



# **European Investment Bank Carbon Footprint Report 2014**

## **GHG emissions resulting from EIB Group internal operations**

**January to December 2014**

This report has been prepared by Carbon Trust Advisory Ltd for the European Investment Bank using data provided by the EIB.

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## 1 EXECUTIVE SUMMARY

The EIB Group first calculated the carbon footprint of its head office operations in 2007 and set a target to reduce emissions by 20-30% by 2020. This includes emissions from energy use in the buildings (natural gas for heating and power generation, and purchased electricity and steam for power), from mobility activities (owned vehicles, business travel and employee commuting), from waste disposal and from the production of paper used in the offices. As purchased electricity is covered by green guarantees of origin, it is treated as zero carbon on a net basis.

In 2014, **the EIB's total** net carbon footprint was 17,510tCO<sub>2</sub>e, an increase of 22% from 2013 and a decrease of 2% compared to 2007.

The relative carbon footprint in 2014 was 6.85tCO<sub>2</sub>e per employee. The relative carbon footprint for 2013 was 6.07 tCO<sub>2</sub>e per FTE, and the baseline year 2007 was 11.95 tCO<sub>2</sub>e per FTE<sup>1</sup>. This reflects a 70% increase in staff numbers since 2007. As such, the EIB is on track to achieve its carbon reduction target, which is in line with **the EU's target of 20-30% reduction by 2020.**

The most significant source of emissions (94% of total net emissions) relates to mobility activities. Air travel represents the biggest share of this (78% of total net emissions). Policies related to travel class are in place to minimise emissions, but it is **a core part of EIB's business activity and** emissions will therefore remain significant.

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<sup>1</sup> Note, that in 2014 the EIB changed the methodology for calculating numbers of employees from an FTE (full time equivalent) basis to a total number of contracted employees. See section 6.2 for more details.

## 2 INTRODUCTION

The European Investment Bank (EIB) was established in 1958 under the Treaty of Rome. **It is the European Union's financing institution, with a remit to contribute** towards the integration, balanced development and economic and social cohesion of the Member States. It raises funds on the capital markets to finance projects that meet EU objectives: regional development, trans-European networks of transport, telecommunications and energy, research, development and innovation, environmental improvement and protection, health and education. Since 2007, the EIB is the largest Green Bonds Issuer, offering the opportunity to investors to participate in projects in the fields of renewable energy and energy efficiency. Outside of the European Union, the EIB implements the financial components of agreements concluded under the European development aid and cooperation policies.

The European Investment Fund (EIF) is a European Union agency, majority-owned by the EIB, whose remit is to provide finance through private banks and funds to small and medium-sized enterprises. Together the EIB and the EIF constitute the EIB Group. **The EIF is included within the boundary of the EIB's carbon footprint and references to the EIB's emissions** in this report include the EIF.

The EIB first calculated its carbon footprint in 2007 and adopted a 20-30% reduction target from this baseline to 2020. This was consistent with the European Commission target for 2020 of a 20% reduction in EU greenhouse gas emissions from 1990 levels (with an 8% reduction to be achieved between 2008 and 2012 as agreed under the Kyoto Agreement). For Luxembourg, the National Emissions Reduction target was set at 28% by 2012 based on its relative wealth at the time.

**The EIB's commitment to measure** and manage its footprint is consistent with its environmental and social policies, principles and standards for the projects it finances. Understanding its carbon footprint also allows it to identify and implement measures to reduce emissions and to track performance against its target. Measures taken in previous years include **expansion into a BREEAM 'excellent' building and investment in** the energy efficiency of existing buildings, in addition to some activities to reduce travel related emissions. Examples of specific measures taken in 2014 to reduce energy consumption include:

- Regulation and distribution optimization of heating and cooling systems (adaptation to the real needs);
- Implementation of drive system on heating circulation pumps;
- Improvement of lighting management;
- Optimization of ventilation system management;
- Replacement of old network printers and copiers with brand new multifunctional devices that can print, copy and scan.

This report presents the analysis of **EIB's** 2014 carbon footprint based on the GHG Protocol Corporate Standard and the Global Reporting Initiative principles and indicators.

### 3 ORGANISATIONAL AND OPERATIONAL BOUNDARY

#### 3.1 Organisational boundary

The organisational boundary defines the businesses and operations that constitute the company for the purpose of accounting and reporting greenhouse gas emissions. Companies can choose to report either the emissions from operations over which they have financial or operational control (the control approach) or from operations according to their share of equity in the operation (the equity share approach).

The **EIB's** carbon footprint uses the operational control approach. As such, it includes the EIB and EIF head office operations in Luxemburg (Kirchberg, BHK and the new site PKI). Smaller regional offices are not included due to their non-material share of the total footprint and to difficulties obtaining consistent data.

