

## CORPORATE RESPONSIBILITY REPORT 2015

# THE FULL DATA SET

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 2015 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 2015 – FULL data set contents and introduction

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

**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. However, this report covers the 2014/2015 financial year and as such uses our older divisional structure in force at the time: Benelux Solid Waste, Hazardous Waste, Organics and UK Municipal. We have operations in the Netherlands, Belgium, UK and Canada, and employ more than 3,500 people. In our target markets, we are at the forefront in providing sustainable waste management solutions for both the public and private sectors.

This is our 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 Reports by giving fuller, additional and more in-depth information. For ease of reading this document is split as shown right.

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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 2015

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

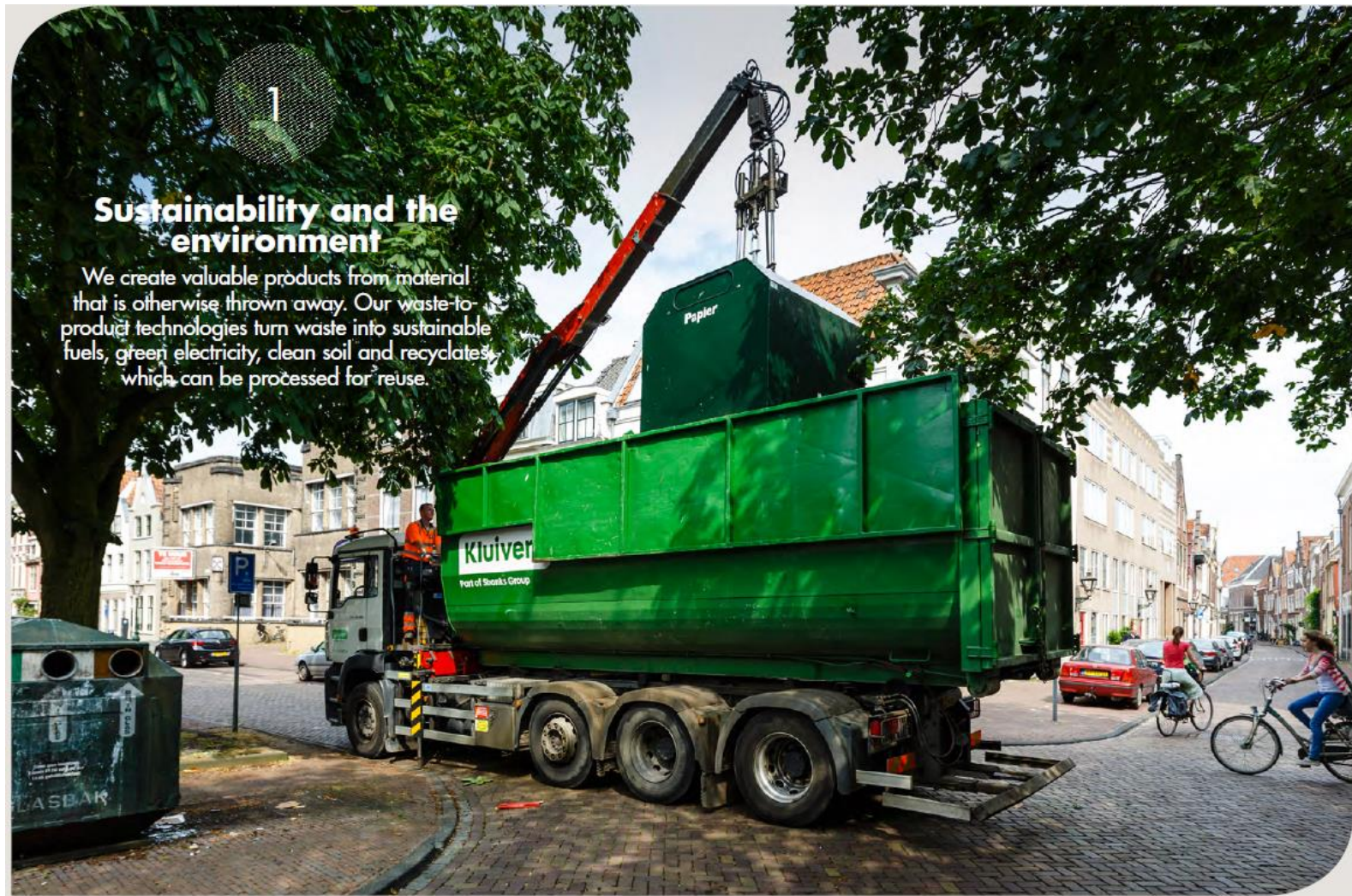
Measure	Benelux Solid Waste	Hazardous Waste	Organics	UK Municipal	Group
Average number of employees <sup>3</sup>	2,062	789	78	577	3,506
Active operating centres <sup>1</sup>	46	13	6	20	85
Operating centres with recycling/recovery	34	2	6	19	61
Operational landfill sites	3	0	0	2	5
Collection and transport lorries	655	167	0	24	846
Tonnes waste handled (million tonnes)	4.13	1.91	0.7	1.05	7.79
Tonnes materials recovered (million tonnes) <sup>2</sup>	3.09	1.84	0.68	0.75	6.36
Overall recycling and recovery rate	75%	96%	97%	71%	82%
Total energy generated (000' megawatt hours)	52.0	0	44.2	9.4	105.6

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





## Sustainability and the environment





## 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> 2015	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2014
<b>Process based emissions</b>		
Emissions from anaerobic digestion	40	19
Emissions from composting	39	45
Emissions from hazardous waste treatment	225	255
Emissions from landfill <sup>3</sup>	73	115
Emissions from mechanical biological treatment (MBT)	17	22
<b>Transport based emissions</b>		
Fuel used by waste transport vehicles	58	61
Business travel (cars, trains, flights etc)	3	4
<b>Energy use emissions</b>		
Electricity used on sites and in offices	64	64
Gas used on sites and in offices	10	9
Fuel used on sites for plant and equipment / heating <sup>2</sup>	17	20
<b>Total emissions from significant sources</b>	<b>546</b>	<b>614</b>
<b>Carbon avoidance</b>		
Renewable energy generated	38	36
Waste derived fuels produced and sold <sup>4</sup>	891	750
Materials separated for re-use/recycling (some re-used directly, others undergo re-processing by 3 <sup>rd</sup> parties) <sup>3</sup>	482	474
<b>Total potential avoided emissions</b>	<b>1411</b>	<b>1260</b>

