



CORPORATE SOCIAL RESPONSIBILITY REPORT 2018

INDICATORS DOCUMENT

Waste no more

The data in the Renewi annual CSR Report and the more-in-depth CSR Full data document comes from a wide variety of sources. It is critical this data is as consistent and accurate as practical. This indicators document is aimed at two audiences: **1. Internal stakeholders:** such as the Renewi employees who collect our CSR data to ensure this is collected in a consistent manner. **2. External stakeholders,** such as readers of our CSR Report documents to allow them access to how we calculate CSR data and on what basis.



RENEWI PLC | CORPORATE RESPONSIBILITY REPORT 2018



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1. Index and general reporting guidelines

The tables below in section 2 show the CSR performance indicators used in Renewi it's CSR report documents. These are listed by themes (safety, recycling, carbon footprint, etc). Each indicator is listed by what it is, the units the indicator is reported in and comments. In addition, the method of calculation for the indicator, where appropriate. For many indicators the method of calculation is obvious, while for others more explanation is provided. However, in general: see right for overall reporting guidelines applied

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1. General reporting guidelines and boundaries

- In general the Renewi annual CSR reports state performance on a financial year basis. For example, 1st April 2016 to 31st March 2017. However, where data is collected on a calendar year (January – December) for regulatory purposes (for example where an environmental regulator requires an annual report), or for other reporting cycles and similar reasons such data is acceptable and is used to avoid duplication of effort
- The Renewi CSR reports cover all of its operating divisions across the Group and all countries of operation and all sites/operations of the Group. Report boundaries are not constrained by company structure or geography
- However, reports do not include the activities of sub-contractors or suppliers. As a waste management company Renewi it's upstream supply chain consists largely of the wastes its sites receive (see the Renewi CSR Policy, supply chain section)
- Reporting of joint ventures is on a case-by-case basis. Where Renewi has < 50% share in a company, data is not generally included. Where share is 50% or more reporting is generally by level of share. For example for the UK Joint Venture site at Cumbernauld, environmental data is reported as a proportion representing the shareholding of Renewi (50%) to reflect the financial reporting arrangements. But, H&S and H.R. parameters are reported as 100% for contractual reasons. Specific arrangements for specific joint ventures are decided on at Renewi it's Group CSR Committee
- Where an operation was only operational (or owned by Renewi in the case of acquisitions) for part of the year, data is only be reported for that portion of the year Renewi operated/owned the site
- Conversion factors for calculating carbon dioxide emissions are detailed in appendix 1. Please note that Renewi sets itself 5-year key CSR objectives, one of which is the amount of carbon avoidance our activities produce. To allow valid comparisons from year-to-year during these 5-year objectives cycles we retain the same carbon factors. At the end of each cycle we revise the factors to update them



2. Table of indicators with definitions

2.1 Renewi at a glance

Indicator	Description	Definition
Number of employees	Number permanent employees in FTE per country and business line	✓ As already reported as below under 2.2
Number of operating sites	Number active operating centres	✓ Not including offices, small civic amenity and similar sites, and other non-operational sites such as closed sites
Operating sites with recycling/recovery	Number active operating sites	✓ All operating centres with recycling and/or recovery operations on them. This includes multi-functional sites with more than one type of operation on them, one being recycling/recovery
<i>Operational landfill sites</i>	<i>Number active sites</i>	✓ Number of operational landfill sites – not including closed landfill sites (which still can be under our management though) Full data document indicator only
Number waste collection and transport trucks	Number of vehicles per country and business line	<ul style="list-style-type: none"> ✓ Number of <u>motor</u> vehicles used for the collection and/or transport of waste. Thus, this excludes non motor (semi-) trailers. It also excludes terrain vehicles, cranes, shovels, light vans, company cars, mopeds, etc. ✓ Only vehicles registered for operational service are reported. This excludes vehicles which aren't in active service
Total waste handled at sites (million tonnes)	Tonnes (for each of the types of waste)	✓ Million tonnes of total incoming waste accepted at Renewi sites (collected by Renewi or third parties)
Recycling and recovery as % of waste handled	Rate	✓ Total incoming waste accepted at Renewi sites (collected by Renewi or third parties) – waste sent to landfill or incineration disposal divided by total waste handled (that is incoming waste accepted at) at Renewi sites (tonnes) whether collected by Renewi or by third parties times 100
Green electricity generated	Production in Megawatt hours	✓ Electricity produced out of landfill gas, anaerobic conversion, solar panels or wind mills. Electricity generated and used elsewhere on site and electricity generated and sold to grid are both reported

Note much of the above data is already included as below. The key facts and figures data section is simply to show the extent of the Group and to give an indication of the size of its activities. Where data is already included below this is noted next to the indicator. This key facts and figures data is also used in the Group annual financial report.