#### 3.2 Operational boundary

Defining the operational boundary involves identifying emissions associated with its operations, categorising them as direct and indirect emissions, and choosing the scope of accounting and reporting for indirect emissions.

The following definitions are used:

##### Direct GHG emissions

- **Scope 1:** emissions from sources that are owned or controlled by the reporting entity (i.e. any owned or controlled activities that release emissions straight into the atmosphere).

##### Indirect GHG emissions

Indirect emissions **occur as a consequence of the reporting entity's activities** but at sources that are owned or controlled by another entity (and are therefore their scope 1 emissions). These are classified as:

- **Scope 2:** Indirect GHG emissions from the consumption of purchased electricity, heat, steam or cooling.
- **Scope 3:** Indirect GHG emissions from other activities. A detailed Standard exists that sets out the rules for 15 categories of scope 3 emissions as indicated in Figure 1<sup>2</sup>.

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<sup>2</sup> The Corporate Value Chain (Scope 3) Accounting & Reporting Standard:  
<http://www.ghgprotocol.org/standards/scope-3-standard>

The operational boundary for **EIB's** carbon footprint report includes the following:

- **Scope 1:** Natural gas combusted in boilers to heat EIB buildings and used in the co-generation plant to generate heat and power, and transport fuel used to run vehicles owned by the EIB. There are no relevant fugitive emissions because air conditioning systems use ammonia.
- **Scope 2:** Purchased grid electricity (from green tariffs) and steam used for power in the properties (lighting, air conditioning, small power, elevators, etc).
- **Scope 3:** Transport fuel and power used by air and rail transport operators for EIB business travel, by the outsourced mini-bus service that operates between the Luxembourg sites and by employee-owned vehicles for commuting to and from work; emissions from waste management operations due to incineration or recycling of waste generated by the EIB; emissions from energy consumption in external data centres that store EIB data; and, emissions generated in the production of office paper purchased by the EIB.

In pursuit of continual improvement, the EIB reviews its footprint boundary annually and regularly looks for opportunities to expand its scope of reporting, especially in the areas of scope 3 emissions. In the 2014, the EIB is reporting for the first time emissions associated with external data centres that store data related to the activities of the EIB. Looking forward, the EIB will continue to explore opportunities to expand its reporting scope, such as the inclusion of other emissions from business travel such as hotels stays and conferences, the indirect emissions of recruitment drives and the emissions of external associate offices outside its main offices in Luxembourg.

Figure 1 illustrates the current organisational and operational boundary.

### 3.3 Reporting period covered

The reporting period covers 1 January 2014 to 31 December 2014.