1. Figures rounded to nearest 1,000 tonnes – totals may reflect rounding
2. Includes heat use on site for Shanks Hazardous Waste
3. Reduction largely the result of sale of Peckfield Landfill in the UK and engineering works
4. Change largely the result of improved marketing of waste derived fuels



## 2. Sustainability and the environment – carbon footprints

### Shanks Benelux Solid Waste carbon footprint

This is the carbon footprint for our Benelux Dry 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 Benelux Solid Waste

Source	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2015	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2014
<b>Process based emissions</b>		
Emissions from composting	19	23
Emissions from landfill	55	58
<b>Transport based emissions</b>		
Fuel used by waste transport vehicles	49	46
Business travel (cars, trains, flights etc)	1	2
<b>Energy use emissions</b>		
Electricity used on sites and in offices	14	14
Gas used on sites and in offices	8	8
Fuel used on sites for plant and equipment / heating	10	12
<b>Total emissions from significant sources</b>	<b>156</b>	<b>163</b>
<b>Renewable energy generated</b>	<b>14</b>	<b>13</b>
<b>Waste derived fuels produced and sold</b>	<b>554</b>	<b>514</b>
<b>Materials separated for re-use/recycling (some re-used directly, others undergo re-processing by 3<sup>rd</sup> parties)</b>	<b>285</b>	<b>341</b>
<b>Total potential avoided emissions</b>	<b>853</b>	<b>868</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> 2015	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2014
<b>Process based emissions</b>		
Emissions from hazardous waste treatment	225	255
<b>Transport based emissions</b>		
Fuel used by waste transport vehicles	8	9
Business travel (cars, trains, flights etc)	1	1
<b>Energy use emissions</b>		
Electricity used on sites and in offices	27	25
Gas used on sites and in offices	2	1
Fuel used on sites for plant and equipment / heating	2	2
<b>Total emissions from significant sources</b>	<b>265</b>	<b>293</b>
<b>Energy from waste used on site as a fuel<sup>2</sup></b>	<b>255</b>	<b>257</b>
<b>Total potential avoided emissions</b>	<b>255</b>	<b>257</b>

- Figures rounded to nearest 1,000 tonnes – totals may reflect rounding
- Waste used on site as a fuel is unique to Shanks Hazardous Waste and is not quoted for other business units. Please note that avoided emissions from waste used on site as a fuel is not included in Shanks group's footprint as this was not included for data from the Group's base year for Shanks carbon avoidance objective. This omission to ensure the tracking of this objective is consistent from year-to-year



## 2. Sustainability and the environment – carbon footprints

### Shanks Organics carbon footprint

This is the carbon footprint for our Organics 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 Organics

Source	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2015	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2014
<b>Process based emissions</b>		
Emissions from anaerobic digestion	12	11
Emissions from composting	17	18
<b>Transport based emissions</b>		
Fuel used by waste transport vehicles <sup>2</sup>	0	0
Business travel (cars, trains, flights etc)	0.4	0.3
<b>Energy use emissions</b>		
Electricity used on sites and in offices	9	8
Gas used on sites and in offices	0	0
Fuel used on sites for plant and equipment / heating	2	2
<b>Total emissions from significant sources</b>	<b>40</b>	<b>39</b>
<b>Renewable energy generated</b>	<b>19</b>	<b>18</b>
Energy from waste directly used on site	2	1
Materials separated for re-use/recycling (some re-used directly, others undergo re-processing by 3 <sup>rd</sup> parties)	35	39
<b>Total potential avoided emissions</b>	<b>56</b>	<b>58</b>

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

2. No waste collection activities and hence zero figure





## 2. Sustainability and the environment – carbon footprints

### Shanks UK Municipal footprint

This is the carbon footprint for our UK 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 UK Municipal

Source	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2015	CO <sub>2</sub> equivalent ('000 tonnes) <sup>1</sup> 2014
<b>Process based emissions<sup>2</sup></b>		
Emissions from anaerobic digestion	28	8
Emissions from composting	3	4
Emissions from landfill <sup>5</sup>	18	57
Emissions from mechanical biological treatment (MBT)	17	22
<b>Transport based emissions</b>		
Fuel used by waste transport vehicles	1	6
Business travel (cars, trains, flights etc)	1	1
<b>Energy use emissions</b>		
Electricity used on sites and in offices	14	17
Gas used on sites and in offices <sup>3</sup>	0	0
Fuel used on sites for plant and equipment / heating <sup>2</sup>	3	4
<b>Total emissions from significant sources</b>	<b>85</b>	<b>119</b>
<b>Renewable energy generated<sup>3</sup></b>	<b>5</b>	<b>5</b>
<b>Waste derived fuels produced and sold<sup>4</sup></b>	<b>337</b>	<b>236</b>
<b>Materials separated for re-use/recycling (some re-used directly, others undergo re-processing by 3<sup>rd</sup> parties)<sup>3</sup></b>	<b>162</b>	<b>94</b>
<b>Total potential avoided emissions</b>	<b>504</b>	<b>335</b>

1. Figures rounded to nearest 1,000 tonnes – totals may reflect rounding
2. Emissions include biogenic carbon
3. Gas is used at only a few sites leading to zero figure with rounding
4. Change largely the result of improved marketing of waste derived fuels
5. Affected by sale of last UK commercial landfill site and engineering works