PLANET

We give new life to used materials. This helps to protect the world's limited resources and preserve the planet for future generations. Our work puts us at the heart of the circular economy





2.2. Recycling and recovery performance		
Definition		Indicator
Total incoming waste accepted at Renewi sites (collected by Renewi or third parties) – waste sent to R1 incineration and waste sent to landfill or incineration disposal	X 100	= Recycling as % of waste handled
Total waste handled (that is incoming waste accepted at) at Renewi sites (tonnes) whether collected by Renewi or by third parties		
Total incoming waste accepted at Renewi sites (collected by Renewi or third parties) – waste sent to landfill or incineration disposal	X 100	= Recycling and recovery as % of waste handled
Total waste handled (that is incoming waste accepted at) at Renewi sites (tonnes) whether collected by Renewi or by third parties		
Note – for wastes accepted at Renewi landfill sites the % recycled or recovered is zero		

Indicator	Description	Definition
Total waste handled at sites (million tonnes)	Tonnes (for each of the types of waste)	✓ Million tonnes of total incoming waste accepted at Renewi sites (collected by Renewi or third parties)
Materials recycled (million tonnes)	Type of treatment	✓ Million tonnes of total incoming waste accepted at Renewi sites which receive a destination for further (end-) processing, trading to other processors or use of waste directly as a secondary raw material
Materials recovered for energy production from waste (million tonnes)	Type of treatment	✓ Million tonnes of total incoming waste accepted at Renewi sites which are sent to incineration or are transformed into waste derived fuels: Icopower pellets, woodchips for biomass, SRF from MBT, etc. Only materials going to production and recovery processes are included. Non-recovery incineration not included
Total materials recycled and recovered for energy production	Type of treatment	✓ Sum of the above (materials recycled and materials recovered for energy production from waste) in million tonnes
Materials disposed (million tonnes)	Type of treatment	✓ Million tonnes of waste accepted at Renewi landfill sites or sent from Renewi sites towards other landfill sites or other waste-disposal companies (no recycling or recovery). Full data document indicator only
Total outgoing waste per waste type	Tonnes (for each of the types of waste)	✓ Million tonnes of waste leaving our sites, split into Renewi standard waste categories (see appendix 2 for categories). Note – where it is not possible to match categories 100%, wastes are allocated to the nearest category. Note – ONLY the 'Top Hierarchy' categories as shown in appendix 2 are used. Full data document indicator only

2.3. Our Carbon Performance

2.3a Carbon emissions from our activities (CO₂-equivalent '000 tonnes)

Indicator	Description	Definition
Process based emissions		
Emissions from green composting	CO ₂ equivalents in '000 tonnes	✓ Tonnes waste composted x conversion factor = CO ₂ equivalent (see appendix 1 for conversion factors)
Emissions from landfill	CO ₂ equivalents in '000 tonnes	<ul style="list-style-type: none"> ✓ Emissions are CO₂ emitted from the combustion of collected landfill gas in a flare or power engines and landfill gas (CO₂ and CH₄) emitted from passive venting of collected gas or emitted from the surface of the landfill ✓ If a methodology for calculating the emissions for a landfill site already exists - a method agreed for regulatory reporting, this is used. Otherwise, GasSim (model used in UK for regulatory reporting) is used ✓ Emissions reported include operational landfill sites and closed landfills where Renewi actively manages gas
Emissions from hazardous waste treatment	CO ₂ equivalents in '000 tonnes	✓ ATM emissions and other E-PRTR emissions from hazardous waste sites
Emissions from mechanical biological treatment (MBT)	CO ₂ equivalents in '000 tonnes	✓ Technology specific calculations are used. These are peer reviewed by Renewi Group CSR Committee
Transport based emissions		
Fuel used by waste transport vehicles	CO ₂ equivalents in '000 tonnes	<ul style="list-style-type: none"> ✓ Includes all waste and recyclable materials collection, transfer, etc, transport movements by road by Renewi vehicles. Does not include third party transport (only emissions from Renewi vehicles are included) ✓ Includes any diesel, petrol, LPG, biodiesel, etc. used (see appendix 1 for conversion factors) ✓ Litres fuel consumed x relevant conversion factor = CO₂ equivalent (see appendix 1 for conversion factors) ✓ Vehicles operated for business purposes but which do not carry waste (such as cars and light vans) are not included in this indicator (see below for this category)
Business travel (cars, trains, flights, etc.)	CO ₂ equivalents in '000 tonnes	✓ Based on distance travelled and average fuel consumption
Energy use based emissions		
Electricity used at sites and in offices	CO ₂ equivalents in '000 tonnes	<ul style="list-style-type: none"> ✓ All electricity used at sites and in offices included. Includes electric motors etc used in recycling and other operations, electric heating, general electricity usage etc. ✓ Electricity consumed (kWh) x relevant conversion factor = CO₂ equivalent (see appendix 1 for factors) ✓ Electricity generated from renewable sources on- site and used on site (other than parasitic usage) is excluded ✓ Imported electricity from renewable sources reported separately in order to use different conversion factors
Gas used at sites and in offices	CO ₂ equivalents in '000 tonnes	<ul style="list-style-type: none"> ✓ Gas consumed (kWh or Nm³) x conversion factor = CO₂ equivalent (see appendix 1 for conversion factors) ✓ Emissions from gas consumption are reported separately from electricity consumption
Fuel used on sites and in offices	CO ₂ equivalents in '000 tonnes	<ul style="list-style-type: none"> ✓ Includes fuel used in heavy mobile and static plant, oil heating etc ✓ Litres of fuel consumed x relevant conversion factor = CO₂ equivalent (see appendix 1 for conversion factors)



Total emissions from significant sources	CO ₂ equivalents in '000 tonnes	✓ Total of 1 (process emissions), 2 (transport emissions) and 3 (energy use emissions) to give Renewi total significant carbon emissions expressed as CO ₂ equivalent '000 tonnes (in outline, scope 1 and 2 emissions)
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The above represents Renewi emissions. Below are avoidance indicators: That is Renewi activities, such as recycling and recovery and production of various 'fuels' have a carbon benefit in that they avoid carbon emissions compared with the fuel or material they are displacing. For example, metals separated for recycling and passed to a processor emit less CO₂ than producing the same metal from raw ores. Likewise waste derived fuels may displace fossil fuels such as coal in a cement kiln so reducing CO₂ equivalent tonnes emissions. Renewi does not use a simple add and subtract calculation – rather emissions and avoidance are stated and the reader can make their own conclusions

