



Environmental Performance 2014 Public Statement

May 2015



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1. Introduction

1.1. Background

Fairfield Energy (Fairfield) was established in 2005 and was created specifically as a UK focused independent company to participate in the realignment of North Sea asset ownership in this mature province.

The Company is headquartered in Staines-upon-Thames, Middlesex and has operational offices in Aberdeen.

The purpose of this statement is to provide an overview on the environmental performance of the Fairfield operated activities during 2014.

1.2. Our Operations

Fairfield's operations during 2014 comprised production from, and intervention work within, the Dunlin licence area.

Dunlin is a mature field located within United Kingdom Continental Shelf (UKCS) Block 211/23 which is in the Brent oil province in the Northern North Sea (NNS) (see Figure 1.1). The Dunlin Alpha platform was installed in 1977 and started production in 1978. Dunlin is supported by thirty four production wells and ten water injection wells. It lies approximately 137 km north east of Scotland, 11 km from the UK/Norwegian median line and in a water depth of approximately 151 m.

Two subsea tiebacks to Dunlin Alpha, Osprey and Merlin, were brought online in 1997 and 1999 respectively. Osprey is supported by eight production wells and four water injection wells, whilst Merlin is supported by three production wells and one water injection well. Osprey and Merlin are tied back to Dunlin Alpha via 8" crude pipelines. The well fluids from the Merlin wells join the pipeline from Osprey before the Dunlin riser.

Treated seawater is injected into the Dunlin, Merlin and Osprey reservoirs to maintain pressure and enhance recovery. The water injection of Osprey and Merlin occurs through two 10" pipelines connected through a Y-piece after the Dunlin risers.

Export oil is pumped into the Brent pipeline via Cormorant Alpha and onwards to Sullom Voe. Produced water is discharged overboard. Dunlin Alpha is gas deficient and therefore native produced gas is blended with imported gas from Thistle Alpha and utilised as fuel gas for the platform.

