



# CORPORATE RESPONSIBILITY REPORT 2016

## THE FULL DATA SET

### *Making more from waste*

This is our full corporate responsibility (CR) FULL data document. Our publicly available annual CR Reports include highlights of our sustainability and CR performance. This document supports our CR Report by giving additional, fuller and more in-depth information, such as divisional splits of data and detail emissions figures. To see our 2016 CR Report and other information on our corporate responsibility see the 'want to know more' section at the end of this document.





## Shanks CR Report 2016 – FULL data document

### Shanks Group is a leading international sustainable waste management business

**Our vision is to be the most respected waste-to-product company. We meet the growing need to manage waste without damaging the environment. Our solutions reduce greenhouse gas emissions, recycle natural resources and limit fossil fuel dependency.**

We use a range of sustainable and cost-effective technologies to make valuable products from what is thrown away. We produce green energy, recovered fuel, recycled commodities and organic fertiliser, while generating returns for our shareholders. In April 2015 we restructured our divisions. This report follows our newer divisional structure:

Belgium Commercial  
Netherlands Commercial  
Hazardous Waste  
Municipal

We have recalculated our 2015 data in line with our newer divisional structure to allow a valid year-on-year comparison to be made. As a result, our Group totals data in this document will match those reported in 2015, but divisional split data may not.

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### Basis for data

Each of the above sections is presented below with a brief description of what the data is and what it shows. Where given, CR data is split by our operating divisions. For further information on what each item of data means and how it has been calculated please see our 'CR Indicators document', which is available in the Our Responsibilities section on our Group web site ([www.shanksplc.com](http://www.shanksplc.com)). This CR indicators document also explains how we treat data issues such as joint ventures, reporting cycle and other information on our CR data.



## 1. Key facts and figures

Our operations are diverse and widespread. The data to the right illustrates this and provides readers with an overview of our operations

For more information on Shanks and its activities go to our web site (see further information details in section 15 of this document)

### Key facts and figures

Measure	Belgium Commercial	Netherlands Commercial	Hazardous Waste	Municipal	Group
Average number of employees <sup>1</sup>	772	1285	810	657	3524
Active operating centres <sup>2</sup>	19	28	14	22	83
Operating centres with recycling/recovery	10	27	2	21	60
Operational landfill sites	1	1	0	2	4
Collection and transport lorries	172	461	161	23	817
Tonnes waste handled (million tonnes)	1.12	3.47	1.94	1.87	8.40
Tonnes materials recovered (million tonnes) <sup>3</sup>	0.70	2.76	1.90	1.41	6.77
Overall recycling and recovery rate <sup>4</sup>	74%	82%	99%	76%	84%
Total energy generated (000' megawatt hours)	772	1285	810	657	3524

1. May not align with data in financial report as the result of differing reporting rules
2. Active operating centres does not include small stand-alone civic amenity and similar sites
3. For some technologies includes water loss, such as during the production of waste derived fuels
4. Calculated based on waste diverted from landfill and incineration

## **Sustainability and the environment**

*Making more from waste*



### **SUSTAINABILITY & THE ENVIRONMENT**

Our waste-to-products technologies turn waste into everything from sustainable fuels to green electricity





## 2. Sustainability and the environment – carbon footprints

### Group carbon footprint

This is our Group carbon footprint. Unlike many other companies Shanks activities provide a carbon avoidance benefit produced from our recycling and recovery operations. The footprint right is split to reflect this: Listed first are our emissions, both direct and indirect, followed by the carbon avoidance benefit produced by our activities. For details of how we calculate this data see our CR Indicators document. The following pages contain individual footprints for our operating divisions, which when totalled result in our Group footprint

### Emissions from our activities: Shanks Group totals

Source	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2016	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2015
<b>Process based emissions</b>		
Emissions from anaerobic digestion and composting	105	79
Emissions from hazardous waste treatment	295	225
Emissions from landfill	71	73
Emissions from mechanical biological treatment (MBT)	24	17
<b>Transport based emissions</b>		
Fuel used by waste transport vehicles	57	58
Business travel (cars, trains, flights etc)	3	3
<b>Energy use emissions</b>		
Electricity used on sites and in offices	75	64
Gas used on sites and in offices	11	10
Fuel used on sites for plant and equipment / heating	17	17
<b>Total emissions from significant sources</b>	<b>658</b>	<b>546</b>
Renewable energy generated	45	38
Waste derived fuels produced and sold	848	891
Materials separated for re-use/recycling (some re-used directly, others undergo re-processing by 3 <sup>rd</sup> parties) <sup>3</sup>	482	482
<b>Potential avoided emissions excluding energy from waste used on site<sup>2</sup></b>	<b>1375</b>	<b>1411</b>
Energy from waste used on site as a fuel <sup>2</sup>	334	255
<b>Total potential avoided emissions</b>	<b>1709</b>	<b>1666</b>

- Figures rounded to nearest 1,000 tonnes – totals may reflect rounding
- Shanks Hazardous Waste ATM Plant uses wastes as an energy source for its on-site processes. Measurement of this did not commence until partway through our previous 5-year CR objectives cycle. For consistency reasons, this data was not included in carbon footprints in previous CR Reports. This data has now been added and will be measured going forward. As a result the 2015 total potential avoided emissions figure given above has been revised to allow an appropriate baseline, and a direct comparison without energy from waste used on site given.
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## 2. Sustainability and the environment – carbon footprints

### Shanks Belgium Commercial

This is the carbon footprint for our Belgium Commercial Division operations. As for our Group carbon footprint the information is split into the emissions from our activities, followed by the carbon avoidance benefit we produce from our sustainable waste management operations

#### Emissions from our activities: Shanks Belgium Commercial

Source	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2016	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2015
<b>Process based emissions</b>		
Emissions from composting	6	10
Emissions from landfill	35	37
<b>Transport based emissions</b>		
Fuel used by waste transport vehicles	9	10
Business travel (cars, trains, flights etc)	0.9	0.2
<b>Energy use emissions</b>		
Electricity used on sites and in offices	2	5
Gas used on sites and in offices	0.03	0.02
Fuel used on sites for plant and equipment / heating	3	4
<b>Total emissions from significant sources</b>	<b>56</b>	<b>66</b>
<b>Renewable energy generated</b>	<b>9</b>	<b>13</b>
<b>Waste derived fuels produced and sold</b>	<b>338</b>	<b>403</b>
<b>Materials separated for re-use/recycling (some re-used directly, others undergo re-processing by 3<sup>rd</sup> parties)</b>	<b>58</b>	<b>39</b>
<b>Total potential avoided emissions</b>	<b>405</b>	<b>455</b>

1. Figures rounded to nearest 1,000 tonnes – totals may reflect rounding



## 2. Sustainability and the environment – carbon footprints

### Shanks Hazardous Waste carbon footprint

This is the carbon footprint for our Hazardous Waste Division operations. As for our Group carbon footprint the information is split into the emissions from our activities, followed by the carbon avoidance benefit we produce from our sustainable waste management operations

#### Emissions from our activities: Shanks Hazardous Waste

Source	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2016	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2015
<b>Process based emissions</b>		
Emissions from hazardous waste treatment	295	225
<b>Transport based emissions</b>		
Fuel used by waste transport vehicles	9	8
Business travel (cars, trains, flights etc)	1	1
<b>Energy use emissions</b>		
Electricity used on sites and in offices	34	27
Gas used on sites and in offices	2	2
Fuel used on sites for plant and equipment / heating	2	2
<b>Total emissions from significant sources</b>	<b>343</b>	<b>265</b>
<b>Energy from waste used on site as a fuel<sup>2</sup></b>	<b>334</b>	<b>255</b>
<b>Total potential avoided emissions</b>	<b>334</b>	<b>255</b>

1. Figures rounded to nearest 1,000 tonnes – totals may reflect rounding
2. Shanks Hazardous Waste ATM Plant uses wastes as an energy source for its on-site processes. Some 81% of the plant's requirements being sourced this way. Measurement of this did not commence until partway through Shanks previous 5-year CR objectives cycle. As such, for consistency reasons, this data was not included in Group carbon footprint in previous reports. This data has now been added and will be measured going forward.