2.3b Carbon avoidance as a result of our activities

Indicator	Description	Definition
Renewable energy generated	CO ₂ equivalents in '000 tonnes	<ul style="list-style-type: none"> ✓ Both landfill gas power generation and anaerobic digestion power generation ✓ Comparison used is CO₂ emissions avoided from average grid electricity generation ✓ Electricity generated (kWh) x relevant conversion factor = CO₂ equivalent (see appendix 1 for conversion factors) ✓ Electricity generated and used elsewhere on site and electricity generated and sold to grid reported separately
Waste derived fuels produced and sold	CO ₂ equivalents in '000 tonnes	<ul style="list-style-type: none"> ✓ Includes all waste derived fuels: Icopower pellets, woodchips for biomass, SRF from MBT, etc ✓ Only materials going to production and recovery processes are included. Non-recovery incineration not included ✓ Emissions avoided based on calorific value of fuel and what it replaces (see appendix 1 for conversion factors)
Materials separated for re-use/recycling	CO ₂ equivalents in '000 tonnes	<ul style="list-style-type: none"> ✓ Each waste type recycled to be reported separately ✓ Tonnes waste recycled x relevant conversion factor for each waste type (see appendix 1 for conversion factors)
Total potential avoided emissions	CO ₂ equivalents in '000 tonnes	✓ Total of above to give Renewi total potential avoided carbon emissions expressed as CO ₂ equivalents in '000 tonnes (in outline, scope 1 and 2 emissions)

The above sections (2.3a and 2.3b) represent the Renewi carbon 'footprint'

2.3c Carbon emissions and avoidance intensity ratios

Million tonnes greenhouse gases emitted (CO₂ equivalents) per million tonnes waste handled	Rate	✓ Total emissions from above / total waste handled = emissions intensity ratio
Million tonnes greenhouse gases avoided by our activities (CO₂ equivalents) per million tonnes waste handled	Rate	✓ Total avoidance from above / total waste handled = avoidance intensity ratio



2.4. Resource use

Indicator	Description	Definition
Electricity consumption	Megawatt hours	<ul style="list-style-type: none"> ✓ All electricity used at sites and in offices included. Includes electric motors etc used in recycling and other operations, electric heating, general electricity usage etc ✓ Electricity generated from renewable sources on- site and used on site (other than parasitic usage) is excluded here and put under green electricity generated (below) ✓ Imported electricity from renewable sources is excluded here and put under green electricity purchased (below)
Gas used at sites and offices	Megawatt hours	<ul style="list-style-type: none"> ✓ As for section 3 above energy use based emissions, but expressed as raw consumption data in Megawatt hours (see appendix 1 for conversion factors)
Fuel (such as diesel) used on sites and offices	Megawatt hours	<ul style="list-style-type: none"> ✓ As for section 2.3a above; energy use based emissions, but expressed as raw consumption data in litres used
Total energy use at sites	Megawatt hours	<ul style="list-style-type: none"> ✓ Total of above to give Renewi total energy use at sites expressed in Megawatt hours
Fuel used by waste collection vehicles	'000 litres	<ul style="list-style-type: none"> ✓ Includes all waste and recyclable materials collection, transfer, etc, transport movements by road . Does not include third party transport ✓ Includes any diesel, petrol, LPG, biodiesel, etc. used ✓ Vehicles operated for business purposes but which do not carry waste (such as cars and light vans) are not included in this indicator (see below for this category)
% of waste collection / transport truck fleet compliant with Euro VI Standard	Number of vehicles	<ul style="list-style-type: none"> ✓ The Euro VI standard is an official standard to indicate the amount of NO_x and fine particulate emissions
Green electricity generated	Mega Watt Hours	<ul style="list-style-type: none"> ✓ Electricity produced out of landfill gas, anaerobic conversion, solar panels or wind mills. Electricity generated and used elsewhere on site and electricity generated and sold to grid are both reported
Significant spills at sites – number of reported spills required by permits	Number of incidents	<ul style="list-style-type: none"> ✓ Number of spills which were reportable to environmental regulators under site environmental permits. Small scale spills which were not reportable (that is spills which fell below site permit reporting requirements) are not included



Indicator	Description	Definition
Energy use on sites (kWh per tonne of waste handled)	Rate	✓ Energy used on sites in kWh per tonne of waste handled at sites (as reported at 2.2)
Total waste collected by Renewi trucks	Tonnes	✓ Total tonnes of waste collected by Renewi trucks (this EXCLUDES waste collected by third parties and brought to Renewi sites)
Litres of fuel used (per tonne of waste collected / transported)	Rate	✓ Fuel used by Renewi trucks in Litres per tonne of waste collected by these trucks

Full data document indicators

Indicator	Description	Definition
2.5 E-PRTR data		
Total number of significant spills	Descriptions	✓ See appendix 5 for a more elaborate description of reporting on E-PTR data



PEOPLE

Ensuring the health, safety, wellbeing and engagement of our people is crucial to Renewi's success. We take that responsibility very seriously