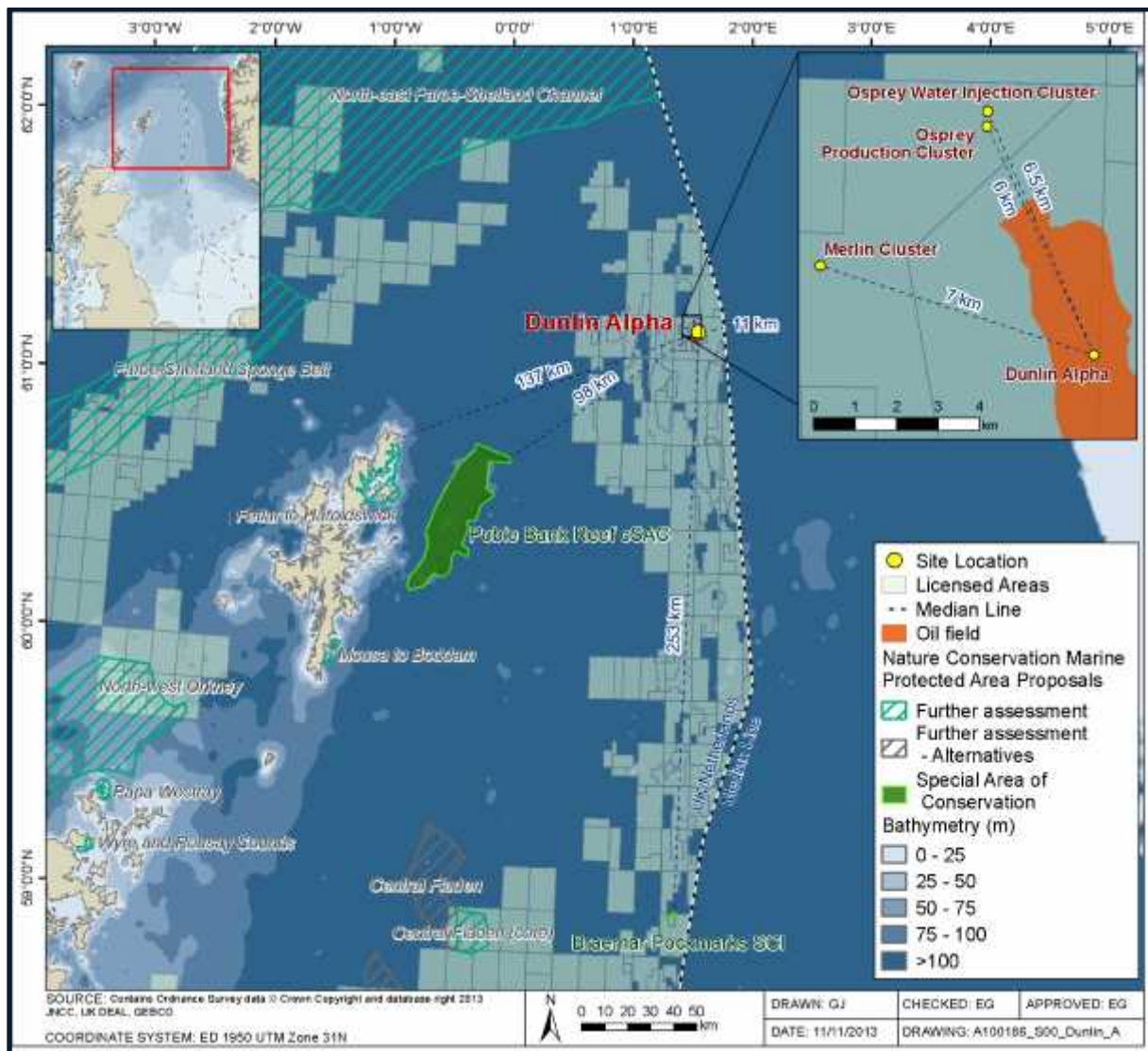


Figure 1.1 – Location of Fairfield Operations in 2014



2. Environmental Policy and Management System

ENVIRONMENTAL MANAGEMENT POLICY

It is the policy of Fairfield Energy Limited (Fairfield) to seek to conduct its business in a responsible manner that prevents pollution and promotes the preservation of the environment.

As an oil & gas exploration and production operator, Fairfield appreciates that our activities can interact with the natural environment in many ways. We recognize that sustained development of Fairfield and our long term success depends upon achieving high standards of environmental performance. We are therefore committed to conducting our undertakings in an environmentally responsible manner.

This means that we will :-

- Integrate environmental considerations within our business and ensure that we treat these considerations with at least equal importance to those of productivity and profitability;
- Incorporate environmental risk assessment in our business management processes, and seek opportunities to reduce the environmental impact of our activities;
- Continually improve our environmental management performance;
- Comply with all environmental laws, regulations and standards applicable to our undertakings;
- Allocate necessary resources to implement this policy;
- Communicate openly in matters of the environment with government authorities, industry partners and through public statements.

In particular, we will :-

- Maintain an environmental management system in accordance with international best practice and with the BS-EN-ISO 14001:2004 standard, including arrangements for the regular review and audit of our environmental performance;
- Conduct environmental analyses and risk assessments in our areas of operation, in order to ensure that we understand the potential environmental impacts of our activities and that we identify the necessary means for addressing those impacts;
- Manage our emissions according to the principles of Best Available Techniques;
- Publish an annual statement on our public web site, providing a description of our environmental goals and performance
- Maintain incident and emergency systems in order to provide assessment, response and control of environmental impacts.

Ultimate responsibility for the effective environmental management of our activities rests with the Chief Executive and the Board.

This policy shall be implemented by line management through the development and implementation of working practices and procedures that assign clear responsibilities for specific environmental activities with our employees and contractors.

In addition, each of our employees has a personal responsibility to conduct themselves in a manner that enables us to implement this policy and our environmental management system.