## 2. Sustainability and the environment – carbon footprints

### Shanks Netherlands Commercial carbon footprint

This is the carbon footprint for our Netherlands Commercial Division operations. As for our Group carbon footprint the information is split into the emissions from our activities, followed by the carbon avoidance benefit we produce from our sustainable waste management operations

#### Emissions from our activities: Shanks Netherlands Commercial

Source	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2016	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2015
<b>Process based emissions</b>		
Emissions from anaerobic digestion and composting	32	30
Emissions from landfill	18	17
<b>Transport based emissions</b>		
Fuel used by waste transport vehicles	38	39
Business travel (cars, trains, flights etc)	0.5	0.8
<b>Energy use emissions</b>		
Electricity used on sites and in offices	18	15
Gas used on sites and in offices	8	8
Fuel used on sites for plant and equipment / heating	7	6
<b>Total emissions from significant sources</b>	<b>122</b>	<b>117</b>
<b>Renewable energy generated</b>	<b>25</b>	<b>20</b>
<b>Waste derived fuels produced and sold</b>	<b>141</b>	<b>151</b>
<b>Materials separated for re-use/recycling (some re-used directly, others undergo re-processing by 3<sup>rd</sup> parties)</b>	<b>275</b>	<b>270</b>
<b>Total potential avoided emissions</b>	<b>441</b>	<b>441</b>

1. Figures rounded to nearest 1,000 tonnes – totals may reflect rounding





## 2. Sustainability and the environment – carbon footprints

### Shanks Municipal carbon footprint

This is the carbon footprint for our Municipal Division operations. As for our Group carbon footprint the information is split into the emissions from our activities, followed by the carbon avoidance benefit we produce from our sustainable waste management operations

#### Emissions from our activities: Shanks Municipal

Source	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2016	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2015
<b>Process based emissions<sup>2</sup></b>		
Emissions from anaerobic digestion and composting	67	57
Emissions from landfill	18	18
Emissions from mechanical biological treatment (MBT)	24	17
<b>Transport based emissions</b>		
Fuel used by waste transport vehicles	1	1
Business travel (cars, trains, flights etc)	1	1
<b>Energy use emissions</b>		
Electricity used on sites and in offices	21	17
Gas used on sites and in offices	1	0
Fuel used on sites for plant and equipment / heating	5	5
<b>Total emissions from significant sources</b>	<b>137</b>	<b>116</b>
Renewable energy generated	11	5
Waste derived fuels produced and sold	369	337
Materials separated for re-use/recycling (some re-used directly, others undergo re-processing by 3 <sup>rd</sup> parties) <sup>3</sup>	149	173
<b>Total potential avoided emissions</b>	<b>529</b>	<b>515</b>

1. Figures rounded to nearest 1,000 tonnes – totals may reflect rounding

2. Emissions include biogenic carbon

3. Increases in emissions and avoidance the result of new plants being brought on line such as at BDR and Wakefield and increased capacity at others such as Cumbernauld



## 2. Sustainability and the environment – carbon ratios

### Group GHG intensity ratios

Shanks operations have GHG (greenhouse gas) emissions. They also facilitate carbon avoidance through their recycling, recovery and green energy production. This data is presented above. However, this data when seen in isolation may not show trends or performance over time. In order to achieve this we also present our total emissions and avoidance (as CO<sub>2</sub> equivalents) as a ratio of our turn-over. The below shows this and is expressed as '000 tonnes CO<sub>2</sub> equivalent per £ million of revenue

### GHG intensity ratios

Indicator	2016	2015
Amount greenhouse gases emitted (CO <sub>2</sub> equivalent '000 tonnes) per revenue-over (£ million)	1.07	0.91
Greenhouse gases avoided by our activities (CO <sub>2</sub> equivalent '000 tonnes) per unit revenue (£ million)	2.78	2.77

We first set ourselves quantified key CR objectives in 2010. These original objectives ran over a five-year cycle, and ended in 2015. One of these five-year 2010-2015 objectives was to improve the level of carbon avoidance our activities produce. We achieved this objective. In 2015 we set ourselves a new and wider range of CR objectives, again over a five-year period running to 2020. These new objective also include a carbon avoidance target. Many carbon calculations are based on 'factors'. For example, amount of electricity consumed x a factor = amount of carbon emitted. These factors are taken from various sources, such as Government agencies (see our CR indicators document for detail), and are periodically revised by their producers as knowledge increases or external conditions change. To allow comparison between years we did not revise the carbon factors used to arrive at our carbon emissions and avoidance over the five-year period 2010-2015 – any revision during the five-year cycle would have resulted in false year-on-year comparisons. When we set our new objectives in 2015 we took the opportunity to revise the factors we use and bring them up-to-date. As a result some of our longer-term carbon data may not be comparable. For this reason we only show two years' of data above, rather than the five years we showed in our previous reports.



### 3. Sustainability and the environment – emissions and bio-diversity

#### GHG emissions, spills and bio-diversity near to our sites

This is a synopsis of our significant greenhouse gas (GHG) emissions, spillages and biological diversity

#### GHG emissions, spills and biological diversity

Indicator	Belgium Commercial	Netherlands Commercial	Hazardous Waste	Municipal	Group
Amount greenhouse gases emitted key operations (CO <sub>2</sub> equivalent '000 tonnes) <sup>1</sup>	56	122	343	137	658
Significant spills at sites – number of reported spills required by permits <sup>2</sup>	0	0	33	9	42
Sites with land in or next to protected or high biodiversity value areas <sup>3,4,5</sup>	3	0	1	1	5

1. Data rounded to nearest 1,000 tonnes
2. All reportable spills at Shanks ATM site are a function of strict site permit reporting requirements
3. Area of high biodiversity as part of Shanks Monceau which is managed in accordance with legal obligation (5,000 square metres). Foronex Bree is located nearby natura 2000 areas and protected bird region. Foronex Manhay is located nearby natura 2000 areas. Area of protected land near to Shanks ATM site (115,000 metres<sup>2</sup> in extent)
4. Four sites in the Netherlands near to natura areas of land
5. One site in UK (Aucheninnes closed landfill site) next to habitat conservation area

### 3. Sustainability and the environment – emissions

#### Significant emissions

We use a wide variety of technologies. These technologies use different processes and their potential significant environmental emissions are often very different: For example, methane emissions are significant for a landfill, but not for a recycling plant. As a result reporting in a meaningful way on potentially significant emissions is complex for us, and requires common indicators and a common set of parameters to report against.

All of our sites operate under environmental permits. Except for Shanks Canadian operations, these permits all come under common European (EU) law. Part of this regulation is that larger facilities are required to report on specified emissions using the European Pollution Release and Transfer (EPRT) protocols. This gives us a common set of emissions and measures of significance.

However, EPRT does not cover all of our operations, only larger facilities where the regulator deems there may be significant emissions. In practice this means that Shanks EPRT emissions reporting covers some 70% of the wastes our sites handle, leaving some 30% not covered. This does not mean we do not report emissions from our non-EPRT sites - we do but as part of our greenhouse gas/carbon reporting. The table right lists our operational types in broad categories, whether they are covered by EPRT, brief descriptions of potential significant emissions and where Shanks reports on these.