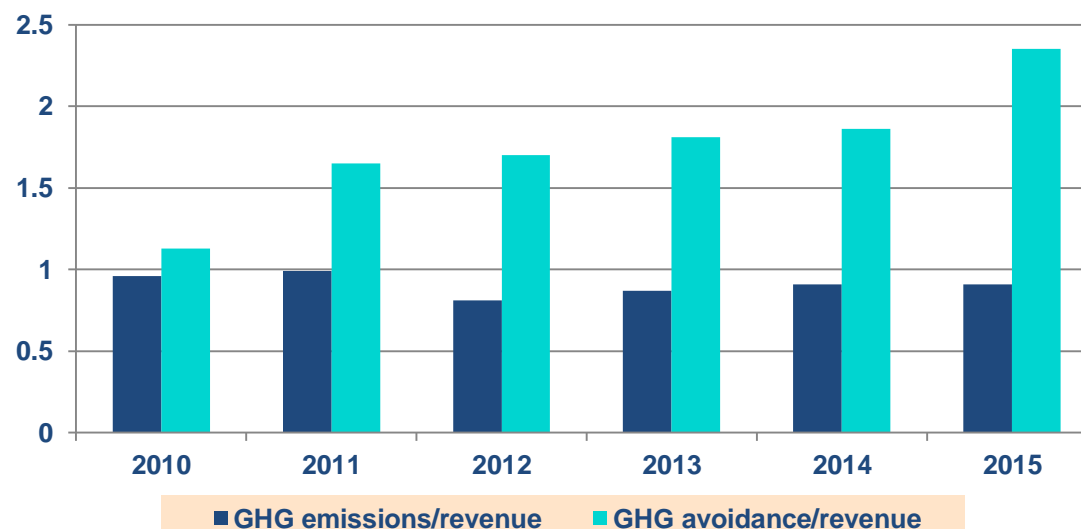
## 2. Sustainability and the environment – carbon footprints

### 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. In broad terms, emissions intensity ratio is static or declining and avoidance intensity ratio is rising over time. This reflects Shanks strategic move towards more sustainable waste management

#### GHG intensity ratios

Indicator	2010	2011	2012	2013	2014	2015
Amount greenhouse gases emitted (CO <sub>2</sub> equivalent '000 tonnes) per revenue-over (£ million)	0.96	0.99	0.81	0.87	0.91	<b>0.91</b>
Greenhouse gases avoided by our activities (CO <sub>2</sub> equivalent '000 tonnes) per unit revenue (£ million)	1.13	1.65	1.70	1.81	1.86	<b>2.35</b>





### 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	Benelux Solid Waste	Hazardous Waste	Organics	UK Municipal	Group
Amount greenhouse gases emitted key operations (CO <sub>2</sub> equivalent '000 tonnes) <sup>1</sup>	156	265	40	85	546
Significant spills at sites – number of reported spills required by permits	1	17	0	1	19
Sites with land in or next to protected or high biodiversity value areas	3	0	4	1	8

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 CO <sub>2</sub> and other GHG to environment from landfill gas Direct CO <sub>2</sub> and other GHG to from green energy generation Direct CO <sub>2</sub> 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 CO <sub>2</sub> and other GHG to environment Indirect GHG emissions from power use (eg, electricity) Direct CO <sub>2</sub> and other GHG emissions from fuel use (mobile plant)	
	Hazardous waste treatment	Effluent discharge to environment/sewer Direct CO <sub>2</sub> and other GHG to environment Indirect GHG emissions from power use	
	Larger recycling plants	Indirect CO <sub>2</sub> / other GHG emissions from power use (eg, electricity) Direct CO <sub>2</sub> and other GHG emissions from fuel use (mobile plant)	
	Larger composting plants	Direct CO <sub>2</sub> and other GHG to environment from compost process Indirect GHG emissions from power use (eg, electricity) Direct CO <sub>2</sub> and other GHG emissions from fuel use (mobile plant)	
	Larger AD plants	Direct CO <sub>2</sub> and other GHG to from green energy generation Indirect GHG emissions from power use (eg, electricity) Direct CO <sub>2</sub> and other GHG emissions from fuel use (mobile plant)	
Non-EPRT sites Some 30% waste handled	Smaller recycling plants	Indirect CO <sub>2</sub> and other GHG emissions from power use (eg, electricity) Direct CO <sub>2</sub> 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 CO <sub>2</sub> and other GHG emissions from power use (eg, electricity) Direct CO <sub>2</sub> and other GHG emissions from fuel use (mobile plant)	
	Smaller AD plants	Direct CO <sub>2</sub> and other GHG to from green energy generation Indirect GHG emissions from power use (eg, electricity) Direct CO <sub>2</sub> and other GHG emissions from fuel use (mobile plant)	
	Transfer stations	Direct CO <sub>2</sub> and other GHG emissions from fuel use (mobile plant)	
	Amenity sites	Direct CO <sub>2</sub> and other GHG emissions from fuel use (mobile plant)	
NA	Offices	Indirect CO <sub>2</sub> 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 CO <sub>2</sub> 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> )	100000			1509010	0	0
Carbon monoxide (CO)	500000			844.9	0	0
Carbon dioxide (CO <sub>2</sub> )	100000000			291111427	0	0
Nitrous oxide (N <sub>2</sub> O)	10000			12404	0	0
Ammonia (NH <sub>3</sub> )	10000			2785	0	0
Non-methane volatile organic compounds (NMVOC)	100000			1554	0	0
Nitrogen oxides (NO <sub>x</sub> /NO <sub>2</sub> )	100000			317703	0	0
Sulphur oxides (SO <sub>x</sub> /SO <sub>2</sub> )	150000			85079	0	0
Total nitrogen		50000	50000	1856	249661	0
Total phosphorus		5000	5000	0	3107.42	0
Hydrochlorofluorocarbons (HCFCs)	1			1.792	0	0
Chlorofluorocarbons (CFCs) (6) 1	1			41.061	0	0
Arsenic and compounds (as As)	20	5	5	0.2761	7.01	0
Cadmium and compounds (as Cd)	10	5	5	0.0081	0	0
Chromium and compounds (as Cr)	100	50	50	0.32459	13	0
Copper and compounds (as Cu)	100	50	50	0.16498	8.475	0
Mercury and compounds (as Hg)	10	1	1	0.00048	0.0001	0
Nickel and compounds (as Ni)	50	20	20	0.42069	437.36	0
Lead and compounds (as Pb)	200	20	20	0.03358	0	0
Zinc and compounds (as Zn)	200	100	100	0.645904	35435.2	0