Signed D. Reith
Chief Executive Officer

Date March 2013



FairfieldEnergy

V3.3 March 2013



Fairfield has a structured Environmental Management System (EMS), which is certified to the ISO 14001:2004 standard and which establishes the company standards for environmental risk management in accordance with the environmental policy. The EMS is an integral part of the overall business management system and provides a structured and systematic framework for implementing our environmental policy as well as outlining the mechanisms through which compliance is maintained. The system:

- Applies to all activities under the direct control of Fairfield throughout the entire life-cycle of managing oil and gas facilities within the UKCS, from exploration to production and eventual decommissioning,
- Applies to all levels within the Fairfield organisation, including subsidiary companies,
- Applies to all personnel – whether directly employed or contracted (when engaged in activities under Fairfield’s direct control), and
- Provides a basis for establishing suitable interface arrangements with activities performed under contractual arrangement with Fairfield.

Progress against the key objectives within our 2014 environmental programme is summarised below:

Key Objective	Summary of Progress
<p><i>Maintenance and implementation of the ongoing environmental performance improvement plan</i></p>	<p>Successful maintenance and implementation of the environmental performance improvement plan has resulted in a reduction in reportable incidents in 2014. A significant number of environmental procedures have been reviewed, rewritten and republished.</p> <p>The use of “SUB” chemicals during production operations at Dunlin in 2014 was less than 50% of that in 2013.</p>
<p><i>Conduct management review of the Fairfield Environmental Management System.</i></p>	<p>Senior management reviewed the Fairfield Environmental Management System (EMS) at periodic, planned intervals. Over and above this, weekly EMS review meetings were conducted by the HSE Department and relevant information communicated at monthly / quarterly management meetings.</p>
<p><i>Progress development of a strategy for identification and management of Environmentally Critical Elements.</i></p>	<p>A strategic approach for the identification and management of Environmentally Critical Elements (ECEs) was developed and applied to evaluate the Drilling Package systems and elements at Dunlin.</p> <p>Following this successful implementation, a similar approach was commenced for the remaining Dunlin platform facilities.</p>
<p><i>Promotion of workforce environmental awareness</i></p>	<p>Environmental Awareness Training sessions were carried out with the onshore / offshore workforce throughout the year and both the number and standard of Environmental Inspections carried out at Dunlin was increased in 2014.</p>



	<p>A programme of tagging all of the platform drains with identifying tags that stipulate discharge restrictions was completed and rolled out in Q2. Similarly, a Spill Kit Management Improvement Programme was completed and implemented by the end of Q3. A Hose Management Programme was commenced in 2014 and progressed throughout the year.</p> <p>Monthly Environmental Awareness posters detailing information on the organisations environmental performance were displayed on noticeboards onshore and offshore.</p>
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Table 2.1 – 2014 Key Objectives and Summary of Progress



3. Environmental Performance

Given the nature of Fairfield's operations during 2014, the potential for significant environmental impact arose from:

- atmospheric emissions from power generation and flaring,
- discharge of produced water,
- chemical use and discharge,
- waste, and
- oil or chemical release incidents

The 2014 Environmental Performance of Fairfield's operations are summarised in the sections that follow, and has been reported to the Department for Energy and Climate Change (DECC) via the UK Environmental Emissions Monitoring System (EEMS).

3.1. Atmospheric Emissions

Atmospheric emissions from the Dunlin Alpha are derived from the generation of electrical power required to support oil production operations. Emissions are also generated from the flaring of gas associated with the produced oil that is not otherwise used for power generation.

In 2014, approximately 40% of the power generated by Dunlin was from diesel combustion and 19% of power was from the combustion of natural gas. A further 40% of power was imported from the Brent Charlie installation, equivalent to 29,358 MWhrs.

A summary of the atmospheric emissions generated from the Dunlin Alpha in 2014 is given below.