For example, a small or medium sized recycling plant will typically have two significant emissions: Indirect greenhouse gas (GHG) emissions associated with electricity used on site to power recycling equipment and direct GHG emissions from diesel use in heavy mobile plant. There will be other emissions, such as discharges to sewer from employee welfare facilities, but these are very unlikely to be significant

#### Significant emission types by operation type

EPRT	Operation types	Description of potential significant emissions	Where reported
EPRT sites Some 70% waste handled	Landfills	Treated leachate to environment/sewer Methane to environment from landfill gas Direct CO2 and other GHG to environment from landfill gas Direct CO2 and other GHG to from green energy generation Direct CO2 and other GHG emissions from fuel use (mobile plant)	CO <sub>2</sub> and other GHG emissions included in Shanks carbon footprints. Other emissions in EPRT data as below
	Mechanical Biological treatment	Effluent discharge to environment/sewer Direct CO2 and other GHG to environment Indirect GHG emissions from power use (eg, electricity) Direct CO2 and other GHG emissions from fuel use (mobile plant)	
	Hazardous waste treatment	Effluent discharge to environment/sewer Direct CO2 and other GHG to environment Indirect GHG emissions from power use	
	Larger recycling plants	Indirect CO2 / other GHG emissions from power use (eg, electricity) Direct CO2 and other GHG emissions from fuel use (mobile plant)	
	Larger composting plants	Direct CO2 and other GHG to environment from compost process Indirect GHG emissions from power use (eg, electricity) Direct CO2 and other GHG emissions from fuel use (mobile plant)	
	Larger AD plants	Direct CO2 and other GHG to from green energy generation Indirect GHG emissions from power use (eg, electricity) Direct CO2 and other GHG emissions from fuel use (mobile plant)	
Non-EPRT sites Some 30% waste handled	Smaller recycling plants	Indirect CO2 and other GHG emissions from power use (eg, electricity) Direct CO2 and other GHG emissions from fuel use (mobile plant)	CO <sub>2</sub> and other GHG emissions included in Shanks carbon footprints
	Smaller recovery plants	Indirect CO2 and other GHG emissions from power use (eg, electricity) Direct CO2 and other GHG emissions from fuel use (mobile plant)	
	Smaller AD plants	Direct CO2 and other GHG to from green energy generation Indirect GHG emissions from power use (eg, electricity) Direct CO2 and other GHG emissions from fuel use (mobile plant)	
	Transfer stations	Direct CO2 and other GHG emissions from fuel use (mobile plant)	
	Amenity sites	Direct CO2 and other GHG emissions from fuel use (mobile plant)	
NA	Offices	Indirect CO2 and other GHG emissions from power use (eg, electricity)	CO <sub>2</sub> and other GHG emissions included in Shanks carbon footprints
	Vehicles sites	Direct CO2 and other GHG emissions from fuel use (road lorries)	

### 3. Sustainability and the environment – emissions

#### EPRTR emissions

The table right shows emissions from our sites under EPRTR reporting. These are cumulative – the total emissions for all of our EPRTR sites across the Group. Which emissions any site is required to report on is decided by the regulator and reporting requirements vary. Notes are given (see ref No next to each emission data-set and comments below). However, reflecting the complexity of the data, the following also need to be accounted for:

- ✓ Thresholds under EPRTR (columns headed 'EPRTR thresholds') are for single sites and not for a company's total emissions. We have chosen to report on all EPRTR emissions and notes are given on whether any single site reported emissions above threshold
- ✓ EPRTR covers both the 'release' and 'transfer' of emissions. For releases these are emissions direct to the environment. For transfers these are emissions to secondary treatment. For example, a discharge to a sewer where further treatment will be applied before release into the environment
- ✓ Much of the below data is based on monitoring of emissions. However, some is based on modelling. In particular where emissions may be from a diffuse source, such as fugitive emissions of methane through a landfill cap where direct measurement is not practical. As with most modelled data its value may be more in an ability to benchmark rather than as an exact measurement of emissions
- ✓ For data derived from models some of the assumptions in the model used may result in over-estimation. For example, emissions of CFCs and HCFCs from landfill sites may be lower than shown as a result of assumptions in the models used to derive this data

EPRTR emission	EPRTR threshold kg/year			Group total emissions kg/year		
	Air	Water	Soil	Air	Water	Soil
Methane (CH <sub>4</sub> )	100,000			1650521		
Carbon monoxide (CO)	500,000			16272		
Carbon dioxide (CO <sub>2</sub> )	100,000,000			385660930		
Nitrous oxide (N <sub>2</sub> O)	10,000			3346		
Ammonia (NH <sub>3</sub> )	10,000			42189.09		
Non-methane VOCs	100,000			16928		
Nitrogen oxides (NO <sub>x</sub> /NO <sub>2</sub> )	100,000			332058.6		
Sulphur oxides (SO <sub>x</sub> /SO <sub>2</sub> )	150,000			18443		
Total nitrogen		50,000	50,000		214656.2	
Total phosphorus		5,000	5,000		2311.687	
Hydrochlorofluorocarbons (HCFCs)	1			24926.39		
Chlorofluorocarbons (CFCs) (6) 1	1			47.49		
Arsenic and compounds (as As)	20	5	5		134.03	
Cadmium and compounds (as Cd)	10	5	5		0.1	
Chromium and compounds (as Cr)	100	50	50		590.34	
Copper and compounds (as Cu)	100	50	50		122.51	
Mercury and compounds (as Hg)	10	1	1		0.293	
Nickel and compounds (as Ni)	50	20	20		576.54	
Lead and compounds (as Pb)	200	20	20		18.00858	
Zinc and compounds (as Zn)	200	100	100		585.39	



### 3. Sustainability and the environment – emissions

#### EPRTR emissions continued

##### Further notes

- ✓ For carbon and other GHG emissions threshold only exceeded generally at landfill sites
- ✓ For some other emissions in excess of threshold the threshold is only exceeded at one site only (hazardous waste destruction to prevent environmental damage)
- ✓ For other emissions threshold only exceeded as a transfer to secondary treatment not as release to the environment

**General notes:** Data is for 2015 as reported by Shanks sites under EPRTR. Some of the data (such as methane and carbon dioxide) is already reported on as carbon equivalents in Shanks carbon footprints. Exceeding an EPRT threshold, even at an individual site, does not imply any breach of an environmental permit or an unacceptable level of emission, simply that the emission is significant

EPRTR emission	EPRTR threshold kg/year			Group total emissions kg/year		
	Air	Water	Soil	Air	Water	Soil
2 1,2-dichloroethane (EDC)	1,000	10	10	56		
2 Dichloromethane (DCM)	1,000	10	10	47		
Halogenated organic compounds (as AOX)		1,000	1,000	6		
Ethyl benzene		200	200	1		
Phenols (as total C)		20	20	6.26		
Toluene		200	200	2		
Total organic carbon (as total C or COD/3)		50,000		79856		
Xylenes		200	200	5		
Chlorides (as total Cl)		2,000,000	2,000,000	4975589		
Asbestos	1	1	1	0		
Cyanides (as total CN)		50	50	14		
Particulate matter (PM10)	50,000			7285		



## 4. Sustainability and the environment – resources

### Our resource use

This data is a synopsis of our resource use across our activities. As for other data the basis for calculation is included in our CR indicators document available on our Group web site ([www.shanksplc.com](http://www.shanksplc.com)) in the Our Responsibilities section

### Resource use

Indicator	Belgium Commercial		Netherlands Commercial		Hazardous Waste		Municipal <sup>5</sup>		Group	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Electricity consumption (000' Kilowatt hours)	15829	19200	34832	34832	63242	58052	42656	36255	156560	148340
Gas used at sites and offices (000' Kilowatt hours)	1629	1509	49270	52088	9227	9704	3095	80	63221	63381
Fuel use at sites and offices (000' litres) <sup>1</sup>	1541	1472	2112	2159	490	753	1902	1100	6045	5484
Fuel used waste collection vehicles (000' litres) <sup>1</sup>	3264	3582	11902	12218	2738	2649	489	527	18394	18976
Electricity generated (Mega-watt hours)	52589	48595	47789	47570	0	0	24790	9357	125168	105522
Water used at sites - potable water ('000 m <sup>3</sup> ) <sup>2</sup>	21	26	55	53	129	140	52	45	257	264
Water used at sites – surface water ('000 m <sup>3</sup> ) <sup>2,3</sup>	30	36	23	23	2784	4604	0	0	2837	4663
Water used at sites – groundwater ('000 m <sup>3</sup> ) <sup>2</sup>	7	10	40	33	0	0	0	0	47	43
Water used at sites – rain water ('000 m <sup>3</sup> ) <sup>2,4</sup>	0	36	1	0	297	46	0	8	298	90
Water used at sites – grey water ('000 m <sup>3</sup> ) <sup>2</sup>	0	57	89	75	786	657	0	0	875	789