2.8. Health and Safety Performance

Indicator	Description	Definition
Number of <u>fatal</u> accidents	Number accidents	✓ An accident resulting in injury, including death, suffered by an employee in a workplace. Workplaces include Renewi it's own sites, third party sites including customer sites, where a Renewi employee may be working, and while Renewi employees are actively involved in the collection of wastes, including on the public highway. It would not include road traffic accidents which occur while not actively collecting wastes, such as while travelling between sites. An employee is a permanent employee of Renewi. This would not include non-permanent workers, contractors, other third parties and members of the public. The accident needs to be work related. For example, a heart attack suffered by an employee resulting from non-work causes would not be included.
Total number LTI's	Number of lost time injuries	✓ An accident whereby the injured permanent employee is unable to perform their normally assigned work or restricted work for more than one working day
LTI rate	Frequency rate	✓ $\text{Number of LTIs} / \text{total number hours worked} \times 1,000,000$
Number of >3 day accidents	Number accidents	✓ All accidents which result in an injured permanent employee being off-work for more than three <u>working days</u> . Classification does not start until the day after the incident occurred
>3 day accident rate	Rate per 100,000 permanent employees	✓ $\text{Number of >3 day accidents} / \text{number of permanent employees (FTE)} \times 100,000$ (standard rate)
Severity rate	Frequency rate	<ul style="list-style-type: none"> ✓ The total number of lost <u>working days</u> per Lost Time Injury accident ✓ The number of working days lost due to workplace injury accidents of permanent employees. This includes lost workdays due to <3 day injury accidents. Working days are all days except weekends, but including public holidays (because these deviate among different countries)
Number of near-misses reports raised	Number NM raised	<ul style="list-style-type: none"> ✓ An event that did not result in injury, illness or damage, but had the potential to do so. Near miss includes unsafe conditions, unsafe actions and unsafe behaviour, ... that did not result in any loss. Also called risk reports, close calls or similar ✓ All events that are registered as Near Miss in the SHEQ registration systems
Number of near-misses reports closed	Number NM closed	✓ The number of near misses closed requires that all actions, raised for this near miss, have been implemented or discounted
Near-Miss close-out rate	rate	✓ $\text{Number NM closed out} / \text{number NM raised} \times 100$ (as a percentage)



2.9. People performance indicators

Indicator	Description	Definition
Total number permanent employees	Number employees in FTE	<ul style="list-style-type: none"> ✓ Permanent employees have a contract of employment direct with Renewi and this contract is either for a fixed term (such as a year) or open-ended and not time limited except by retirement ✓ Reported as average annual number (number per month divided by 12) per division and per country ✓ FTE: Full Time Equivalent, one FTE is equivalent to one employee working full-time (e.g. 40 hours a week)
Number of male permanent employees	Number employees in FTE	<ul style="list-style-type: none"> ✓ Number of permanent male employees (both operational as non-operational) ✓ Reported as average annual number (number per month divided by 12)
Number of female permanent employees	Number employees in FTE	<ul style="list-style-type: none"> ✓ Number of permanent female employees (both operational as non-operational) ✓ Reported as average annual number (number per month divided by 12)
Number of full-time employees	Number employees in FTE	<ul style="list-style-type: none"> ✓ Number of permanent employees (both operational as non-operational) with a full time (1 FTE) contract ✓ Reported as average annual number (number per month divided by 12)
Number of part-time employees	Number employees in FTE	<ul style="list-style-type: none"> ✓ Number of permanent employees (both operational as non-operational) with a less than 1 FTE contract ✓ Reported as average annual number (number per month divided by 12)
Number of operational permanent employees	Number employees in FTE	<ul style="list-style-type: none"> ✓ Number of permanent operational ('blue-collar') employees, such as operators, lorry drivers, mobile plant drivers etc. Reported as average annual number (number per month divided by 12)
Number of administration, managerial and support employees	Number employees in FTE	<ul style="list-style-type: none"> ✓ Number of permanent non-operational ('white collar') employees, such as managers, support staff, administration staff etc. Reported as average annual number (number per month divided by 12)
Number of male statutory plc Board directors	Number employees in FTE	<ul style="list-style-type: none"> ✓ Number of male directors (as listed via Company House etc) ✓ Reported as average annual number (number per month divided by 12)
Number of female statutory plc Board directors	Number employees in FTE	<ul style="list-style-type: none"> ✓ Number of female directors (as listed via Company House etc) ✓ Reported as average annual number (number per month divided by 12)
Number of male senior managers	Number employees in FTE	<ul style="list-style-type: none"> ✓ Number of male senior managers – senior managers being managers on organisational levels N-1 to N-3 ✓ Reported as average annual number (number per month divided by 12)
Number of female senior managers	Number employees in FTE	<ul style="list-style-type: none"> ✓ Number female senior managers – senior managers being managers on organisational levels N-1 to N-3 ✓ Reported as average annual number (number per month divided by 12)
Number of employees who left the company during the year	Rate	<ul style="list-style-type: none"> ✓ Number of permanent employees which left the company during the reporting year (April 01 up until March 31)
Employment turnover rate	Rate	<ul style="list-style-type: none"> ✓ Number of permanent employees which left the company during the reporting year divided by the average number of permanent employees (FTE) during the year



Indicator	Description	Definition
Number NON-permanent employees in FTE	Number employees in FTE	<ul style="list-style-type: none"> ✓ Non-permanent workers, also known as temporary workers, agency workers, non-fixed term contract workers, accommodation workers, systematic workers or other descriptions. See also appendix 4
Total employee absenteeism from work (% of available days)	Rate	<ul style="list-style-type: none"> ✓ $\text{Total days absence} * 100 / \text{Total available days}$ ✓ Days of Absence are the working days an employee cannot work because of illness. This excludes occupational therapy. ✓ Total available days are all working days in the reporting year (so all calendar days minus weekend, but including public holidays which don't fall in the weekend), times the number of employees.