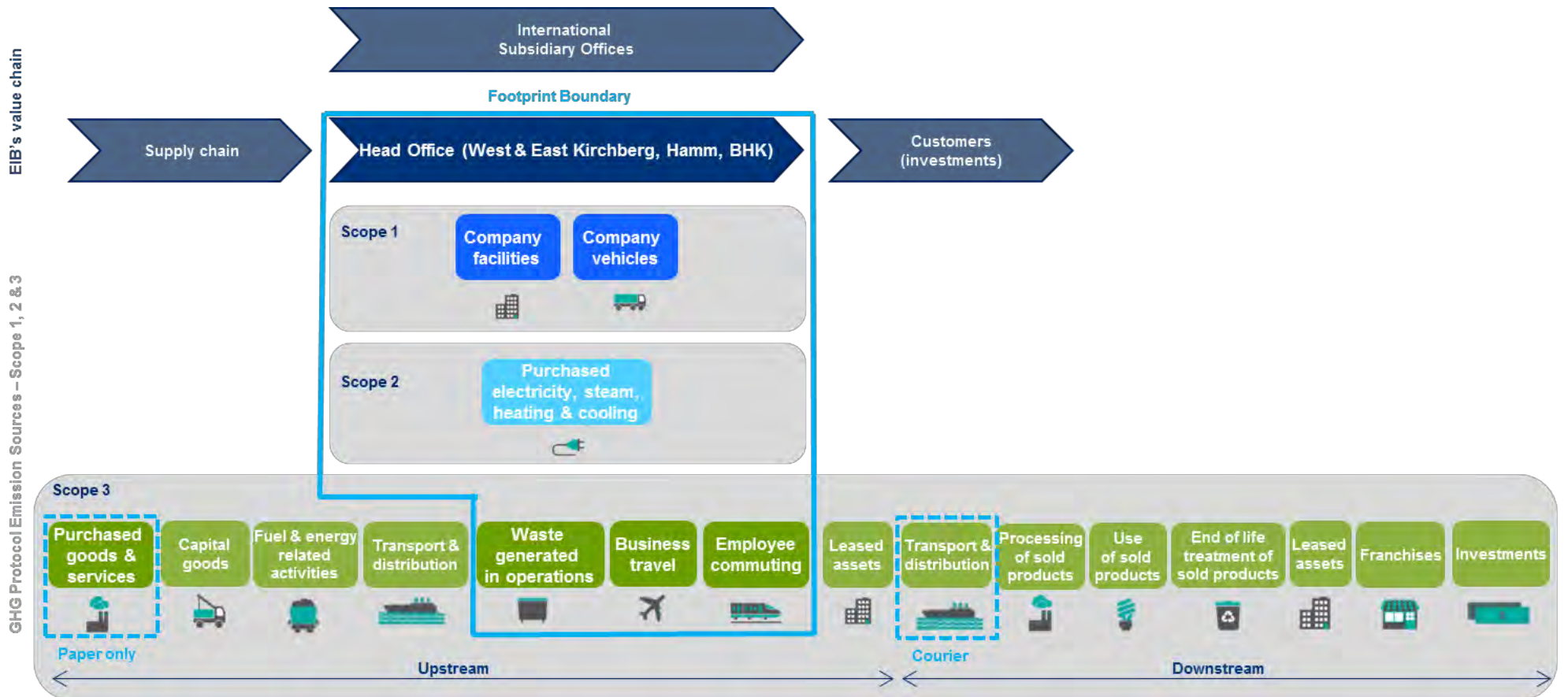


Figure 1: Boundary diagram



## 4 METHODOLOGY

EIB Carbon footprint analysis in 2014 follows the GHG Protocol<sup>3</sup>, consistent with the approach adopted in 2013. The GHG Protocol is recognized as the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions. It is an international standard used by a diverse range of organisations, including many in the banking sector, and it is widely accepted as best practice.

To calculate the GHG emissions inventory, we identified all relevant GHG emissions sources and collected activity data from the EIB then, using emission factors, calculated emissions from each source. This was aggregated to corporate level for **EIB's total carbon footprint**.

The following sections set out the details of the process followed.

### 4.1 Emission sources and activity data

Activity data is a quantitative measure of activity that results in GHG emissions. Table 1 shows the activity data provided by the EIB. It is mainly primary data e.g. the amount of gas used for heating or the distance travelled by air, with the exception of commuting data that is based on the average number of vehicles and average distance travelled. The activity data is also used as environmental impact indicators as per the Global Reporting Initiative (GRI).

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<sup>3</sup> <http://www.ghgprotocol.org/standards/corporate-standard>

Emission scope	Emission source	Units	Resolution
Scope 1	Natural Gas for heating	kWh	By site, by month
	Natural gas for co-generation	kWh	By site, by month
	Owned vehicles	km	By vehicle
Scope 2	Purchased electricity <sup>1</sup>	kWh	By site, by month
	Purchased steam	kWh	By site, by month
Scope 3	Business travel – Air	Passenger km	By journey (including class and distance)
	Business travel – Rail	Passenger km	By journey (inc. class and distance)
	Outsourced minibus	km	Single figure
	Employee commuting	Parking spaces <sup>2</sup>	Average count by month
	Couriers	Shipments	Single figure
	Water	m <sup>3</sup>	By site, by month
	Waste	kg	By type and treatment, by site, by month
	Paper consumption	Tonnes	By site
Data centres (NEW from 2014)	kWh	By site per annum	

**Table 1: Activity data**

**Notes to Table 1:**

<sup>1</sup> The EIB began to purchase electricity originated 100% from renewable sources (hydropower, wind power and biomass) in 2007 and is the proprietor of the related green guarantees of origin. As such, whilst emissions at a grid average factor are accounted for under scope 2, there are no net emissions associated with purchased electricity. The EIB has been closely monitoring developments since the publication of the GHG Protocol Scope 2 Guidance in January 2015 and shall report against the guidance from 2015 onwards.

<sup>2</sup> Primary data on distances travelled or fuel consumed for commuting is not currently available. The EIB therefore counts the average number of available parking spaces on a monthly basis, deducted from the total number of available spaces, to arrive at an assumed number of cars per day. This is then multiplied by an average distance travelled of 35 km per day, based on a survey conducted by the European Commission of its employees in Luxemburg (and supported by 3<sup>rd</sup> party research<sup>4</sup> as well as by an internal detailed reasonability analysis). This is then multiplied by 220 days.

<sup>4</sup> A. Aguilera (1999) 'Growth in commuting distances in polycentric metropolitan areas: the case of Paris', 45th Congress of the European Regional Science Association: <http://www-sre.wu-wien.ac.at/ersa/ersaconfs/ersa05/papers/255.pdf>

## 4.2 Emission factors

Emission factors are calculated ratios relating GHG emissions to a measure of activity at an emissions source. They are used to convert activity data to carbon emissions.