1. Diesel fuel used (for site use mainly in heavy mobile or static plant)

2. Data rounded to nearest 1,000 m<sup>3</sup>

3. Changes in water use for Hazardous Waste are the result of more efficient plant cooling systems

4. Changes in water use for BE Commercial caused by shift in scope at one site

5. Changes in Municipal data largely the result of new plants such as at BDR and Wakefield in the UK being brought on line in the year

6. Notes on gas consumption. Units changed for 2016 to kilowatt hours to allow better comparison with electricity. Gas used for heating etc in offices, but also at some sites in processes. This results in varying data for divisions dependent on degree of process use. Large rise in Municipal consumption the result of new site at Wakefield in the UK which includes an autoclave heated via gas powered steam generation which was brought on line in late 2015



## 5. Sustainability and the environment – waste types

### Our waste types

As a waste management company, the wastes we accept are our raw materials and represents our up-stream supply chain. Right is a synopsis of the waste types we accept and the tonnages of each type we accept. As for other data this is split between our divisions plus a Group total

### Wastes accepted by our sites

Waste type <sup>1,2,3</sup>	Belgium Commercial	Netherlands Commercial	Hazardous Waste	Municipal	Group
Bulky waste	20	199		2	221
Construction and demolition	62	611		3	677
Commercial waste	171	303		0	474
Compost	7	1		0	8
Domestic waste	35	94		203	332
Food waste	44	30		291	365
Glass and ceramics	2	119		7	128
Green waste	25	466		293	783
Landfill	159	101		0	260
Liquid waste	116	0	779	7	902
Metals	3	10		5	18
Paper based	39	81		9	129
Plastics	5	25		11	41
Rockwool	0	61		0	61
Rubber	5	2		0	7
Rubble	56	876		2	935
Soil / sand / sludge	154	289	1022	8	1473
Special waste	22	76		0	98
SRF / RDF (waste derived fuels)	0	1		129	129
Wood	124	120		5	249
General waste	0	0		118	118
Other	45	6	121	773	945
<b>Totals</b>	<b>1094</b>	<b>3473</b>	<b>1922</b>	<b>1865</b>	<b>8354</b>

1. Figures are '000 tonnes, may reflect rounding and may not total. As a result of rounding and small scale wastes not included data may be different to waste data elsewhere in this document
2. Data is for wastes received at Shanks sites (handled) and does not include wastes collected and transported to third party site
3. Some data calendar year for regulatory reporting reasons



## 6. Sustainability and the environment – recycling and recovery

### Our recycling and recovery rates

As a sustainable waste management company one of Shanks key performance measures is its recycling and recovery rate. Our recycling and recovery activities have a positive resource benefit and underpin our carbon avoidance benefit. The below data shows how much of the wastes we handle were recycled or recovered in the year compared to the previous year

#### Resource use

Indicator	Belgium Commercial		Netherlands Commercial		Hazardous Waste		Municipal		Group	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Total waste handled at Shanks sites (million tonnes)	1.12	1.16	3.47	3.50	1.94	1.91	1.87	1.22	8.40	7.79
Amount of materials recovered from waste at Shanks sites (million tonnes) <sup>1</sup>	0.70	0.8	2.76	2.80	1.9	1.84	1.41	0.91	6.77	6.36
Proportion of total waste handled at sites recovered from the waste stream (%) <sup>1,3</sup>	74%	69%	82%	80%	99%	96%	76%	75%	84%	82%
Tonnes of waste handled at Shanks sites sent for landfill disposal (million tonnes) <sup>2</sup>	0.22	0.23	0.04	0.02	0.001	0.03	0.42	0.31	0.67	0.57
Tonnes of waste handled at sites sent for incineration (million tonnes) <sup>2</sup>	0.07	0.13	0.59	0.69	0	0.05	0.04	0.05	0.70	0.92

1. Includes water recovery and moisture loss during treatment for some technologies employed
2. Summing wastes sent to landfill and incineration will not always result in total as the result of rounding
3. Calculated based on waste diverted from landfill and incineration



## Health and safety

### *Making more from waste*







## 7. Health and safety – our accident and near-miss performance

### Our accident performance

The health, safety and wellbeing of all of our employees are key issues for Shanks. We accept that we operate in a known high-risk sector. The most basic measure of accident rate is shown right, along with severity and lost time accident frequency rates on the following page.

Together this data provides the top-line indicators of our success in this area

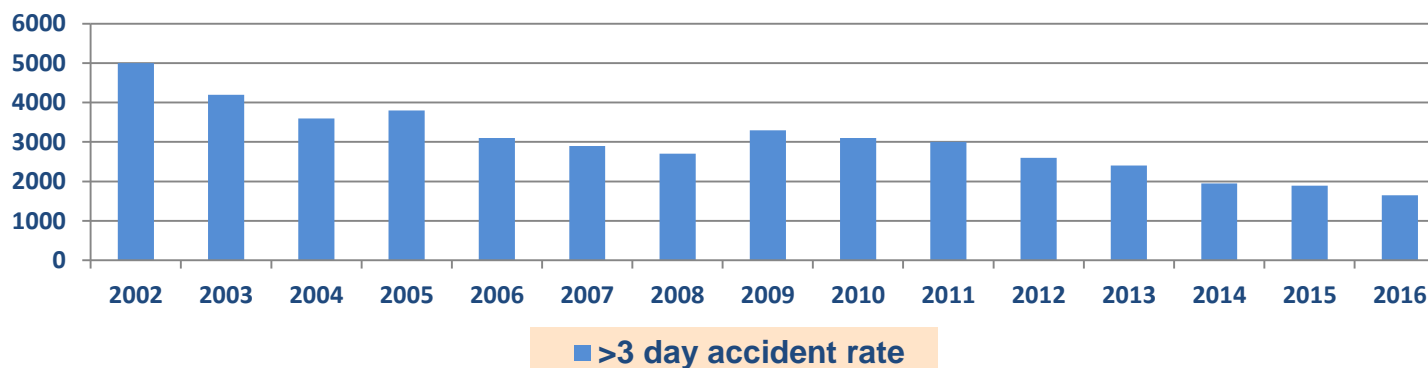
Note – near-miss close-out numbers and rates were not collected centrally until the 2015/2016 year – hence the NA marks for 2015

See key on next page for definitions and explanations

### Employee accidents

Indicator	Belgium Commercial		Netherlands Commercial		Hazardous Waste		Municipal		Group	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Total Number LTAs	24	36	50	28	1	4	18	19	93	87
LTA rate	3110	4350	4020	2300	130	510	2710	3150	2850	2530
Number >3 day accidents	19	30	31	21	0	4	7	10	57	65
>3 day accident rate	2460	3630	2490	1720	0	510	1060	1660	1650	1890
Number fatal accidents	0	0	0	0	0	0	0	0	0	0
Number near-miss reports	717	77	499	75	608	433	4108	1637	5932	2222
Number near-miss close-out	518	NA	182	NA	441	NA	2247	NA	3388	NA
Near-miss close-out rate	72%	NA	36%	NA	73%	NA	55%	NA	57%	NA

### Employee >3 day accident rates – long term trend





## 7. Health and safety – our accident performance

### Key to terms used in health and safety tables and graphs

In all of the health and safety tables and graphs the accident categories used are:

**>3 day accident** – any injury suffered by an employee which results in more than three days off work. Note – in some Shanks documents this type of accident is referred to as 'reportable'. In Shanks documents, the terms 'reportable' and '>3 day' are interchangeable and mean the same. The term 'reportable' is internal only and does not imply any regulatory definition. Shanks has decided to use >3 day as a definition to allow comparison both between Shanks divisions and over time.