PARTNERSHIP

Through our partnerships, we aim to help society towards a more sustainable future. Taking the views of our host communities into account, minimising the impact we have on them and giving something back – through what we do – is important to us





2.10 Community performance

Indicator	Description	Definition
Number of environmental complaints received by our sites/operations	Number complaints received	<ul style="list-style-type: none"> ✓ Number of complaints received from any third party relating to an environmental issue (can be reported direct or via a regulator). Includes substantiated and unsubstantiated complaints ✓ If a site has received a particularly high number of complaints comments are given in footnotes
Average number of complaints per site	Number per operating centre	<ul style="list-style-type: none"> ✓ Total number of complaints / number of operating centres
Type of complaints	Number of types of complaints	<ul style="list-style-type: none"> ✓ Split into the following categories: Odour, litter, vermin (flies, birds, rats etc), traffic (mud on the road, numbers of lorries etc), noise, dust and others

2.11 Governance, compliance and external accreditation

Indicator	Description	Definition
2.11a Accreditations		
ISO 14001 / EMAS	Number of sites	<ul style="list-style-type: none"> ✓ Report number of operating centres certified to ISO14001, EMAS, ISO9001, OHSAS18001, VCA, etc. Specify number of sites certified to each standard separately
ISO 9001	Number of sites	
OHSAS 18001	Number of sites	
SCC/VCA	Number of sites	
% operations with ISO 14001/EMAS	Rate	<ul style="list-style-type: none"> ✓
2.11b Our Compliance performance		
Number of environmental convictions and fines	Number of convictions/fines	<ul style="list-style-type: none"> ✓ Convictions (cases where the company goes to court) and significant administrative fines (such as those that can be received in Belgium and the Netherlands) reported
Number of health and safety convictions and fines	Number of convictions/fines	<ul style="list-style-type: none"> ✓ Convictions (cases where the company goes to court) and significant administrative fines (such as those that can be received in Belgium and the Netherlands) to be reported
Legal actions for anti-competitive behaviour, anti-trust and monopoly practices	Number of actions	<ul style="list-style-type: none"> ✓ Convictions (cases where the company goes to court) and significant administrative fines (such as those that can be received in Belgium and the Netherlands) to be reported
<i>Details on safety convictions and fines</i>	<i>List of details</i>	<ul style="list-style-type: none"> ✓ Reported date of offence or date of prosecution/fine, company concerned, nature of offence and amount of fine. Full data document indicator only



Indicator	Description	Definition
2.11c Our Governance performance		
Number of employees which received training/courses/workshops on integrity	Number of employees	✓ Number of employees (headcount) which received training, courses or workshops given by integrity managers
Number of investigations on integrity issues	Number of investigations	✓ Investigations commenced by integrity managers leading to a report for the management
Total number of times advice issues to employees/ management following integrity notifications	Number of advices	✓ Number of times the integrity management advised employees/management on a notified integrity affair
Number of times advice issues to employees/ management following ethical misconduct notifications	Number of advices	✓ Both ethical misconduct between employees or imposed upon or by external persons. Ethical misconduct includes: <ul style="list-style-type: none"> • Break-in, theft, embezzlement (internal crime) • Abuse or improper use of confidential information • Fraud • Drugs/alcohol/medication abuse • Undesirable behaviour/bullying/discrimination • Abuse company assets • Aggression and violence
Number of times advice issues to employees/ management following aggression and violence notifications	Number of advices	✓ Both aggression and violence between employees as caused by or imposed upon external persons
% employees covered by formal safety committees	Percentage	✓ Coverage of organisation by formal safety committees which have a measurable influence on safety policy
% of operations which have undergone risk assessment for bribery and other similar risks	Percentage	✓ Coverage of organisation by means of policy instruments

Appendix 1. Carbon conversion factors

Carbon factors

These factors are used to convert energy use, recycle material production etc to carbon equivalents. Factors vary from country to country for a variety of reasons. For example, the UK has a greater reliance on fossil fuels than the Netherlands and therefore will have a different conversion factor to express electricity used as a carbon equivalent

Carbon factors for emissions and avoidance

Source of emission or avoidance	Unit of measurement	Conversion factor to convert to tonnes of carbon dioxide equivalents			
		NL	BE	UK	CA
1. Emissions					
Transport based emissions					
Diesel for road transport	litres	0.00323	0.0026694	0.0025839	-
Petrol	litres	0.00280	0.0023307 ⁸	0.0021944	-
LPG	litres	0.00181	0.0014968 ⁸	0.00150938	-
Bio-ethanol	litres	0.00124	-	-	-
Biodiesel	litres	0.00315	Factor depends on specific fuel		
Business travel	Km	Various	0.000250416	-	-
Energy use emissions					
Electricity	kWh	0.000649	0.00026738	0.00049636	0.0003234
Electricity - solar	kWh	0	-	-	-
Electricity - self-generated	kWh	-	-	0.0004585	-
Gas	see individual column	0.00189 (Nm3)	0.00018396 (kWh)	0.00018407 (kWh)	-
Diesel used on sites	litres	0.00323	0.00266948	0.0025839	0.0031351
Other fuels	Factors for other fuels, including alternative fuels, available – ask your CSR contact				
2. Avoidance					
Waste derived fuels produced and sold					
Icopower pellets	tonnes	0.713	-	-	-
Woodchips/Wood for biomass incineration	tonnes	0.747	1,088917 ¹²	-	-



Carbon factors

Continued...