### 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 2014 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)	1000	10	10	0.1564	4	0
2 Dichloromethane (DCM)	1000	10	10	0.3073	92	0
Halogenated organic compounds (as AOX)		1000	1000	0	48510.14	0
Tetrachloroethylene (PER)	2000	20		0.1505	0	0
Tetrachloromethane (TCM)	100	1		0.07321	0	0
Trichlorobenzenes (TCBs) (all isomers)	10	1		0.00169	0	0
1,1,1-trichloroethane	100			0.9482	0	0
1,1,2,2-tetrachloroethane	50			0.0801	0	0
Trichloroethylene	2000	10		0.248	0	0
Trichloromethane	500	10		0.0489	0	0
Vinyl chloride	1000	10	10	0.1527	0	0
Benzene	1000	200	200	201.4169	0	0
Ethyl benzene		200	200	0	0.8	0
Phenols (as total C)		20	20	0.001040	3	0
Toluene		200	200	0.0596	2	0
Total organic carbon (TOC) (as total C or COD/3)		50000		0	86989	0
Xylenes		200	200	0.1546	2	0
Chlorides (as total Cl)		2000000	2000000	1708	4988024	0
Chlorine and inorganic compounds (HCl)	10000			105.5	0	0
Cyanides (as total CN)		50	50	0.675535	33.714	0
Particulate matter (PM10)	50000			11085.2	0	0



## 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	Benelux Solid Waste		Hazardous Waste		Organics		UK Municipal <sup>3</sup>		Group	
	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
Electricity consumption (000' Kilowatt hours)	40462	39477	58052	54958	23780	21419	26045	30604	148340	146458
Gas used at sites and offices (cubic metres)	45.7	45.0	7.8	8.7	1.2	2.1	1.0	2.5	55.7	54.2
Fuel use at sites and offices (000' litres) <sup>1</sup>	3291	3869	753	548	765	802	675	1241	5484	6460
Fuel used waste collection vehicles (000' litres) <sup>1</sup>	15800	15362	2649	2743	-	0	527	2244	18976	20349
Electricity generated (Mega watt hours)	51999	57951	0	0	44166	38972	9357	9455	105522	106378
Water used at sites - potable water ('000 m <sup>3</sup> ) <sup>2</sup>	78	79	140	117	29	32	17	39	264	267
Water used at sites – surface water ('000 m <sup>3</sup> ) <sup>2</sup>	59	29	4604	3149	0	0	0	0	4663	3178
Water used at sites – groundwater ('000 m <sup>3</sup> ) <sup>2</sup>	31	47	0	0	12	12	0	0	43	59
Water used at sites – rain water ('000 m <sup>3</sup> ) <sup>2</sup>	36	36	46	21	7	0	0.5	0.5	89.5	57.5
Water used at sites – grey water ('000 m <sup>3</sup> ) <sup>2</sup>	79	84	657	690	53	65	0	0	788	839

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. Sale of UK commercial waste operations in December 2013 has affected data



## 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 accepted. As for other data this is split between our divisions plus a Group total

### Wastes accepted by our sites

Waste type <sup>1,2</sup>	Benelux Solid Waste	Hazardous Waste	Organics	UK Municipal	Group
Bulky waste	53	0	0	5	58
Construction and demolition	471	0	0	0	471
Commercial waste	599	0	13	16	628
Compost	1	0	0	0	1
Domestic waste	99	0	0	507	606
Food waste	57	0	170	65	292
Glass and ceramics	134	0	0	2	136
Green waste	340	0	321	3	663
Landfill	112	0	0	0	112
Liquid waste	114	681	142	19	957
Metals	13	0	0	2	15
Paper based	137	0	0	8	145
Plastics	30	0	0	0	30
Rockwool	65	0	0	0	65
Rubber	9	0	0	0	9
Rubble	1010	0	0	1	1011
Soil / sand / sludge	420	1122	44	4	1590
Special waste	96	0	15	0	110
SRF / RDF (waste derived fuels)	1	0	0	0	1
Wood	253	0	0	4	257
General waste	0	0	0	28	28
Other	92	112	0	386	590
<b>Totals</b>	<b>4130</b>	<b>1915</b>	<b>704</b>	<b>1050</b>	<b>7799</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





## 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

	Benelux Solid Waste		Hazardous Waste		Organics		UK Municipal <sup>3</sup>		Group	
	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
Total waste handled at Shanks sites (million tonnes)	4.13	4.05	1.91	2.11	0.7	0.69	1.05	1.23	<b>7.79</b>	<b>8.08</b>
Amount of materials recovered from waste at Shanks sites (million tonnes) <sup>1</sup>	3.09	3.09	1.84	2.06	0.68	0.66	0.75	0.87	<b>6.36</b>	<b>6.64</b>
Proportion of total waste handled at sites recovered from the waste stream (%) <sup>1</sup>	75%	76%	96%	97%	97%	96%	71%	71%	<b>82%</b>	<b>82%</b>
Tonnes of waste handled at Shanks sites sent for landfill disposal (million tonnes) <sup>2</sup>	0.23	0.86	0.03	0	0.01	0.03	0.3	0.27	<b>0.57</b>	<b>1.16</b>
Tonnes of waste handled at sites sent for incineration disposal (million tonnes) <sup>2</sup>	0.81	0.1	0.05	0.05	0.01	0.002	0.05	0.08	<b>0.92</b>	<b>0.23</b>

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. UK waste received affected by sale of UK commercial operations in December 2013, plus landfill disposal figure higher as result of fire at Shanks Frog Island facility resulting in temporary diversion to landfill while plant inoperable