**LTA (lost time accident) injury** – any injury suffered by an employee which results in at least one day off work.

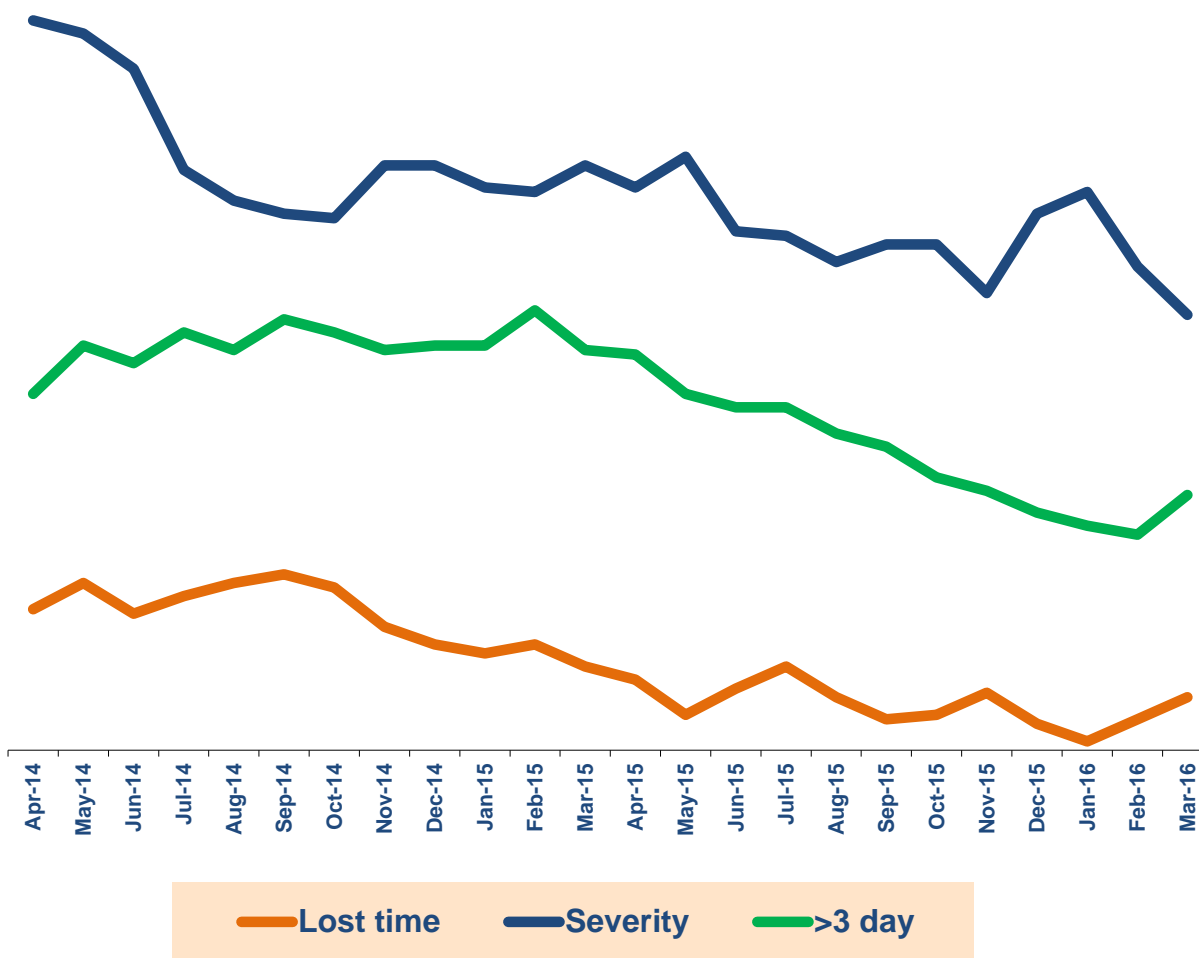
**Fatal accidents** – fatal employee workplace accidents.

**>3 day and LTA accident rates** – total accident figures do not allow adequate comparisons to be made over time as employee numbers can, and do, change. The accident rates quoted are per 100,000 employees. These rate figures are a truer measure of accident performance. Note – scale used in graph right is different to that in tables above. This is simply to allow all data to fit onto the graph right.

**LTA frequency** – number of lost time employee accidents per 100,000 days worked. Note – data is presented on a rolling 12 month basis to smooth any month-to-month changes and allow the data to represent trends

**Incident severity rate** – average number of days lost per lost time employee accident. Note – data is presented on a rolling 12 month basis to smooth month-to-month changes and allow the data to represent trends

Shanks Group >3 day rate, lost time accident frequency and severity rate





## **Our people**

### *Making more from waste*



## 8. Our people – sickness absence performance

### Our people – sickness absence

Absence from work may be for work reasons, such as a workplace accident, or for non-work related reasons. Right is a synopsis of our employee absence data. As for other data this is presented split into our operating divisions and as Group totals

#### Sickness absence

Indicator	Belgium Commercial		Netherlands Commercial		Hazardous Waste		Municipal		Group	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Total employee absenteeism from work (% of available days)	6.2	6.1	6.3	7.5	4.1	4.2	3.0	3.1	5.1	5.1
Short-term sickness absence (<8 days off work)	1.1	1.1	1.2	1.0	0.5	0.7	0.6	0.6	0.9	0.9
Work related accident absenteeism (% of available days)	0.5	0.9	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3
Non-work related absenteeism from work (% available days)	5.7	5.2	6.1	7.3	4.0	3.9	2.8	2.9	4.9	4.8
Average duration of employee absence (days)	21.9	21.4	26.4	24.0	41.6	34.6	9.4	13.0	25.7	19.0
Average frequency of absence (number of absence periods)	1.1	1.2	1.1	0.9	0.5	0.7	0.7	0.9	0.9	2.1
Employees with more than 2 absence periods (% of workforce)	18	16	14	12	4	8	7	7	11	16
Employees with zero absence days (% of workforce)	34	36	0	39	66	60	61	61	34	48

1. Data as percentages may not sum to totals as a result of rounding
2. Short-term absence defined as <8 days absence. Only measured from 2015 onwards



## Our people

1. Employee numbers are by divisional reporting line and may vary from those contained in Shanks annual financial report
2. Statutory directors only as listed in company data
3. Other senior executives/directors such as divisional MD direct reports. Note – not including statutory directors noted in the lines above to avoid double-counting
4. Male/female splits are as at year-end for reporting rules reasons, whereas total employee figures are averages – male/female splits may not total to averages
5. Director and senior executive data only given as Group totals
6. Includes Group central services

## Indicator

Indicator	Belgium Commercial		Netherlands Commercial		Hazardous Waste		Municipal <sup>6</sup>		Group	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Total number permanent employees <sup>1</sup>	772	848	1285	1259	810	789	657	610	3524	3506
No. operational site employees	537	594	1067	993	510	501	403	375	2516.5	2463
No. support, etc. employees	235	254	218	266	300	288	254	235	1007	1043
No. male permanent employees <sup>4</sup>	671	710	1136	1080	696	706	549	501	3052	2997
No female permanent employees <sup>4</sup>	101	103	149	113	114	110	108	109	472	435
No. male statutory directors <sup>2,4,5</sup>									15	34
Number female statutory directors <sup>2,4,5</sup>									1	2
No. male senior executives/directors <sup>3,4,5</sup>									28	7
No. female senior executives/directors <sup>3,4,5</sup>									5	4
No. of full-time permanent employees	740	814	1167	1143	719	704	633	587	3259	3248
No. part-time permanent employees	32	34	118	116	91	85	24	23	265	258
Permanent employee turnover (%)	2.6	4.4	10.0	14.0	5.7	6.7	17.4	14.5	8.8	9.8
Average years' service for employees	10.7	10.5	11.3	16.4	11.2	16.9	5.7	8.8	10.1	14.4
No. non-permanent employees	83	82	144	148	128	133	14	16	369	379
No. cases of discrimination	0	0	0	0	0	0	0	0	0	0
% employees covered by formal safety consultation committees	96	94	100	100	100	100	100	100	99	99