Consistent with prior years, the emission factors represent carbon dioxide equivalent (CO<sub>2</sub>e). They convert the impact of each of the six greenhouse gases covered by the Kyoto Protocol — carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF<sub>6</sub>) — into a common unit of tonnes of CO<sub>2</sub>e based on their Global Warming Potential (GWP). The GWP is a measure of how much heat the respective gas retains in the atmosphere over a given time horizon, based on the Intergovernmental Panel on Climate Change (IPCC) 100-years GWP coefficients.

Table 2 sets out the emission factors used and the sources of data.

Emission scope	Emission source	Emission factor	% Change from 2013	Data source
Scope 1	Natural Gas for heating	0.182 kgCO <sub>2</sub> e/kWh	0%	EIB
	Natural gas for co-generation	0.182 kgCO <sub>2</sub> e/kWh	0%	EIB
	Owned vehicles	0.151 kgCO <sub>2</sub> e/km <sup>1</sup>	-4%	EIB
Scope 2	Purchased electricity	0.387 kgCO <sub>2</sub> e/kWh	-6%	Defra <sup>2</sup>
	Purchased steam	0.043 kgCO <sub>2</sub> e/kWh	0%	Ville de Luxembourg
Scope 3	Business travel – Air <sup>3</sup>	0.176 to 0.576 kgCO <sub>2</sub> e/Passenger/km	-4% to 1%	Defra
	Business travel – Rail	0.014 kgCO <sub>2</sub> e/Passenger/km	13%	Defra
	Outsourced minibus	0.460 kgCO <sub>2</sub> e/km	0%	EIB
	Employee commuting	0.228 kgCO <sub>2</sub> e/km	20% <sup>4</sup>	Defra
	Courier services	4.830 kgCO <sub>2</sub> e/shipment	0%	DHL
	Water <sup>5</sup>	1.053 kgCO <sub>2</sub> e/m <sup>3</sup>	0%	Defra
	Waste	21 kgCO <sub>2</sub> e/tonne	0%	Defra
Paper consumption	956 kgCO <sub>2</sub> e/tonnes	0.16%	Defra	

**Table 2: Emission factors**

### Notes to Table 2:

<sup>1</sup> This is an average figure for all the vehicles owned by the EIB. The factor provided by the vehicle manufacturers is used for each vehicle to calculate emissions.

<sup>2</sup> Department for Environment Food and Rural Affairs (Defra) annually updates its greenhouse gas conversion factors. Access to the emission factors and descriptions of changes in methodology can be found at <http://www.ukconversionfactorscarbonsmart.co.uk/>.

<sup>3</sup> The emission factor for air travel includes a Radiative Forcing factor that accounts for impacts other than CO<sub>2</sub> emissions (including water vapour, contrails, NO<sub>x</sub> etc) that magnify the warming effect in the upper atmosphere. The range of factors represents the distance (i.e. short- and long-haul) and travel class (i.e. economy and business).

<sup>4</sup> For all scope 3 emission factors, the upstream emissions of producing fuels (mining, excavation, and transportation) prior to combustion has now been included in accordance with GHG Protocol scope 3 guidance. This is the main cause of the significant increase in the emission factor for employee commuting. Emission factors has also been impacted by updates in the Defra conversion factors to include an emission factor for an average car using petrol or diesel.

<sup>5</sup> The emission factor includes both emissions associated with the supply of fresh water and the treatment of waste water.

### 4.3 Emissions inventory calculation

An inventory of GHG emissions by source was calculated by applying the emission factors to **relevant activity data and aggregating the results to calculate EIB's absolute carbon footprint**. A relative footprint was also calculated using employee numbers. Note, that in 2014 the methodology for calculating numbers of employees was changed from an FTE (full time equivalent) basis to a total number of contracted employees - see section 6.2 for more details.