We first set ourselves quantified key CSR 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 CSR 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, 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. The factors in this document are revised 2015 onwards factors

Wood dust for biomass incineration	tonnes	0.643	1,795025 ¹²	-	-	
SRF from MBT used in cement kilns	tonnes	-	1,532932 ¹²	1.01426	-	
Non dangerous sludge used in cement kilns	tonnes	-	0,469843 ¹²	-	-	
Dangerous sludge used in cement kilns	tonnes	-	0,363036 ¹²	-	-	
Non dangerous impregnated sawdust	tonnes	-	1,237843 ¹²	-	-	
Dangerous impregnated sawdust	tonnes	-	1,203849 ¹²	-	-	
Materials separated for re-use/recycling						
Aggregates (replacing sand)	tonnes	0.0023	0.0001 ⁹	0.0001 ⁹	-	
Aggregates (replacing gravel/rock)	tonnes	0.0049				
Silt/soil	tonnes		0.0001 ⁹	0.0001 ⁹	-	
Sieving Sand	tonnes	0.0031				
Asphalt	tonnes	0.019				
Gypsum	tonnes	0.108				
Metals (ferrous)	tonnes	1.736	1.487 ¹⁰	1.487 ¹⁰	-	
Metals (non-ferrous)	tonnes	4.530	12.7 ⁹	12.7 ⁹	-	
Aluminium	tonnes	6.953				
Copper	tonnes	2.107				
Wood	tonnes		0.0479 ⁹	0.0479 ⁹	-	
Woodchips (to chipboard industry)	tonnes	0.202	-	-	-	
Rock wool	tonnes	0.093				
Plastics	tonnes	1.207 ⁵	1.55 ¹¹	1.55 ¹¹	-	
Plastics (foils)	tonnes	1.472				
Glass ⁶	tonnes	0.210	0.253 ¹⁰	0.253 ¹⁰	-	
Glass (flat)	tonnes	0.126				
Paper/cardboard	tonnes	0.817	0.45 ⁹	0.45 ⁹	-	
Textiles	tonnes	3.432	1.34 ⁹	1.34 ⁹	-	



Carbon factors Continued...	Compost (from green waste)	tonnes		0.0039 ⁹	0.0039 ⁹	-
	Compost for agriculture	tonnes	0.171	-	-	-
	Compost for potting soil	tonnes	1.207	-	-	-
	Compost for other usage	tonnes	0.800	-	-	-
	Digestate	tonnes		0.0635 ⁵	-	-
	Sources of carbon conversion factors					
<p>Dutch CO2-emission factors website (www.co2emissiefactoren.nl)</p> <p>Energy from grid in the State of Ontario Canada, calculated according to Handbook CO2 performance Ladder 2.0 (version 23rd of June 2011) SKAO</p> <p>2015-2016 CSRC energy efficiency scheme order: table of conversion factors (Version 5: Published 24th June 2015)</p> <p>DCF Carbon Factors 7 4 2016 11540</p> <p>Carbon Balances and Energy Impacts of the Management of UK Wastes, ERM December 2006</p> <p>Waste management options and climate change, AEA Technology for DG Environment 2001</p> <p>CO2 impacts of transporting the UK's recovered paper and plastic bottles to China, WRAP August 2008</p> <p>Factors of the DEFRA/DECC's 2009 and Bilan Carbone de L'ADEME, 2011</p>						
<p>Waste recycled conversion factors have been chosen from a number of sources as best available. However, treat with care; what is included and excluded should be considered (eg, a factor for emissions avoided by paper recycling may take into account emissions associated with sorting but already accounted for this in site energy usage). Full life cycle assessment (LCA) figures will not correlate directly with operational emissions data as LCA approach not taken</p>						

Appendix 2. Renewi common waste categories

Renewi common waste categories

We use common waste categories across our operations. Data on these categories is collected via a system called QlikView. This operates on two levels: A top hierarchy consisting of high-level descriptions and a lower hierarchy with more detail descriptions. Data in the Renewi CSR Report and CSR Full data document follow these categories

Waste categories

Top hierarchy description	Lower hierarchy description	Comments
INCINERATION - COMMERCIAL WASTE	COMMERCIAL WASTE	Usually waste inputs
INCINERATION - DOMESTIC WASTE	DOMESTIC WASTE	Usually waste inputs
INCINERATION - SRF / RDF	SRF / RDF	Usually waste outputs
LANDFILL	LANDFILL	Waste outputs or input own disposal sites
MINERALS - C&D waste	C&D (construction and demolition)	Usually waste inputs
MINERALS - RUBBLE	RUBBLE	Usually waste inputs
	GRANULATE	
MINERALS - SOIL / SAND / SLUDGE	SOIL	May be inputs or outputs
	SAND	
	STREET CLEANING SAND	
	SLUDGE / SEWAGE WASTE	
MINERALS - ROCKWOOL	ROCKWOOL	May be inputs or outputs
WOOD	HIGH QUALITY WOOD (A-WOOD)	May be inputs or outputs
	LOW QUALITY WOOD (B/C-WOOD)	
	WOOD CHIPS	
	WOOD TRADING	
	WOOD TREE BARK	
PAPER BASED	TIMBER	Usually waste outputs rather than inputs
	HIGH GRADE (QUALITY) PAPER	
	LOW GRADE (QUALITY) PAPER	
	NEWS & PAMS	
METALS	MIXED PAPER	Usually waste outputs rather than inputs
	CARDBOARD	
	FERROUS	
PLASTICS	NON FERROUS	Usually waste outputs rather than inputs
	HIGH QUALITY PLASTICS	
	LOW QUALITY PLASTICS AND FOILS	



Renewi common waste categories
Continued...