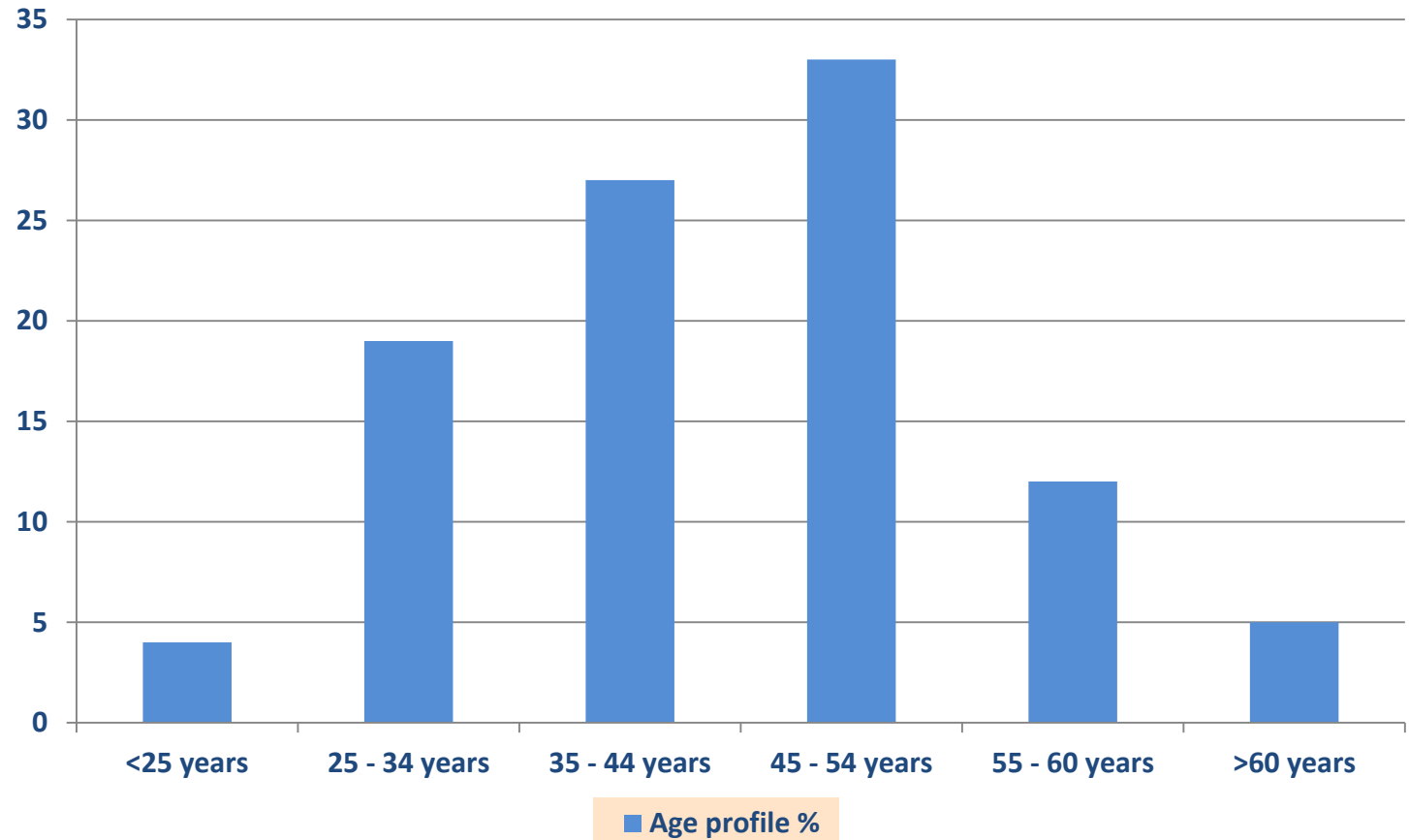


## 10. Our people – age profiles

### Our people – age profile of our people

Graph right shows the age spread of our employees as % of the total number of employees

Age profile by % of employees





## Community relations

*Making more from waste*





## 11. Community – our neighbourliness performance

### Community – complaints performance

The local communities around our sites are a critical stakeholder group for Shanks. If we do not engage with local communities we may find it difficult to gain new environmental permits or develop existing permissions. One of the most obvious performance indicators of our neighbourliness is the number of environmental complaints received by our sites

#### Numbers of complaints <sup>1</sup>

Indicator	Belgium Commercial		Netherlands Commercial		Hazardous Waste		Municipal <sup>6</sup>		Group	
	2016	2015	2016	2015	2016	2016	2016	2015	2016	2015
Number environmental complaints received by our sites/operations <sup>1,2</sup>	2	4	60	43	19	166	187	98	268	311
Average number of complaints per site (out of total number of sites)	0.1	0.2	2.1	1.5	1.4	12.8	8.5	4.1	3.2	3.7
Types of complaint										
Odour	1	2	55	39	19	0	127	75	202	116
Litter	1	0	0	0	0	0	9	0	10	0
Vermin <sup>3</sup>	0	0	0	2	0	0	10	19	10	21
Traffic	0	0	0	0	0	0	3	0	3	0
Mud / Dust	0	1	1	1	0	1	0	3	1	6
Noise	0	0	4	1	0	0	35	0	39	1
Other	0	1	0	0	0	165	3	1	3	167
<b>Total</b>	<b>2</b>	<b>4</b>	<b>60</b>	<b>43</b>	<b>19</b>	<b>166</b>	<b>187</b>	<b>98</b>	<b>268</b>	<b>311</b>

1. Includes all complaints, both those substantiated and those not substantiated

2. Fall in complaints for Hazardous Waste largely the result of an exceptional complaint event in 2015, rise in complaints for Municipal largely the result of issues with two new plants and ongoing odour complaints at Shanks London IVC Plant, Canada

3. Mainly fly complaints



## Sustainable management systems

*Making more from waste*







## 12. Sustainable management – our accreditations

### Management systems – our accreditations

We seek to continuously improve the way we manage our operations to gain further sustainability benefits and to ensure we are compliant with the law and good practice. This is also a critical customer issue for us. Below is a synopsis of the main international and national accreditations we hold. As for other data in the document the information is split by our operating divisions and also shown as Group totals

#### Our formal accreditations

Accreditation	Belgium Commercial		Netherlands Commercial		Hazardous Waste		Municipal <sup>6</sup>		Group	
	2016	2015	2016	2015	2016	2016	2016	2015	2016	2015
ISO14001 / EMAS	7	8	29	21	14	17	14	21	64	67
ISO 9001	12	13	38	25	13	15	15	20	78	73
OSHAS 18001	0	0	6	6	14	16	13	20	33	42
SCC / VCA	9	10	19	9	13	15	0	0	41	34
Other	2	2	20	18	1	12	2	2	25	34
% operating centres with ISO 14001	37%	NA	86%	NA	100%	NA	64%	NA	71%	NA

1. For some operating centres accreditations are held by groups of operating centre. For example, a group of three operating centres with a central accreditation. Data is presented as number of operating centres covered by accreditations
2. % operating centres with ISO 14001 reported from 2016 (new CR objective to 2020 of 100%)

ISO14001 / EMAS – international environmental management standards  
 ISO9001 – international quality standard  
 OHSAS18001 – international health and safety standard  
 SCC / VCA – national health and safety standards

In addition to our formal accreditations, we also take part in high-profile corporate responsibility and sustainability assessments. For example, we are listed in the FTSE4Good index and take part in the Carbon Disclosure Project