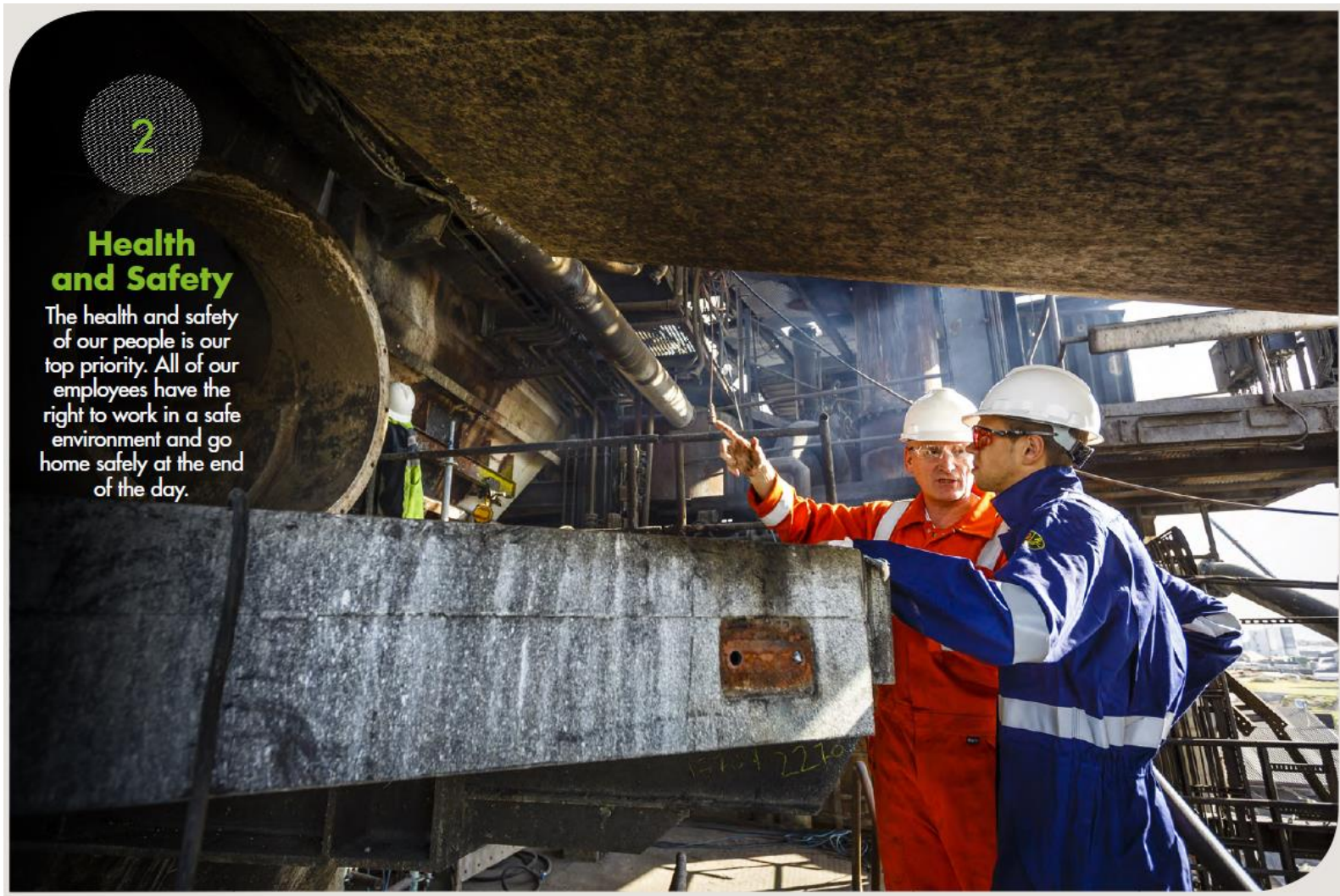


## Health and safety

2

### Health and Safety

The health and safety of our people is our top priority. All of our employees have the right to work in a safe environment and go home safely at the end of the day.





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

### Our accident performance

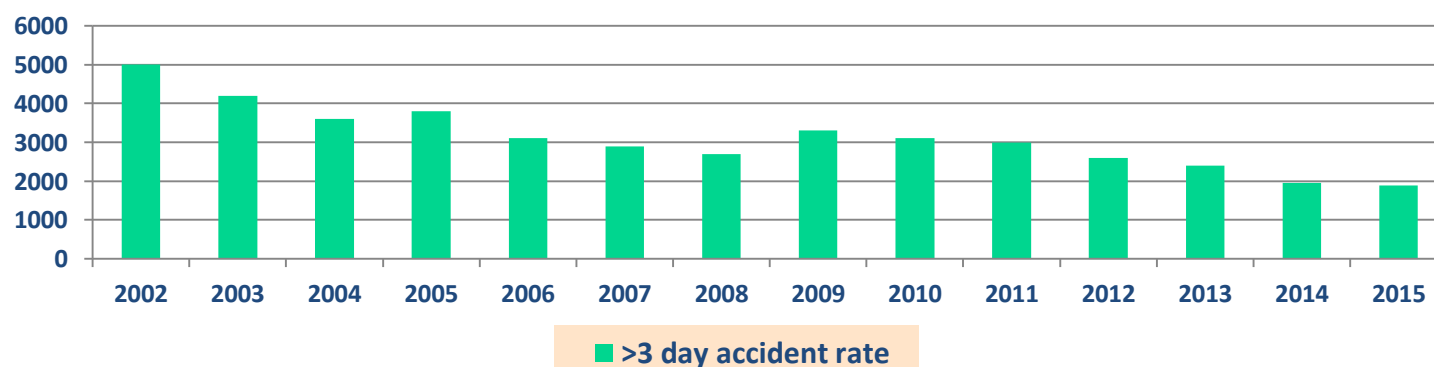
The health, safety and wellbeing of all of our employees are key issues for Shanks. We accept that we operate in a known high-risk sector. The most basic measure of accident rate is shown right, along with severity and lost time accident frequency rates on the following pages. Together this data provides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

Note – near-miss reports were not collected centrally until the start of the 2014/2015 year, and hence the 'NA' for 2014 in table right

#### Employee accidents

Indicator	Benelux Solid Waste		Hazardous Waste		Organics		UK Municipal		Group	
	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
Total Number LTAs (lost time accidents)	64	58	4	4	0	4	19	45	87	111
LTA rate	3190	2950	510	500	0	5550	3190	5550	2530	3100
Number >3 day accidents	51	55	4	4	0	1	10	12	65	72
>3 day accident rate	2540	2700	510	510	0	1400	1760	1450	1890	1950
Number fatal accidents	0	0	0	0	0	0	0	0	0	0
Number near-miss reports	138	NA	433	NA	22	NA	1629	NA	2222	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.