GLASS	GLASS AND CERAMICS	Usually waste outputs rather than inputs
	HIGH QUALITY GLASS	
	LOW QUALITY GLASS	
ORGANICS - GREEN WASTE	GREEN WASTE	Usually waste inputs
	AGRICULTURAL WASTE	
	GARDEN WASTE	
	GREEN WASTE OTHER	
ORGANICS – FOOD WASTE	FOOD WASTE	Usually waste inputs
	SWILL	
	PAST DUE PRODUCTS (ODP)	
ORGANICS - COMPOST	COMPOST	Usually waste outputs rather than inputs
ORGANICS - BIOMASS	BIOMASS	Usually waste outputs rather than inputs
ORGANICS – FAT/OILS	FAT/ORGANIC OILS	Usually waste inputs
BULKY (HOUSEHOLD) WASTE / WEEE	WEEE (Electrical and Electronical Waste)	Usually waste inputs
	BULKY WASTE OTHER	
OTHER RECYCLATES / PMD	(DRY) MIXED RECYCLATES / PMD	Usually waste outputs rather than inputs
	OTHER RECYCLATES	
HAZARDOUS - SPECIAL WASTE	SPECIAL WASTE	Usually waste inputs
	MEDICAL WASTE	
HAZARDOUS - CONTAMINATED SOIL	SOIL	
	GRID	
	TAG	
	REUSE	
	SOIL OTHER	
HAZARDOUS - PAINT	PAINT	Usually hazardous wastes
	SOLVENTS	
	PAINT OTHER	
	SCSRAP / PALLETS	
HAZARDOUS - CONTAMINATED WATER	EXTERNAL	
	SHIPCLEANING	
	SLUDGE	
	WASTE FUEL	
	WATER OTHER	



	OTHER	OTHER	Only use if no other alternative
		GENERAL WASTE	Only use if no other alternative
		RUBBER	
	<p>The above categories are those in QlikView. However, different Renewi countries of operation use different sections of the above as they are relevant to their operations. As such not all reporting will cover all of the above categories.</p>		



Appendix 3. Audiences and stakeholder engagement and materiality

Audiences for Renewi CSR Reports

Many groups of our stakeholders may be interested in Renewi CSR Report. However, from work conducted by Renewi Group CSR Committee, we consider the main stakeholder groups the report is aimed at to be

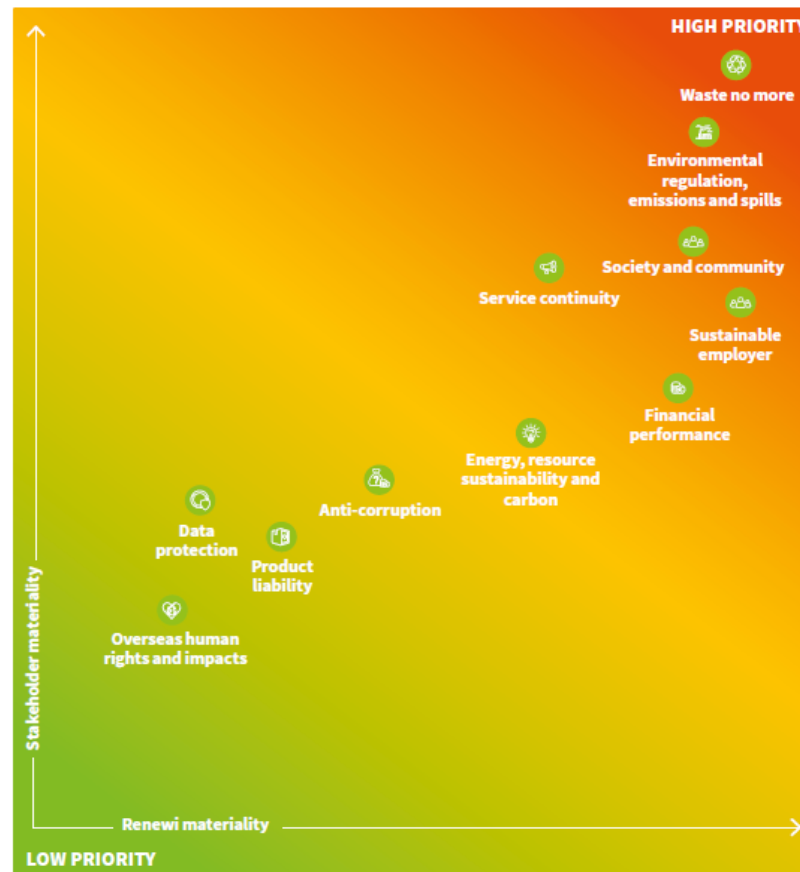
Our CSR reporting complies with Global Reporting Initiative (GRI) guidelines. Part of this is assessing our stakeholder materiality. We have a responsibility to ensure our CSR reporting is relevant to stakeholders, from local communities to employees, customers and shareholders.

Presented right is our stakeholder materiality matrix. The stakeholder issues identified in red are those which are of highest concern and are where we have set ourselves key CSR objectives (see objectives section of our CSR Report).