Emissions in tonnes	CO ₂	NO _x	N ₂ O	SO _x *	CO	CH ₄	VOC
Power Generation	46,269	395	3.42	19.4	101	6.42	11.7
Flaring	35,673	16.7	1.1	-	94	110.6	133.3
Venting	48.7	-	-	-	-	266.7	316.2
Fugitive Emissions	3.3	-	-	-	-	17.9	21.2
Total	81,994	411.7	4.5	19.4	195	401.6	482.4

*Diesel used for power generation has 0.1% sulphur content.

Table 3.1 – Summary of Atmospheric Emissions Generated From Dunlin Alpha in 2014.



3.2. Oil in Produced Water

Formation water is naturally present in oil and gas reservoirs and is separated from the oil at offshore production facilities. In mature fields such as those in the Dunlin area, the naturally occurring formation water is greatly diluted by the seawater which has been injected into the reservoir to maintain pressure and increase recovery of the oil. The produced water which is separated from the oil is treated prior to disposal offshore. The discharged water contains residual quantities of both dispersed and dissolved hydrocarbons.

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). The discharge consent for Dunlin requires monthly average concentration of dispersed oil in discharged produced water to be less than 30 mg/l. During the reporting period 62.36 tonnes of oil were discharged in this way at an average concentration of 15.7 mg/l oil in produced water.

3.3. Chemical Use and Discharge

Offshore use and discharge of operational chemicals is regulated by the Offshore Chemical Regulations 2002 (as amended), where the word “chemicals” refers to fully formulated products used offshore, whether these are comprised of one or more distinct chemical substances. Such chemicals must appear on both the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) Definitive Ranked Lists of Registered Products and on the relevant Chemical Permit application.

All chemicals are tested and classified by CEFAS according to their potential to cause harm. The assessment relates to a combination of the rate of biodegradation, toxicity and potential to bio-accumulate. Environmental data are provided below according to those which are:

- Environmentally benign i.e. labelled as **Pose Little Or NO Risk** (PLONOR)
- Low risk i.e. listed in the CEFAS lowest risk categories ('E' or 'Gold' (excluding PLONOR))
- Higher risk i.e. listed in the CEFAS higher risk categories

Products identified by CEFAS as containing chemicals marked for substitution with a more environmentally friendly alternative are flagged with a “SUB” warning. Use and discharge of such chemicals is included in the totals in the table below and are also reported separately.

Fairfield work with our chemical suppliers to evaluate the potential environmental hazards of chemicals used, and to select less hazardous alternatives where practicable.

3.3.1. Production Activities (PRA) Chemical Use and Discharge

In 2014, Fairfield used approximately 1,065 tonnes of chemicals during Production Activities at Dunlin Alpha. Of this figure, around 65% of chemicals were discharged to the marine environment.



Products by CEFAS Classification	2014 Chemical Use / Discharge (kg)		Percentage of 2014 Total Weight (%)	
	Use	Discharge	Use	Discharge
A	0.00	0.00	0.00	0.00
B	100.87	100.87	0.01	0.01
C	73.10	73.10	0.01	0.01
D	3,172.00	3,172.00	0.30	0.46
E	209,798.43	7,728.91	19.69	1.12
Purple	0.00	0.00	0.00	0.00
Orange	0.00	0.00	0.00	0.00
Blue	0.00	0.00	0.00	0.00
White	0.00	0.00	0.00	0.00
Silver	53,791.35	53,791.35	5.05	7.77
Gold	798,361.95	626,895.71	74.94	90.63

Table 3.2 – 2014 Production Activities Chemical Use / Discharge by CEFAS Classification

In terms of environmental performance, 95% of chemicals used and 92% of chemicals discharged during 2014 were "E" or "Gold" category chemicals. 17% of chemicals used and 1% of chemicals discharged during the year were classified "PLONOR". "SUB" chemicals accounted for 8% of chemicals used and 12% of chemicals discharged during the year. Of the five chemicals carrying SUB warnings on the Dunlin PRA in 2014, one (the corrosion inhibitor "CRO82711") was not discharged and one (the corrosion inhibitor "CRW85648") will be replaced with a non-SUB alternative during 2015. Fairfield will remain in contact with suppliers regarding the pursuit of greener alternatives for the remaining SUB chemicals although no further phase-outs are planned in the short-term having just successfully reduced the amount of SUB chemicals used during Dunlin Production Operations from 179.41 mT in 2013 to 87.50 mT in 2014.