## 5 CARBON FOOTPRINT

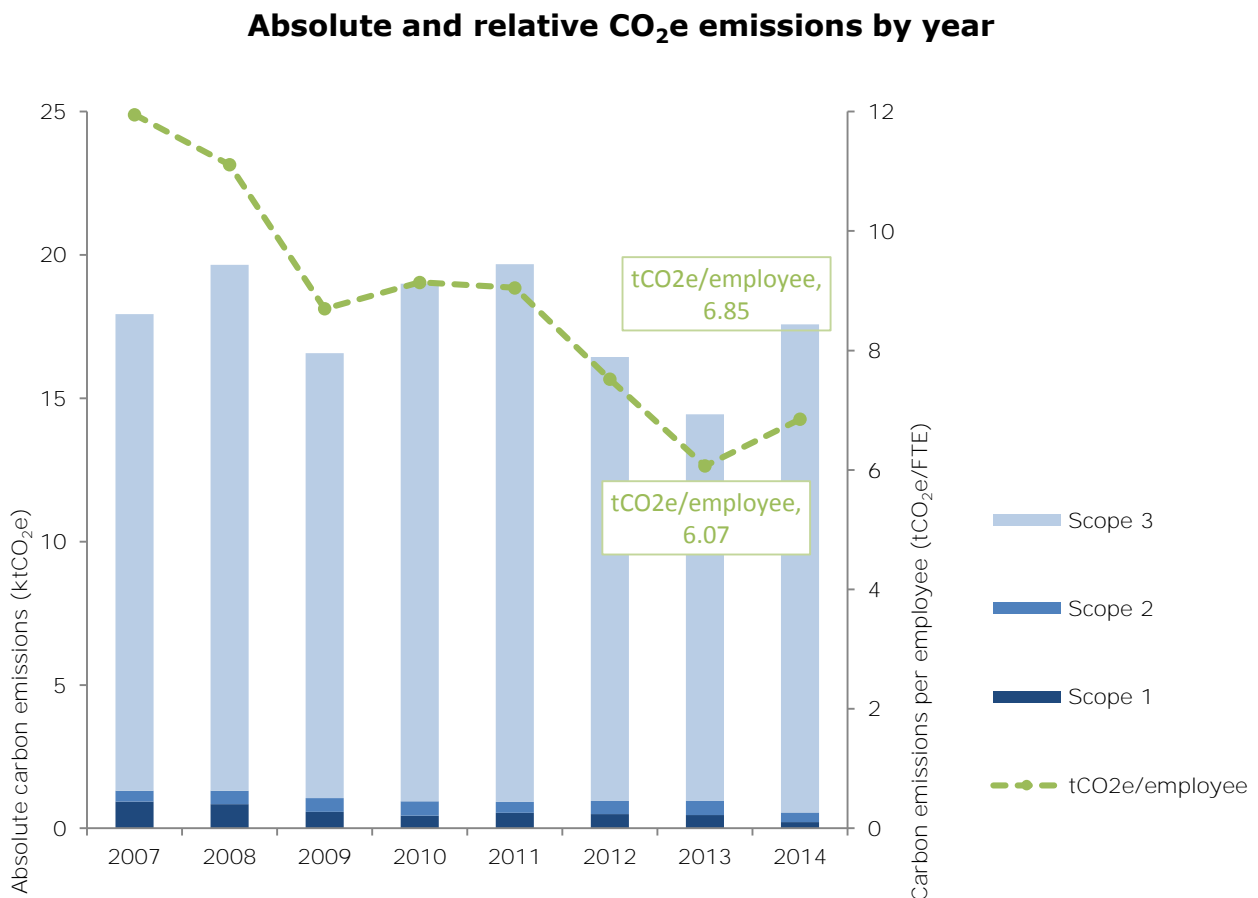
### 5.1 Total net emissions

The EIB's total carbon footprint in 2014 was 17,510tCO<sub>2</sub>e, an increase of 22% compared to 2013 and a decrease of 2% compared to the 2007 baseline year.

The relative carbon footprint in 2014 was 6.85 tCO<sub>2</sub>e per employee. The relative carbon footprint for 2013 was 6.07 tCO<sub>2</sub>e per FTE, and the baseline year 2007 was 11.95 tCO<sub>2</sub>e per FTE<sup>5</sup>. The additional reduction in relative emissions over absolute emission reductions reflects a 70% increase in staff numbers since 2007.

The EIB is on track to achieve the original emission reduction target of 20-30% by 2020 (against a 2007 baseline). This remains true even when the impact of methodology changes is accounted for.

Figure 2 shows total and relative net emissions broken down by scope for 2007 to 2014.



**Figure 2: 2007-2014 total and relative net emissions**

<sup>5</sup> Note, that in 2014 the EIB changed the methodology for calculating numbers of employees from an FTE (full time equivalent) basis to a total number of contracted employees. See section 6.2 for more details.

Figure 3 and Figure 4 shows absolute emissions broken down by source for 2007 to 2014, for scopes 1, 2, and 3.