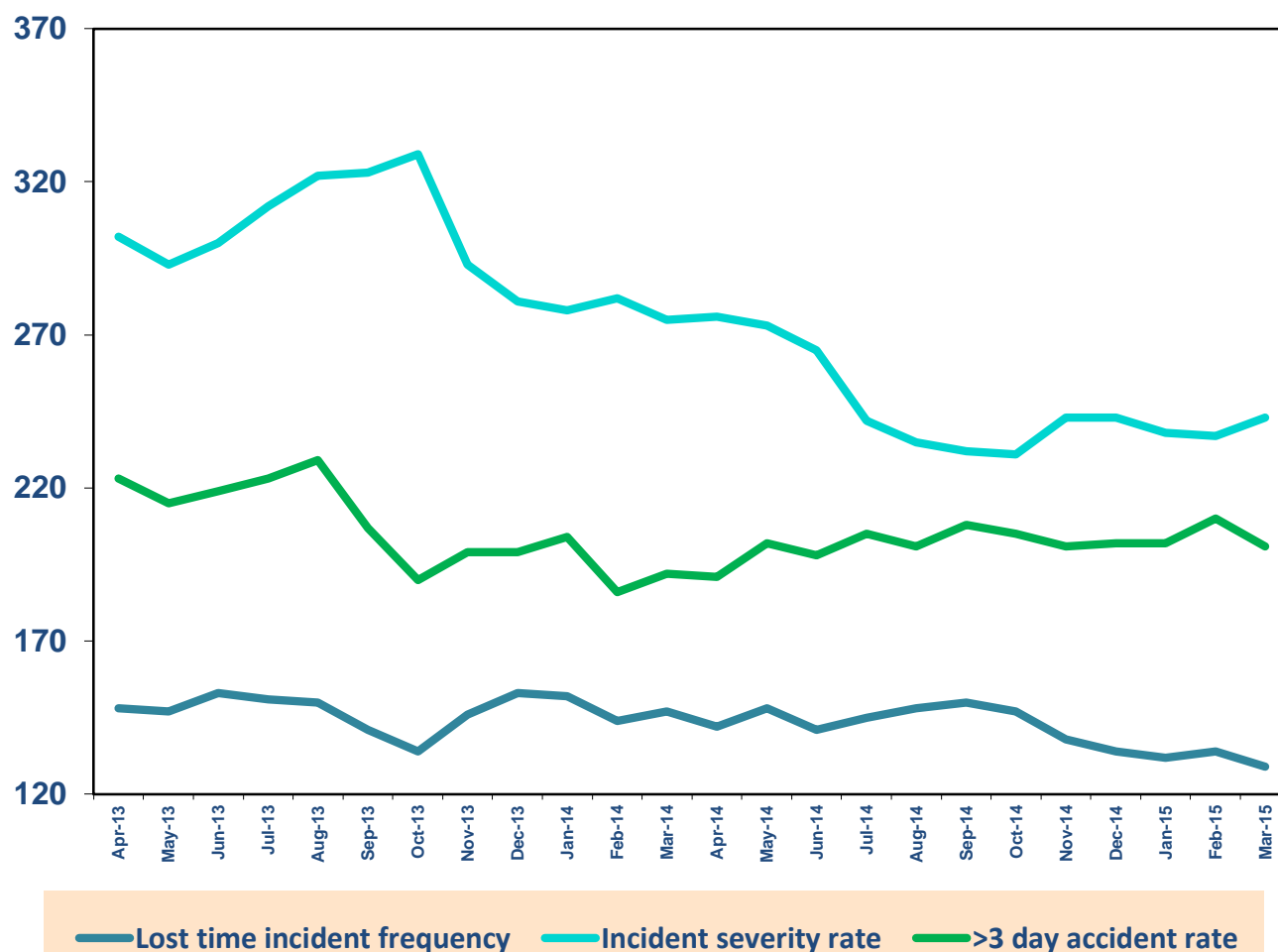
**Fatal accidents** – fatal employee workplace accidents.

**>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 lost time accident frequency and severity







## Our people

3

### Our People

It has been a key imperative to ensure that we motivate and engage with our people and grow our business for the future.





## 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	Benelux Solid Waste		Hazardous Waste		Organics		UK Municipal		Group	
	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
Total employee absenteeism from work (% of available days)	7.0	5.6	4.2	4.0	3.1	2.2	3.1	4.4	5.6	5.1
Short-term sickness absence (<8 days off work) <sup>2</sup>	1.1	NA	0.7	NA	0.4	NA	0.6	NA	0.9	NA
Work related accident absenteeism (% of available days)	0.5	0.3	0.2	0.2	0.0	0.0002	0.2	0.3	0.4	0.3
Non-work related absenteeism from work (% available days)	6.5	5.3	3.9	3.8	3.1	2.2	2.9	4.1	5.3	4.8
Average duration of employee absence (days)	23.0	21.0	34.6	25.0	5.5	8.0	13.6	10.0	23.7	19.0
Average frequency of absence (number of absence periods)	1.1	3.1	0.7	0.7	1.4	0.7	0.9	1.1	1.0	2.1
Employees with more than 2 absence periods (% of workforce)	14	16	8	12	10	14	8	14	11	16
Employees with zero absence days (% of workforce)	37	44	60	59	69	55	60	47	47	48

1. Data as percentages may not sum to totals as a result of rounding

2. New measure for 2015 and not reported on to consistent format previous. Short-term absence defined as <8 days absence



## 9. Our people – employee performance

### Our people

Right is synopsis data on our people performance

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
7. Figure affected by the sale of UK commercial waste sites in December 2013