Chemical Label Code	2014 Chemical Use / Discharge (kg)		Percentage of 2014 Total Weight (%)	
	Use	Discharge	Use	Discharge
PLONOR	176,017.78	7,427.74	16.52	1.07
SUB	87,495.22	82,246.51	8.21	11.89

Table 3.3 – 2014 Production Activities PLONOR / SUB Chemical Use / Discharge

3.3.2. Subsea Activities (PLA) Chemical Use and Discharge

In 2014, Fairfield used approximately 1.376 tonnes of chemicals during Subsea Activities. Of this figure, around 98% of chemicals were discharged to the marine environment. Activity for the year is considered low with only one Subsea Intervention Campaign taking place at Merlin and Osprey.



Products by CEFAS Classification	2014 Chemical Use / Discharge (kg)		Percentage of 2014 Total Weight (%)	
	Use	Discharge	Use	Discharge
A	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00
C	5.84	0.00	0.42	0.00
D	0.00	0.00	0.00	0.00
E	1,369.66	1,343.88	99.57	99.99
Purple	0.00	0.00	0.00	0.00
Orange	0.00	0.00	0.00	0.00
Blue	0.00	0.00	0.00	0.00
White	0.00	0.00	0.00	0.00
Silver	0.00	0.00	0.00	0.00
Gold	0.04	0.04	0.01	0.01

Table 3.4 – 2014 Subsea Activities Chemical Use / Discharge by CEFAS Classification

In terms of environmental performance, over 99% of chemicals used and discharged during 2013 were "E" or "Gold" category chemicals. Over 99% of chemicals used and discharged during the year were classified "PLONOR". No "SUB" chemicals were used or discharged during 2014 operations.

Chemical Label Code	2014 Chemical Use / Discharge (kg)		Percentage of 2014 Total Weight (%)	
	Use	Discharge	Use	Discharge
PLONOR	1,369.66	1,343.88	99.56	99.99
SUB	0.00	0.00	0.00	0.00

Table 3.5 – 2014 Subsea Activities PLONOR / SUB Chemical Use / Discharge

3.3.3. Wells Activities (DRA, WIA) Chemical Use and Discharge

In 2014, Fairfield used approximately 518 tonnes of chemicals during Wells Activities. Of this figure, around 95% of chemicals were discharged to the marine environment. Activity for the year is considered low with only one well drilled, one platform well intervention campaign and one light workover / intervention vessel campaign contributing to these figures.



Products by CEFAS Classification	2014 Chemical Use / Discharge (kg)		Percentage of 2014 Total Weight (%)	
	Use	Discharge	Use	Discharge
A	0.00	0.00	0.00	0.00
B	0.00	0.00	0.00	0.00
C	0.00	0.00	0.00	0.00
D	0.00	0.00	0.00	0.00
E	509,029.82	98.24	488,911.11	99.83
Purple	0.00	0.00	0.00	0.00
Orange	0.00	0.00	0.00	0.00
Blue	0.00	0.00	0.00	0.00
White	0.00	0.00	0.00	0.00
Silver	0.00	0.00	0.00	0.00
Gold	9,121.04	1.76	840.45	0.17

Table 3.6 – 2014 Wells Activities Chemical Use / Discharge by CEFAS Classification

In terms of environmental performance, 100% of chemicals used and discharged during 2014 were "E" or "Gold" category chemicals. 98% of chemicals used and over 99% of chemicals discharged during the year were classified "PLONOR". "SUB" chemicals accounted for 1.25% of chemicals used and 0.03% of chemicals discharged during the year.