### Scope 1 & 2 CO<sub>2</sub>e emissions by year

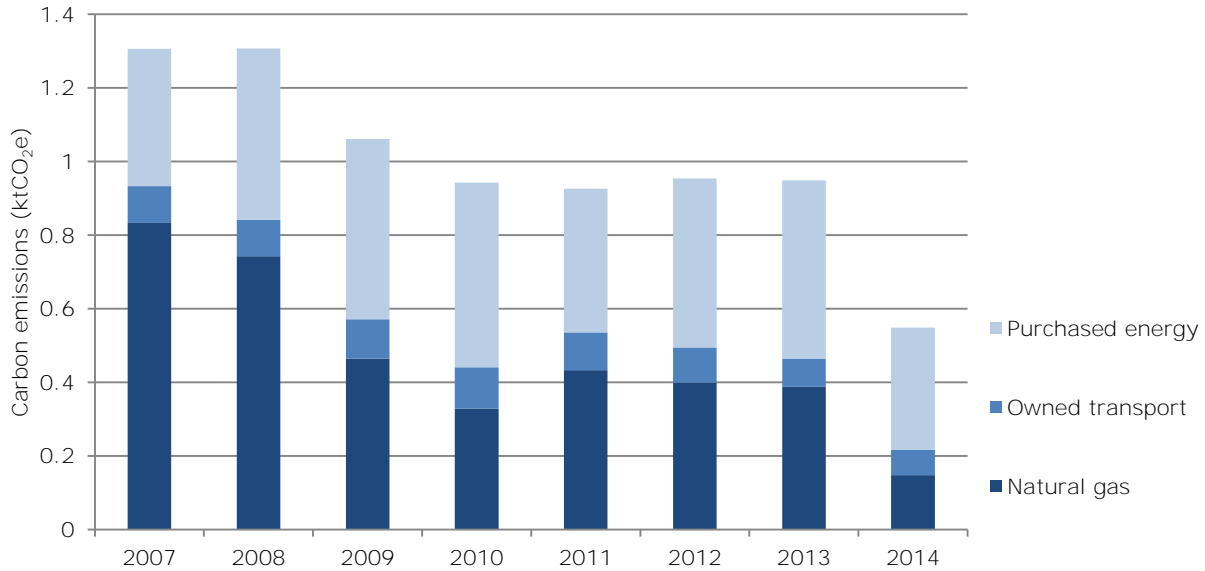


Figure 3: 2007-2014 scope 1 and 2 emissions breakdown by source

### Scope 3 CO<sub>2</sub>e emissions by year

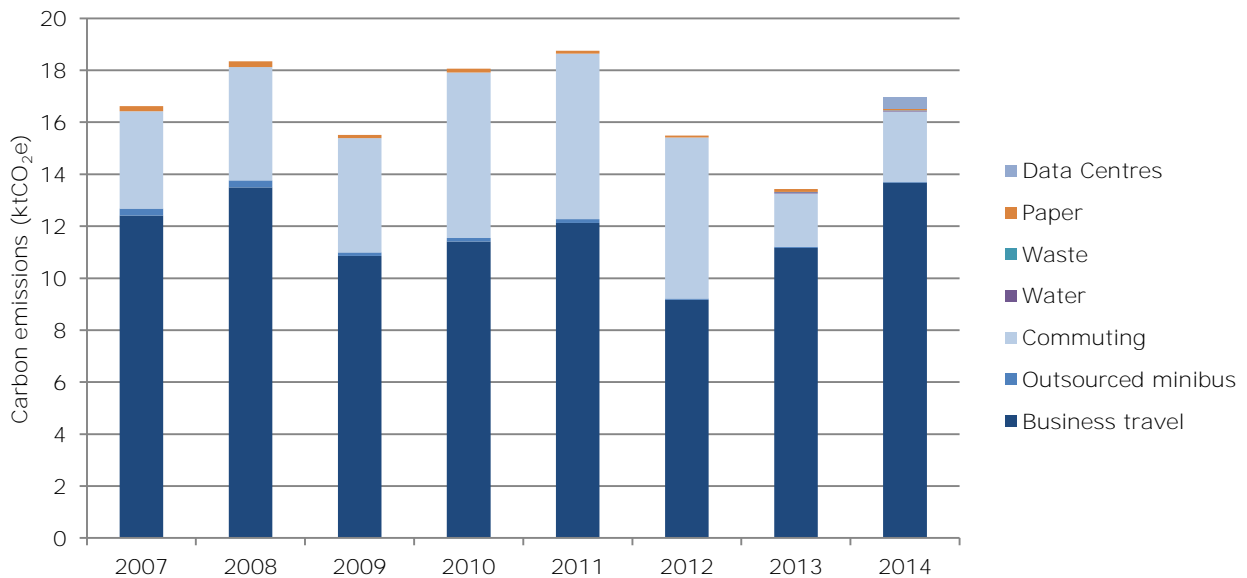


Figure 4: 2007-2014 scope 3 emissions breakdown

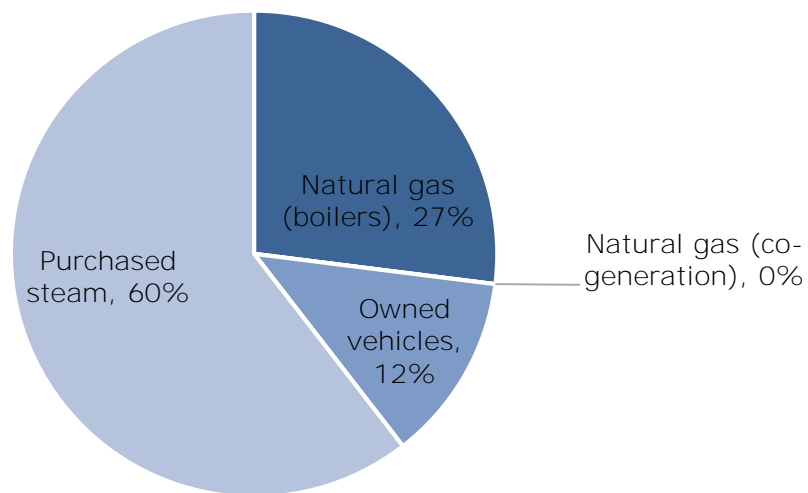
Notes to figure 4:

<sup>1</sup> The significant decrease in scope 1 natural gas emissions in 2014 (62% versus 2013) can be mostly attributed to the Hamm site coming offline in 2014.