Main stakeholder audience groups

Employees, Renewi Board and shareholders and other financial stakeholders, contractors and suppliers/off-takers of wastes and existing and potential customers and clients, regulators and non-governmental organisations, communities and businesses near to Renewi sites and operations and educational establishments, internal and external auditors, researchers, ratings agencies and corporate responsibility organisations, politicians and civil servants (national and local)

Stakeholder materiality matrix



KEY ISSUES

Waste no more: Recycling and recovery, carbon benefit, virgin raw materials conservation and public policy on waste management

Environmental regulation, emissions and spills: Emissions to air, land and water including spills, potential pollution from activities, impact of environmental regulations and compliance

Society and community: Positive contribution to society from recycling and recovery activities and knowledge sharing and education, and potential negative impacts on local communities close to operations

Service continuity: Continuity of service to clients and customers for their waste (waste does not stop being produced)

Sustainable employer: Employee rights, cultural needs, health and safety, working conditions and wellbeing, employee relations

and engagement, (non-discriminating) diversity and equality, and training and education

Financial performance: Financial sustainability of the company

Energy, resource sustainability and carbon: Energy consumption, carbon emissions and prevention, and raw material use

Anti-corruption: Prevention of fraud, bribery and similar, financial governance, good control environment, integrity management and fair practices in business

Data protection: Privacy of clients, customers and employees

Product liability: Health and other potential impacts from products

Overseas human rights and impacts: Complicity in poor human rights and economic impacts on third party countries from activities or via business partners



Appendix 4. Definition of non-permanent workers

Non-permanent workers

Employment law varies across the countries Renewi operates in. One area where a degree of confusion has arisen is what is a non-permanent worker. This appendix gives guidance.

Non-permanent workers

There are three main groups of people who perform tasks for Renewi:

1. **Permanent employees** – have a contract of employment direct with Renewi, and this contract is not for a fixed or limited time period
2. **Non-permanent workers** - variously these persons may be called temporary workers, agency workers, contract workers, accommodation workers, systematic workers, fixed term contract workers or other descriptions. These non-permanent workers may be split into two main categories:
 - ✓ **External non-permanent workers** – temporary, contract, accommodation, systematic etc workers typically employed via an external body such as an agency
 - ✓ **Fixed term contract non-permanent workers** – workers who have a contract with Renewi, but this contract is time limited. Typical examples may be workers contracted for a fixed time period to cover maternity leave, or on a fixed term time limited contract prior to potential permanent employment
3. **Other third parties** – such as contractors performing construction tasks, contract waste collections etc

The difference between permanent employees (1 above) and non-permanent workers (2 above) may be obvious, but the difference between non-permanent workers and other third parties (3 above) such as contractors may be less distinct. If a worker shows the most of the characteristics given in the first column of the table below then it is very likely that they are a non-permanent worker. However, if they show more of the characteristics given in the second column then it is likely they are a contractor or other similar third party and not a non-permanent worker.

Non-permanent worker	Contractor / other third party
Uses Renewi tools, equipment, plant, vehicles etc	Uses their own tools, equipment, plant etc
Works to Renewi procedures	Works to their own procedures approved by Renewi
Is paid by time period (day, hour etc)	Is paid by the job / task
Typically does tasks Renewi employees also do	Typically does tasks Renewi employees do not do

Renewi reporting of data, internally and externally and whether for human resources or CSR reasons, will be to the above definitions: Permanent employees, external non-permanent workers, fixed term contract non-permanent workers.



Appendix 5. Use of E-PRTR emissions data

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. All of our sites operate under environmental permits. With the exception of Renewi Canadian operations, these permits fall 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 (E-PRTR) protocols. This gives us a common set of emissions and measures of significance.

However, E-PRTR does not cover all of our operations, only larger facilities where the regulator deems there may be significant emissions. In practice this means that Renewi E-PRTR 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-EPRTTR 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 E-PRTR, brief descriptions of potential significant emissions and where Renewi 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 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

E-PRTR	Operation types	Description of potential significant emissions	Where reported
E-PRTR 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 ₂ and other GHG emissions included in Renewi carbon footprints. Other emissions in E-PRTR 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-E-PRTR 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 ₂ and other GHG emissions included in Renewi 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 ₂ and other GHG emissions included in Renewi carbon footprints
	Vehicles sites	Direct CO2 and other GHG emissions from fuel use (road lorries)	



Appendix 6. List of main memberships of industry or other associations

Main memberships	Association name	Associated division	Description
<p>To the right an overview of our main memberships of industry associations is given. This list only covers the main memberships. For information on additional memberships, please visit the websites of the different Renewi divisions and companies.</p>	Go4Circle	Commercial Waste Belgium	Industry association for organizations in the circular economy Belgium
	BRBS Recycling	Commercial Waste Netherlands	Industry association for construction and demolition waste companies
	Nederlandse Vereniging voor Afval- en Reinigingsmanagement	Commercial Waste Netherlands	Municipal waste management association Netherlands
	Vereniging Afvalbedrijven	Commercial Waste Netherlands, Hazardous Waste, Monostreams	Waste management association Netherlands
	Transport en Logistiek Nederland	Commercial Waste Netherlands, Hazardous Waste	Industry association for transport and logistics companies in the Netherlands
	Stichting Industrieel Reinigen	Hazardous Waste	Industry association for industrial cleaning
	VOMI	Hazardous Waste	Industry association for service companies in process industry Netherlands
	Environmental Services Association	Municipal UK	Main trade body for waste management UK