## 13. Sustainable management – our compliance performance

### Management systems – our compliance

We aim to achieve high standards. When we do not meet these standards, we are open and transparent about this. We see such failings as opportunities to improve. Right is a synopsis of our compliance record for the year

#### Our compliance performance

Indicator	Belgium Commercial		Netherlands Commercial		Hazardous Waste		Municipal <sup>6</sup>		Group	
	2016	2015	2016	2015	2016	2016	2016	2015	2016	2015
Number of environmental convictions and fines <sup>1</sup>	0	1	0	0	2	4	0	0	2	5
Number of health and safety convictions and fines	0	1	2	4	0	0	0	0	2	5
Legal actions for anti-competitive behaviour, anti-trust and monopoly practices	0	0	0	0	0	0	0	0	0	0
% of operations which have undergone risk assessment for bribery and other similar risks	100	100	100	100	100	100	100	100	100	100

1. Data is for convictions (cases where the company goes to court) and administrative fines (such as those in Belgium and the Netherlands)

#### Our compliance performance – details of cases

Operation	ATM
Date	Feb-15
Penalty	35,000 euro
Synopsis	Failure to notify authorities as soon as possible of an incident and permit breach under Pollution of Surface Waters Act
Operation	Reym
Date	Jul-15
Penalty	Zero euro (no fine imposed as breach off permit corrected in a timely manner)
Synopsis	Effluent wastewater standard breach at Veendam
Operation	Van Tuijl
Date	Mar-14
Penalty	8190 euro between both counts
Synopsis	Machine safety guarding insufficient. Faults addressed promptly. Fined under two different laws, hence count of 2 in table





## 14. Green bond issue 2015

### Green bond issue

In 2015 Shanks released its first ever green bond. The text right is an extract from a case study on the topic taken from our CR Report 2015. This gives background to the green bond.

On the following pages proposed and actual fund allocation and potentially eligible projects for funding are given, including an update of actual allocation of funds.

### Supporting a green bond – case study

In 2015 Shanks released its first ever 'green bond', worth 100 million euros. To be green all funds must be dedicated to sustainable projects, and to ensure they are really sustainable an external and independent assessment must be undertaken.

Shanks is a waste-to-product company and has no shortage of sustainable projects to fund. Projects included in our first green bond issue include our anaerobic digestion plant in Surrey in Canada, our Wakefield project in the UK, our new recycling line near Wateringen in the Netherlands and the replacement of older lorries with new Euro VI compliant vehicles.

To prove that these projects are really green we needed to provide the independent assessor with information and data to support their sustainability credentials. This included project-specific carbon footprints and explanations of how the projects support sustainability. The assessor was more than content that the projects chosen met the sustainability criteria of a green bond, and praised Shanks for the detail and data it could provide. We could provide this high level and quality of data because of our developed management systems.

Our investor stakeholders may chose Shanks because we are a waste-to-product company. Issuing a green bond provides this valuable stakeholder group with a further option, and one which is supported by an independent assessment. Details of the projects to be funded by our green bond issue can be found in our CR FULL DATA document at [www.shanksplc.com/our-responsibilities](http://www.shanksplc.com/our-responsibilities).

Shown right: Artist's impression of our Surrey AD facility in Canada – just one of the sustainable projects eligible for funding through our green bond issue





## 14. Green bond issue 2015

### Green bond issue

The table right shows initial proposed allocation of funds to the specified sustainable projects listed in our green bond issue, and the actual allocation of funds to end of March 2016.

Initially € 162 million of spend was identified as being eligible for green bond funds. The green bond as issued raised € 100 million. Spend on identified eligible projects to end March 2016 exceeds this figure (at € 113 million).

Project	Initial proposed spend € millions	Total spend to end March 2016	Year						
			2016/17 proposed	2015/16 proposed	2015/16 actual	2014/15 proposed	2014/15 actual	2013/14 proposed	2013/14 actual
City of Surrey Anaerobic Digestion Plant (Canada)	€ 35.7	€ 14.1	10.0 €	25.7 €	€ 14.1				
Barnsley Doncaster Rotherham PFI - mechanical biological treatment/anaerobic digestion (England)	€ 14.0	€ 14.0		14.0 €	€ 14.0				
Wakefield PFI - autoclave, anaerobic digestion, recycling and composting (North England)	€ 34.4	€ 34.3		34.4 €	€ 34.3				
ATM Electrostatic precipitator replacement (Netherlands)	€ 5.4	€ 4.5		4.1 €		1.27 €	€ 3.2		€ 1.3
Thamesweg waste water storage (Netherlands)	€ 9.2	€ 9.2		0.2 €	€ 2.0	5.10 €	€ 3.1	3.85 €	€ 4.1
Reym Totalcare North Site (Netherlands)	€ 3.8	€ 3.9				3.80 €	€ 3.9		
ATM Storage Tanks (Netherlands)	€ 6.6	€ 6.5			€ 0.8	5.15 €	€ 4.3	1.47 €	€ 1.5
ATM Vapour destruction equipment (Netherlands)	€ 0.8	€ 1.5			€ 0.8	0.02 €	€ 0.0	0.77 €	€ 0.8
ATM Drum Storage Facility (Netherlands)	€ 2.5	€ 0.0		2.5 €					
VVC Sorting Line, new recycling line (Netherlands)	€ 4.6	€ 4.7				4.60 €	€ 4.7		
Vliko New Recycling Facility (Netherlands)	€ 11.3	€ 7.6		11.3 €	€ 7.6				
Stone Crusher Hook of Holland (Netherlands)	€ 2.3	€ 0.0		2.3 €	€ 0.0				
Replacement of trucks Belgium solid waste operations	€ 11.0	€ 0.7		4.5 €		5.80 €		0.74 €	€ 0.7
Replacement of trucks Netherlands solid waste	€ 14.6	€ 6.1		10.4 €	€ 2.3	3.19 €	€ 2.8	1.04 €	€ 1.0
Replacement of trucks Reym, industrial cleaning (Netherlands)	€ 6.1	€ 6.4		2.5 €			€ 3.1	3.68 €	€ 3.4
<b>Totals</b>	<b>€ 162.4</b>	<b>€ 113.6</b>	<b>10.00 €</b>	<b>111.9 €</b>	<b>€ 75.9</b>	<b>33.42 €</b>	<b>€ 25.0</b>	<b>11.54 €</b>	<b>€ 12.8</b>



## 14. Green bond issue 2015

### Green bond issue

The table right lists potentially eligible projects (as per the table above) and describes in brief their sustainability criteria

Project	Eligibility criteria	Overview	Synopsis of environmental benefit
City of Surrey Anaerobic Digestion Plant (Canada)	Organics Treatment – waste to energy and other usable products	Use of anaerobic digestion technology to divert organic waste from landfill	The Surrey AD Plant will produce: Green compost, a waste derived fuel and bio-gas. The green compost displaces less environmental products from the market, and the waste derived fuel can be used to displace fossil fuels. The estimated carbon avoidance benefit of these two waste products amounts to a carbon saving of some 4,000 tonnes per year. The bio-gas from the plant will be injected direct into Surrey's existing supply grid for use on vehicles and similar. The estimated volume of bio-gas produced per year is some 3 million cubic metres, equivalent to 2.9 million litres of diesel fuel.
Barnsley Doncaster Rotherham (BDR) PFI - mechanical biological treatment and anaerobic digestion (North England)	Recycling and Waste Management – diverting waste from landfills. Organics Treatment – waste to energy and other usable products	Multi-technology waste management site using mechanical biological treatment to produce a waste derived fuel for green energy production, and a dry anaerobic digestion plant producing green compost	Carbon benefits of waste derived fuel displacing fossil fuel in electricity production and displacement of less environmental composts
Wakefield PFI - autoclave, anaerobic digestion, recycling and composting (North England)	Recycling and Waste Management – diverting waste from landfills. Organics Treatment – waste to energy and other usable products	Multi-technology waste management site using recycling, green waste composting, autoclave and anaerobic digestion technologies	Carbon benefit of recycled and recovered materials produced and green power generated by the anaerobic digestion plant.