### People performance indicators

Indicator	Benelux Solid Waste		Hazardous Waste		Organics		UK Municipal <sup>6,7</sup>		Group	
	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
<b>Total number permanent employees<sup>1</sup></b>	2062	2209	789	810	78	72	577	821	<b>3506</b>	<b>3912</b>
<b>No. operational site employees</b>	1566	1662	501	519	49	45	347	497	<b>2463</b>	<b>2723</b>
<b>No. support, etc. employees</b>	496	547	288	291	29	27	230	324	<b>1043</b>	<b>1189</b>
<b>No. male permanent employees<sup>4</sup></b>	1752	1930	706	697	68	59	471	457	<b>2997</b>	<b>3143</b>
<b>No female permanent employees<sup>4</sup></b>	209	246	110	115	11	13	105	123	<b>435</b>	<b>497</b>
<b>No. male statutory directors<sup>2,4,5</sup></b>	NA	NA	NA	NA	NA	NA	NA	NA	<b>34</b>	<b>34</b>
<b>Number female statutory directors<sup>2,4,5</sup></b>	NA	NA	NA	NA	NA	NA	NA	NA	<b>2</b>	<b>2</b>
<b>No. male senior executives/directors<sup>3,4,5</sup></b>	NA	NA	NA	NA	NA	NA	NA	NA	<b>7</b>	<b>7</b>
<b>No. female senior executives/directors<sup>3,4,5</sup></b>	NA	NA	NA	NA	NA	NA	NA	NA	<b>4</b>	<b>3</b>
<b>No. of full-time permanent employees</b>	1924	2044	704	718	66	62	554	794	<b>3248</b>	<b>3618</b>
<b>No. part-time permanent employees</b>	138	165	85	92	12	10	23	27	<b>258</b>	<b>294</b>
<b>Permanent employee turnover (%)</b>	10.1	9.0	6.7	6.0	2.5	16.0	14.4	64.0	<b>9.8</b>	<b>20.0</b>
<b>Average years' service for employees</b>	16.4	10.0	16.9	10.0	4.1	4.0	5.3	6.0	<b>14.4</b>	<b>9.0</b>
<b>No. training days per employee</b>	1.5	1.2	4.5	9.3	3.1	3.0	3.0	3.1	<b>2.5</b>	<b>3.3</b>
<b>No. non-permanent employees</b>	225	177	133	128	6	10	15	111	<b>379</b>	<b>426</b>
<b>No. cases of discrimination</b>	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
<b>% employees covered by formal safety consultation committees</b>	98	84	100	100	100	100	100	100	<b>99</b>	<b>91</b>

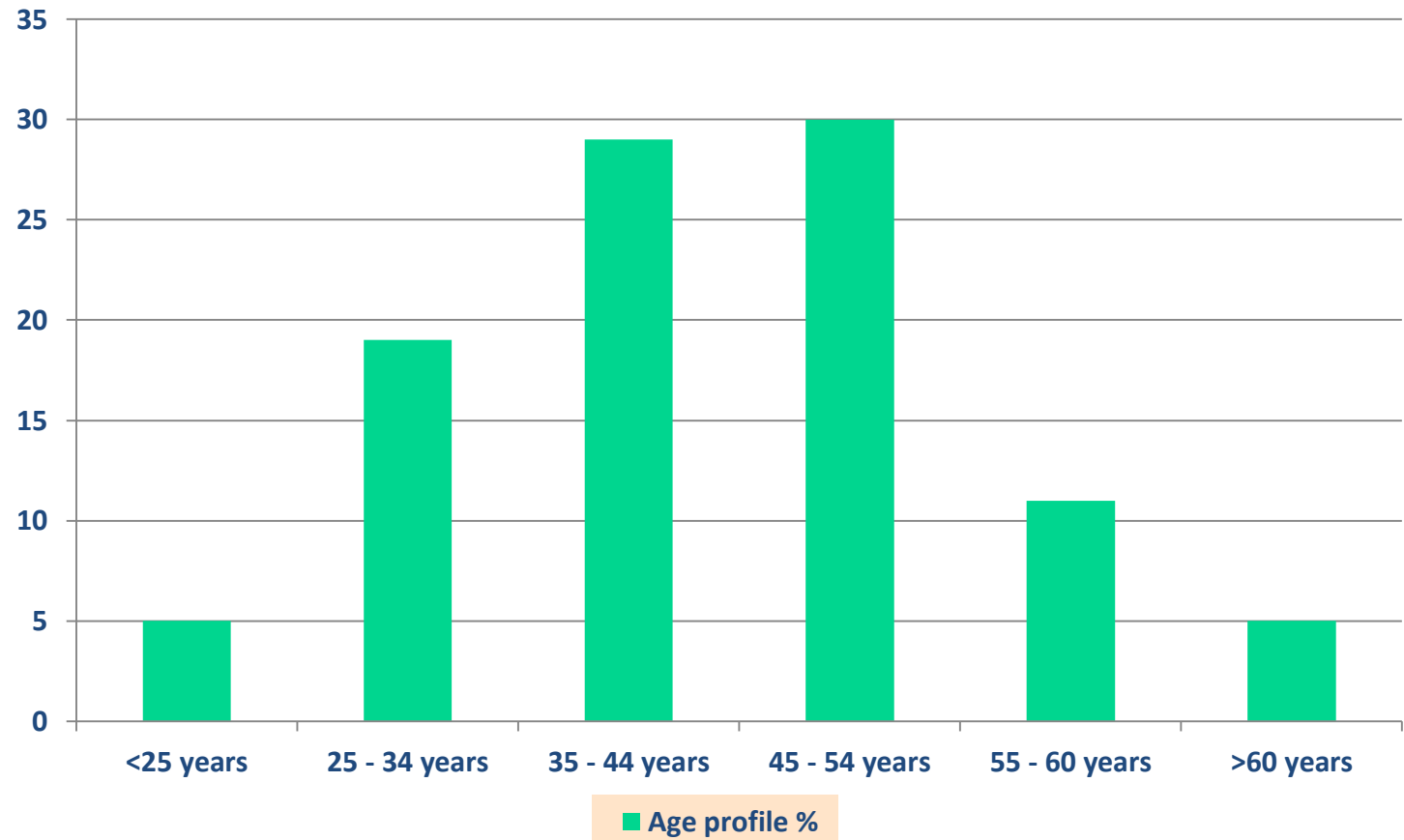


## 10. Our people – age profiles

### 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





## 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	Benelux Solid Waste		Hazardous Waste		Organics		UK Municipal		Group	
	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
Number environmental complaints received by our sites/operations <sup>1</sup>	36	41	166	125	38	64	71	106	311	336
Average number of complaints per site (out of total number of sites)	0.8	0.9	12.8	10	6.3	10.7	3.6	5.3	3.7	4.0
<b>Types of complaint</b>										
Odour	31	33	0	124	34	62	51	32	116	251
Litter	0	0	0	0	0	0	0	3	0	3
Vermin <sup>2</sup>	2	0	0	0	0	0	19	64	21	64
Traffic	0	1	0	0	0	0	0	3	0	4
Mud / Dust	1	2	1	0	4	2	0	4	6	8
Noise	1	3	0	0	0	0	0	0	1	3
Other	1	2	165	1	0	0	1	0	167	3
<b>Total</b>	<b>36</b>	<b>41</b>	<b>166</b>	<b>125</b>	<b>38</b>	<b>64</b>	<b>71</b>	<b>106</b>	<b>311</b>	<b>336</b>

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

2. Mainly fly complaints relating to one site in the UK. Complaint levels at this site have now reduced significantly as a result of actions taken by Shanks





## Sustainable management systems

5

### Sustainable management systems

Our waste-to-product model is achieved through the management systems we have in place. These systems govern all of our operations. Many of our management systems have approval from internationally recognised accreditations.