<sup>2</sup> The significant increase in scope 3 business travel emissions (23% compared to 2013) relates to the increase in overseas travel consistent with an increase in EIB projects signed in 2014 and partially to the fact that the methodology has been refined and scope 3 has been added in the calculation of the travel emission factor.

The 2014 carbon footprint is broken down by emissions source as per Figure 5 below. Approximately 94% relates to mobility - travel in owned vehicles and third party transport used for business travel and employee commuting. Air travel represents the most significant proportion of this as it is a **core part of EIB's business** and cannot be avoided. Nevertheless, policies regarding travel class are in place to minimise emissions.

### 2014 CO2e emissions by source - Scope 1 & 2



### 2014 CO2e emissions by source - scope 3

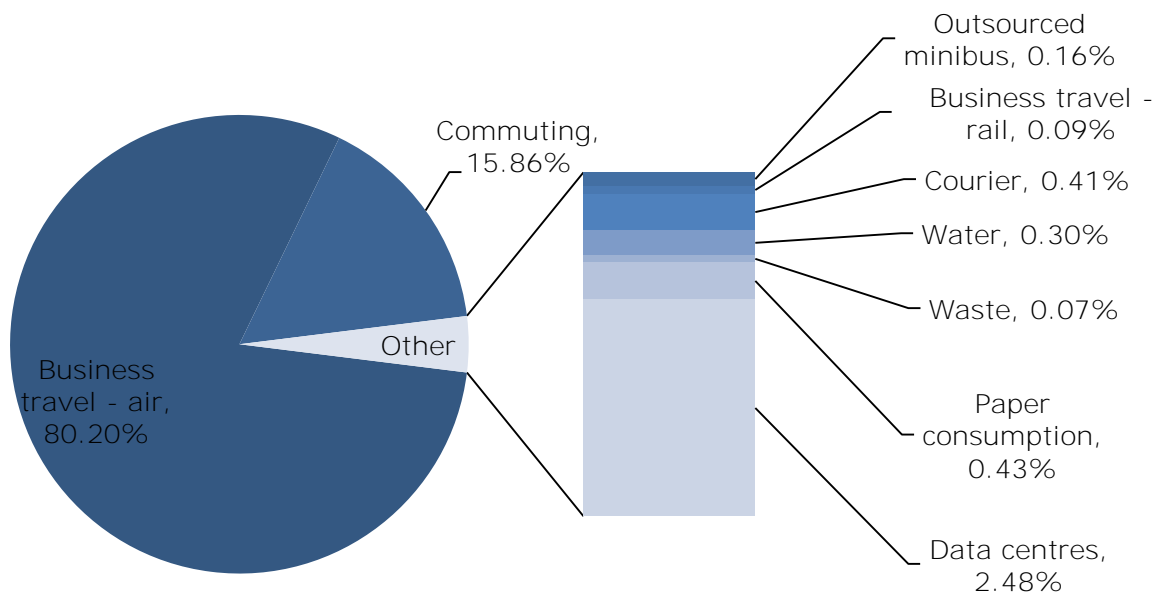
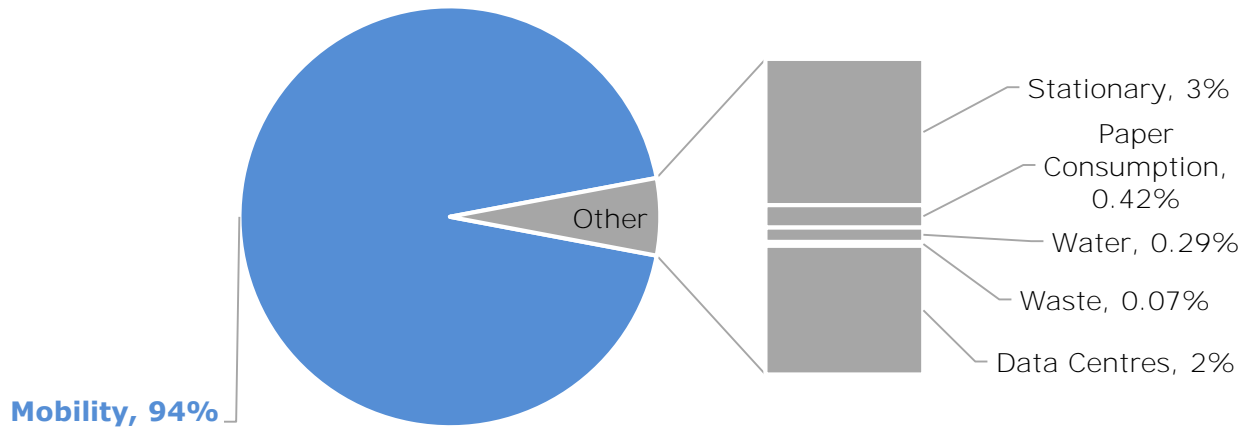


