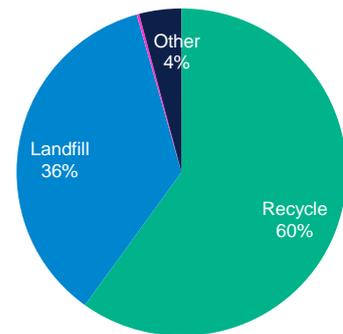


### Operational Waste

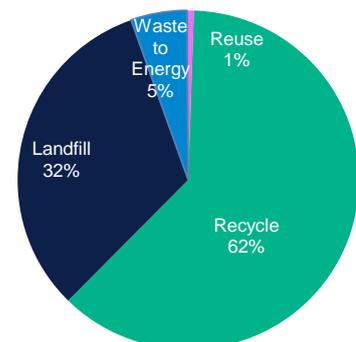
Across all operations, the total volume of waste recycled has increased during 2012 compared to 2011.

On the platforms, recycling doubled in Thistle, from 30% in 2011 to 60% in 2012 and increased on Heather from 62% to 71%. The total percentage of recycled waste on Northern Producer increased, while the total volume of waste generated actually decreased in 2012 compared to 2011 (110.816 t in 2011, to 79.29 t in 2012). In relation to drilling, recycling figures have increased compared to 2011 where on average 34% of waste generated is recycled. The total volume of waste to landfill generated by drilling operations has been fully investigated via a review of waste management. No viable alternative route for landfill drilling waste was identified.

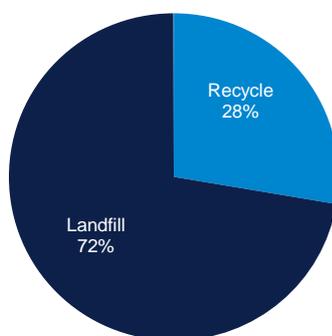
**Thistle**  
Total Waste - 464.2 t



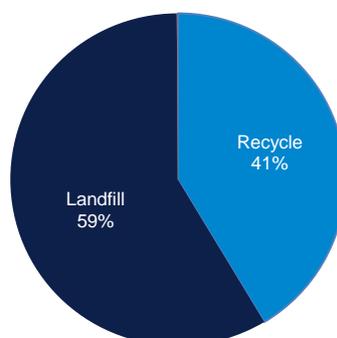
**Northern Producer**  
Total Waste - 79.29 t



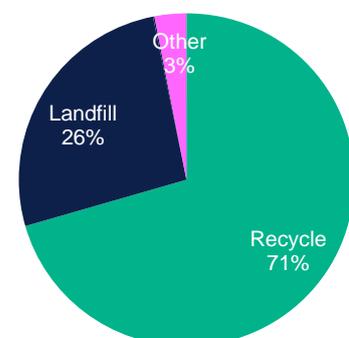
**Stena Spey**  
Total Waste - 3423.57 t



**Ocean Princess**  
Total Waste - 6162.33 t



**Heather**  
Total Waste - 305.46 t



## LOOKING FORWARD

AS A MATURE PROVINCE THE UKCS PRESENTS ITSELF AS A CHALLENGING PLACE TO WORK. LOOKING FORWARD TO 2013, ENQUEST IS COMMITTED TO FURTHER IMPROVING ITS ENVIRONMENTAL PERFORMANCE



### *Thistle*

Looking to 2013, minimizing risk to the environment remains one of the key objectives of the Thistle LLX. A number of projects will be scoped and progressed between 2012-2015 to ensure good environmental practice is inherent in Thistle LLX. Further a new drainage system will be implemented so that no pipe work will be below deck, reducing the risk of a direct spill to sea. Finally, 50% of equipment will be removed from the platform to reduce the number of possible avenues for spills to occur.

### *Heather*

A number of environmental improvements are being undertaken on the Heather to support field life extension during 2013. Following a review of temporary chemical injection skids, a project will be initiated to reinstate fixed platform chemical injection skids, thus reducing the risk of unplanned releases of chemical to the marine environment. Finally, EnQuest remain fully committed to resolving the oil in water issue on the Heather and will continue its focus on managing and mitigating the environmental impact by good produced water management.

### *Northern Producer*

A number of environmental improvements will be implemented for the Northern Producer during 2013. The Dry Low Emissions engine will be commissioned to reduce diesel consumption, while the prospect of fuel gas import will be explored in order to negate reliance on diesel. Looking to the future, EnQuest is continuing to explore life of field studies for the Dons field, therefore any long term potential improvements will be implemented where necessary.

### *Drilling*

As well as continuing to operate and develop our existing seven production fields, the drilling programme will remain with three operated drill strings, one operating from one of the fixed assets and up to two MODUS. Final completion of the 6 Alma production wells will be finalized during the year with the FPSO subsequently due in-field Q3 2013. Assessment of the Kraken field and the other potential reserves will also continue.

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