Chemical Label Code	2014 Chemical Use / Discharge (kg)		Percentage of 2014 Total Weight (%)	
	Use	Discharge	Use	Discharge
PLONOR	508,872.17	488,895.34	98.21	99.83
SUB	6,453.96	1.25	126.88	0.03

Table 3.7 – 2014 Wells Activities PLONOR / SUB Chemical Use / Discharge

3.3.4. 2014 Chemical Use and Discharge: Aggregated Assessment

Combined, Fairfield operations used 1,585 mT of chemicals during our 2014. Of this figure, around 75% of chemicals were discharged to the marine environment.



Products by CEFAS Classification	2014 Chemical Use / Discharge (kg)		Percentage of 2014 Total Weight (%)	
	Use	Discharge	Use	Discharge
A	0.00	0.00	0.00	0.00
B	100.87	100.87	0.01	0.01
C	78.94	73.10	0.00	0.01
D	3,172.00	3,172.00	0.20	0.27
E	720,197.91	497,983.90	45.44	42.10
Purple	0.00	0.00	0.00	0.00
Orange	0.00	0.00	0.00	0.00
Blue	0.00	0.00	0.00	0.00
White	0.00	0.00	0.00	0.00
Silver	53,791.35	53,719.35	3.39	4.54
Gold	807,483.03	627,736.20	50.95	53.07
Total	1,584,824.10	1,182,785.41		

Table 3.8 – 2014 Aggregated Chemical Use / Discharge by CEFAS Classification

In terms of overall environmental performance for operational chemical use and discharge, Fairfield are pleased to report that 96% of chemicals used and 95% of the chemicals discharged during 2014 were "E" or "Gold" category chemicals. Furthermore, SUB" chemicals accounted for just 5.93% of chemicals used and 6.96% of chemicals discharged during the year. 43% of chemicals used and 42% of chemicals discharged during the year were classified "PLONOR".

Chemical Label Code	2014 Chemical Use / Discharge (kg)		Percentage of 2014 Total Weight (%)	
	Use	Discharge	Use	Discharge
PLONOR	686,259.61	497,666.96	43.30	42.08
SUB	93,949.18	82,373.39	5.93	6.96

Table 3.9 – 2014 Aggregated PLONOR / SUB Chemical Use / Discharge



3.4. Waste

Wastes are classified by EEMS according to whether special treatment is required prior to disposal.

During 2014 our offshore operations produced:

Category	Amount in tonnes	Main components
Dunlin		
General Waste	221.27	Scrap metals, segregated recyclable wastes and general waste
Special Waste	160.89	Sludges, liquids and tank washings, chemicals, paints and oils.

Table 3.10 – Annual “General” and “Special” Waste Resulting from 2014 Operations

Waste is managed with preference to re-use, recycling or energy recovery above other forms of disposal route. The proportion of waste by disposal route in 2014 for each of the above categories is shown on the following pie charts:

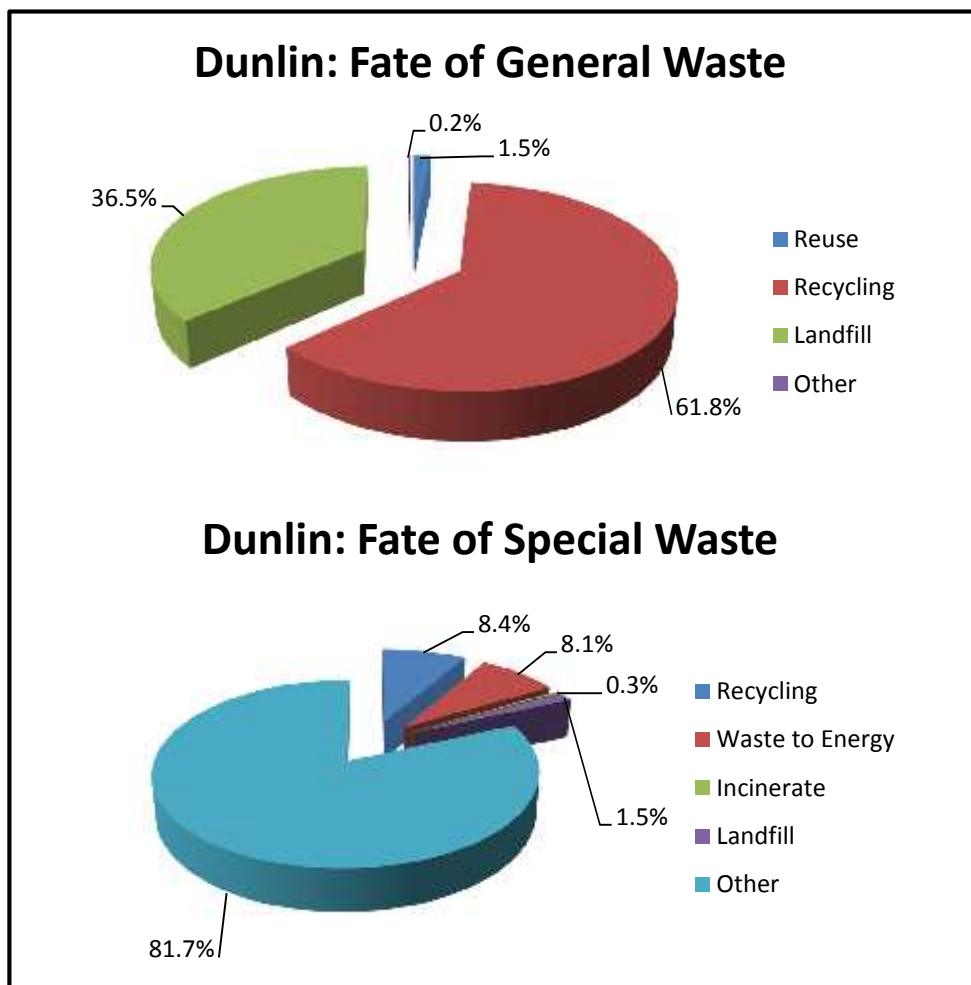


Figure 3.1 – 2014 Fate of Wastes.

Note: The category of ‘Other’ comprises special wastes that are subject to special treatment before return to the environment by discharge.



3.5. Operational Oil or Chemical Release Incidents

The prevention of oil and chemical releases is of the highest environmental priority during Fairfield operations, and consequently we maintain procedures, training and awareness campaigns in order to minimise the risk of release and to ensure a rapid response to any such event.

Oil and chemical release incidents are reported to DECC in accordance with the Petroleum Operations Notice 1 (PON1) system. Fairfield confirmed the occurrence of two such incidents in 2014 and these are summarised in the table below.

Reference	Date	Nature of Incident	Type of Spill	Estimated Maximum Quantity Released (kg)	Location
PON1/3603	18/11/2014	Traces of sodium hypochlorite in fire water ring main leaking from a fire hydrant valve at a rate of approx. 10 l/min.	Chemical	1.10	Dunlin
PON1/3604	18/11/2014	"Bubbles" of an oily looking substance rising to sea surface. Cause unknown. Investigation and monitoring ongoing.	Oil	8.6	Dunlin

Table 3.11 – 2014 Oil and Chemical Release Incidents



4. 2015 Environmental Programme

Our 2015 Environmental Programme continues and builds upon our 2014 programme and objectives.

By the time of going to press with this Environmental Statement for 2014, Fairfield Energy had announced on 8th May 2015 that it had been decided to cease production from Dunlin in mid-June 2015 and to move towards the start of the decommissioning process. Consequently the key environmental objectives for 2015 are under review in order to deliver the orderly shutdown of Dunlin and a transparent decommissioning process, working closely with stakeholders, staff and contracting partners.