## 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	Benelux Solid Waste		Hazardous Waste		Organics		UK Municipal <sup>1</sup>		Group totals	
	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
ISO14001 / EMAS	29	29	17	17	0	0	21	20	67	66
ISO 9001	34	34	15	15	4	4	20	20	73	73
OSHAS 18001	6	6	16	16	0	0	20	20	42	42
SCC / VCA	19	19	15	15	0	0	0	0	34	34
Other	11	11	12	12	9	3	2	0	34	23

1. Figures for UK include certification for Shanks Dumfries and Galloway, for the project management of the Dumfries and Galloway Council waste management contract, which involves 11 sites and certification for Shanks Derbyshire and Cumbria, which involves a series of sub-contracted operations (all three only counted as one certification each)

ISO14001 / EMAS – international environmental management standards

ISO9001 – international quality standard

OSHAS18001 – 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	Benelux Solid Waste		Hazardous Waste		Organics		UK Municipal		Group totals	
	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014
Number of environmental convictions and fines <sup>1</sup>	1	3	4	0	0	0	0	1	5	4
Number of health and safety convictions and fines	5	0	0	0	0	0	0	0	5	0
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	Shanks Vlaanderen, Gent
Date	Apr-14
Penalty	570 euro
Synopsis	Administrative fine levied for incorrect waste transport documents
Operation	Shanks Vlaanderen, Gent
Date	Dec-14
Penalty	Suspended sentence - no fine issued provided no re-offending
Synopsis	Conviction for insufficient organisational measures (separation pedestrians and mobile work equipment)
Operation	Van Tuijl
Date	Feb-15
Penalty	Two offences, each with a 7.200 euro fine
Synopsis	Accident November 2013 - employee cleaning machinery without proper safety procedure in place





## 13. Sustainable management – our compliance performance

### Management systems – our compliance

Note – for some cases date of incident given rather than date of case/hearing. All cases heard 2014/2015

<b>Operation</b>	Van Vliet Groep
<b>Date</b>	Feb-15
<b>Penalty</b>	2400 euro fine
<b>Synopsis</b>	Accident September 2013 - employee injured operating a loading shovel (employee not wearing seatbelt)
<b>Operation</b>	Vliko
<b>Date</b>	Feb-15
<b>Penalty</b>	18000 euro
<b>Synopsis</b>	Accident May 2014 - employee fell off truck while removing blockage from the vehicle's automatic net-system
<b>Operation</b>	ATM
<b>Date</b>	July 2008
<b>Penalty</b>	35,000 euro
<b>Synopsis</b>	Mancozeb' case - failure to notify authorities of an incident and permit breach
<b>Operation</b>	ATM
<b>Date</b>	Mar-10
<b>Penalty</b>	50,000 euro
<b>Synopsis</b>	Cradle' case - alleged waste transport document irregularities (settled out of court)
<b>Operation</b>	ATM
<b>Date</b>	Mar-10
<b>Penalty</b>	100,000 euro (of which 25,000 suspended)
<b>Synopsis</b>	Athos' case - irregularities with waste transport paperwork
<b>Operation</b>	ATM
<b>Date</b>	June 2014
<b>Penalty</b>	2,500 euro
<b>Synopsis</b>	Administrative error relating to single waste input to site



## 14. Green bond issue 2015

### Green bond issue

**In 2015 Shanks released its first ever green bond. The text right is from a case study on the topic taken from our CR Report 2015. This gives background to the green bond. On the following pages potential fund allocation and potentially eligible projects for funding are given. This section will be updated each year to show how funds have actually been allocated**

### 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 (see case study in the sustainability section of this report) 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 – 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 potential allocation of funds to sustainable projects from our green bond issue. This table will be updated annually to show actual spend and allocation of green bond funds

Project	Spend		Spend year			
	Local currency (millions)	Euros (millions)	2016/17	2015/16	2014/15	2013/14
City of Surrey Anaerobic Digestion Plant (Canada)	CAD 50.05	35.74 €	10.00 €	25.74 €		
Barnsley Doncaster Rotherham PFI - mechanical biological treatment/anaerobic digestion (England)	GBP 10.207	14.02 €		14.02 €		
Wakefield PFI - autoclave, anaerobic digestion, recycling and composting (North England)	GBP 25.03	34.39 €		34.39 €		
ATM Electrostatic precipitator replacement (Netherlands)	EUR 5.375	5.38 €		4.10 €	1.27 €	
Thamesweg waste water storage (Netherlands)	EUR 9.145	9.15 €		0.20 €	5.10 €	3.85 €
Reym Totalcare North Site (Netherlands)	EUR 3.80	3.80 €			3.80 €	
ATM Storage Tanks (Netherlands)	EUR 6.62	6.62 €			5.15 €	1.47 €
ATM Vapour destruction equipment (Netherlands)	EUR 0.785	0.79 €			0.02 €	0.77 €
ATM Drum Storage Facility (Netherlands)	EUR 2.50	2.50 €		2.50 €		
VVC Sorting Line, new recycling line (Netherlands)	EUR 4.60	4.60 €			4.60 €	
Vliko New Recycling Facility (Netherlands)	EUR 11.30	11.30 €		11.30 €		
Stone Crusher Hook of Holland (Netherlands)	EUR 2.30	2.30 €		2.30 €		
Replacement of trucks Belgium solid waste operations	EUR 11.04	11.04 €		4.49 €	5.80 €	0.74 €
Replacement of trucks Netherlands solid waste	EUR 14.60	14.60 €		10.38 €	3.19 €	1.04 €
Replacement of trucks Reym, industrial cleaning (Netherlands)	EUR 6.130	6.13 €		2.45 €		3.68 €
		<b>162.35 €</b>	<b>10.00 €</b>	<b>111.88 €</b>	<b>33.42 €</b>	<b>11.54 €</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 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)