## 14. Green bond issue 2015

### Green bond issue

The table right lists potentially eligible projects (as per the table above) and describes in brief their sustainability criteria (continued)

Project	Eligibility criteria	Overview	Synopsis of environmental benefit
ATM Electrostatic precipitator replacement (Netherlands)	Hazardous Waste Treatment – treatment of contaminated water and/or soil	Replacement of older electrostatic precipitator associated with environmental treatment of contaminated soils and similar with new and more efficient equipment	One of ATM's main activities is the thermal treatment of contaminated soils. Post-treatment these soils can be used in various landscape etc projects. Overall Shanks ATM site has a recycling and recovery rate in excess of 90%. The thermal treatment of soils results in emissions which are controlled by various types of emissions system at ATM. One of the key emissions systems in place is the electrostatic precipitator. This removes particulates from emissions. The new electrostatic precipitator results in reduced emissions to atmosphere by use of more efficient and effective equipment.
Thamesweg waste water storage (Netherlands)	Hazardous Waste Treatment – treatment of contaminated water and/or soil. Reducing emissions associated with the required transport of wastes	Local waste capture to transport in bulk for treatment	Waste water is produced locally and requires transport to treatment facilities. This involves the use of road tankers, and results in emissions from such road transport. Providing bulking facilities allows smaller lorries to discharge waste water at the bulking facility rather than transporting direct to treatment facility. This results in a reduction in number of road journeys required to take wastes for treatment, and an associated reduction in emissions from road transport.
Reym Totalcare North Site (Netherlands)	Hazardous Waste Treatment – treatment of contaminated water and/or soil. Reducing emissions associated with the required transport of wastes	Local waste capture to transport in bulk for treatment	Waste water is produced locally and requires transport to treatment facilities. This involves the use of road tankers, and results in emissions from such road transport. Providing bulking facilities allows smaller lorries to discharge waste water at the bulking facility rather than transporting direct to treatment facility. This results in a reduction in number of road journeys required to take wastes for treatment, and an associated reduction in emissions from road transport.



## 14. Green bond issue 2015

### Green bond issue

The table right lists potentially eligible projects (as per the table above) and describes in brief their sustainability criteria (continued)

Project	Eligibility criteria	Overview	Synopsis of environmental benefit
ATM Storage Tanks (Netherlands)	Hazardous Waste Treatment – treatment of contaminated water and/or soil.	Increased holding capacity to accommodate extra waste from degassing regulation etc.	Improved water treatment ability, so reducing potential environmental risk associated with contaminated waters.
ATM Vapour destruction equipment (Netherlands)	Hazardous Waste Treatment – treatment of contaminated water and/or soil.	Process degassing waste to comply with new regulations	For health and safety reasons, ships are required to de-gas (vent their storage tanks). This is often achieved by venting tanks to atmosphere, resulting in the emission of VOCs and similar. At ATM ships can de-gas into a sealed system where emissions are subject to thermal treatment, so reducing the impact of emissions. See attached case study from Shanks Corporate Responsibility Report 2014 for more information.
ATM Drum Storage Facility (Netherlands)	Hazardous Waste Treatment – treatment of contaminated water and/or soil.	Upgrading of existing drum handling facilities to Seveso III standard	Many hazardous wastes are contained in drums, IBCs (small intermediate bulk containers) and similar. ATM's drum facility manages such wastes to reduce potential environmental impact. The upgrade of these facilities to the standard required under the Seveso III Directive reduces any potential risk to the environment, and offers improved health and safety standards.
VVC Sorting Line, new recycling line (Netherlands)	Solid Waste Treatment – recycling waste into usable products.	New recycling plant to sort and separate waste materials for reprocessing	Carbon benefit of recycled materials displacing use of virgin raw materials in manufacture.
Vliko New Recycling Facility (Netherlands)	Solid Waste Treatment – recycling waste into usable products.	New recycling plant to sort and separate waste materials for reprocessing	Carbon benefit of recycled materials displacing use of virgin raw materials in manufacture.



## 14. Green bond issue 2015

### Green bond issue

The table right lists potentially eligible projects (as per the table above) and describes in brief their sustainability criteria (continued)

Project	Eligibility criteria	Overview	Synopsis of environmental benefit
Stone Crusher Hook of Holland (Netherlands)	Solid Waste Treatment – recycling waste into usable products.	New recycling equipment for the recycling of construction and demolition wastes	Carbon benefit of recycled materials displacing virgin raw materials. In addition, construction wastes are heavy, resulting in the need for more road transport journeys than for lighter materials. The provision of local recycling facilities for construction wastes reduces the number and length of road journeys required to move wastes to treatment.
Replacement of trucks Belgium solid waste operations	Reducing emissions associated with the required transport of wastes.	Replacement of older trucks with newer Euro VI compliant vehicles	The Euro VI standard for heavy duty engines (such as those used in road transport vehicles) is a significant step-up from the previous Euro V and prior standards. Permitted hydrocarbon emissions are reduced by some 70%, NOx emissions by some 80% and particulates by some 50%. Shanks purchasing of lorries to the Euro VI standard will reduce its emissions from road transport significantly.
Replacement of trucks Netherlands solid waste operations	Reducing emissions associated with the required transport of wastes.	Replacement of older trucks with newer Euro VI compliant vehicles	The Euro VI standard for heavy duty engines (such as those used in road transport vehicles) is a significant step-up from the previous Euro V and prior standards. Permitted hydrocarbon emissions are reduced by some 70%, NOx emissions by some 80% and particulates by some 50%. Shanks purchasing of lorries to the Euro VI standard will reduce its emissions from road transport significantly.
Replacement of trucks Reym, industrial cleaning (Netherlands)	Reducing emissions associated with the required transport of wastes.	Replacement of older trucks with newer Euro VI compliant vehicles	The Euro VI standard for heavy duty engines (such as those used in road transport vehicles) is a significant step-up from the previous Euro V and prior standards. Permitted hydrocarbon emissions are reduced by some 70%, NOx emissions by some 80% and particulates by some 50%. Shanks purchasing of lorries to the Euro VI standard will reduce its emissions from road transport significantly.





## 15. Want to know more about Shanks?

### Want to know more?

**This CR the full data document is not the only document we produce on our approach to sustainability. The details given right will take you to other sources of information**

### Want to see our formal annual CR Reports?

Our annual CR Reports are publicly available and provide explanations, discussion and further information on our approach to sustainability, including case studies. Our CR Reports are available in the Our Responsibilities section of our Group web site ([www.shanksplc.com](http://www.shanksplc.com))

### Want to know how we calculate our CR data?

Our CR indicators document defines each of the items of data we release and how they are calculated. It also gives the general rules we use for our reporting. To see our CR indicators document go to the Our Responsibilities section of our Group web site ([www.shanksplc.com](http://www.shanksplc.com))

### Want to see how our reporting is in line with GRI G4 guidance?

The data and disclosures in our CR Report, and our other publicly available documents, are based on the requirements of the Global Reporting Initiative (GRI). To see how our reporting complies with GRI go to the Our Responsibilities section of our Group web site ([www.shanksplc.com](http://www.shanksplc.com))

### Want to know more about our strategy and financial performance?

Our annual financial report is publicly available. Our annual reports give more information on Shanks, its activities, our strategy, financial performance and governance. To see our annual report, go to the Investment Centre section of our Group web site ([www.shanksplc.com](http://www.shanksplc.com))

### Do you have a comment or question on our CR report or activities?

Contact us at [CRinfo@shanks.co.uk](mailto:CRinfo@shanks.co.uk). Or, if you do not have access to e-mail please use the contact details given in the contacts section on the rear inside cover of our CR Reports (see above)