Figure 5: Emissions by source

## 5.2 Mobility emissions analysis



**Figure 6: Contribution of mobility emissions**

Net mobility emissions were 16,474tCO<sub>2</sub>e in 2014, representing 94% of total net emissions. This is 24% higher than 2013 (13,336tCO<sub>2</sub>e), and 0.32% lower than 2007 (16,526tCO<sub>2</sub>e).

Mobility emissions relate to the combustion of fuels in the vehicles owned or controlled by the EIB (scope 1) or third party transport for employee business travel and commuting to and from work (scope 3).



The activity data provided by the EIB and resulting emissions are shown in Table 3

Emission source	Activity data (km)	tCO <sub>2e</sub>	tCO <sub>2e</sub> variance to 2013	tCO <sub>2e</sub> variance to 2007
Owned vehicles ( <i>scope 1</i> )	453,816	69	-8%	-31%
Outsourced minibus	58,188	27	-52%	-90%
Business travel – air (short haul, economy class)	8,070,226	1,417	-5%	10% For all flights
Business travel – air (short haul, business/1 <sup>st</sup> class)	7,845,568	2,067	-33%	
Business travel – air (medium and long haul, economy class)	945,581	205	68%	
Business travel – air (medium and long haul, business/1 <sup>st</sup> class class)	17,316,101	9,972	54%	
Business travel – train	1,129,528	16	18%	-35%
Commuting <sup>1</sup>	11,831,050	2,701	32%	-28%
<i>Courier</i>	<b>14,478</b>	70	0%	n/a
<b>Total transport emissions</b>		16,544		
<i>Less offset courier emissions</i>		(70)		
<b>Total net transport emissions</b>		<b>16,474</b>	24%	-0.32%

**Table 3: Mobility emissions and activity data**

*Note to Table 3:*

<sup>1</sup> In 2014, the EIB conducted an internal analysis of the methodology used in previous years to calculate emissions from employee commuting, by taking the postcodes of employees and calculating the average distance that a typical employee commutes to work. It confirmed that the average commuting distance of 35km used by the EIB in previous reporting years is reasonable and no changes to the calculation methodology was required.

The majority of mobility emissions are scope 3 emissions (99.6%), of which 83% relates to flights. The EIB already has policies in place regarding travel classes to minimise emissions and cost, and requires that alternative means, including tele/videoconferencing, are considered, whenever compatible with the business interest.

Company owned vehicles fall under scope 1 and represent 13% (69tCO<sub>2</sub>) of EIB's net scope 1 and 2 emissions. By definition, the EIB has greater control over these emissions and it has implemented a policy to replace poor performing vehicles (in carbon efficiency terms). For example, the poorest performing vehicle was replaced with the top performing vehicle during 2014. Rankings are set out in Table 4 below.

Rank	Emission gCO <sub>2</sub> /km	KMs	Total emission kgCO <sub>2</sub>
1	0 <sup>1</sup>	7	0
1a	0 <sup>1</sup>	392	0
2 (replaces 8a)	48 <sup>2</sup>	5,446	261
3	99	16,284	1,612
4 (replaces 10)	139	15,741	2,188
5a (replaces 13)	142	9,755	1,385
5b (replaces 9)	142	14,100	2,002
5c (replaces 8b)	142	16,481	2,340
5d	142	23,500	3,337
6	146	62,005	9,053
7a	149	23,018	3,430
7b	149	36,178	5,391
8a (replaced by 2)	150	11,520	1,728
8b (replaced by 5c)	150	28,573	4,286
9 (replaced by 5b)	152	15,912	2,419
10 (replaced by 4)	154	23,392	3,602
11 (replaces 17)	157	9,184	1,442
12b	158	8,501	1,343
12a	158	20,524	3,243
12c	158	25,993	4,107
13 (replaced by 5a)	162	8,845	1,433
14 (replaces 16)	163	18,620	3,035
15	173	11,960	2,069
16 (replaced by 14)	183	26,741	4,894
17 (replaced by 11)	195	21,144	4,123
<b>TOTAL</b>		<b>453,816</b>	<b>68,723</b>

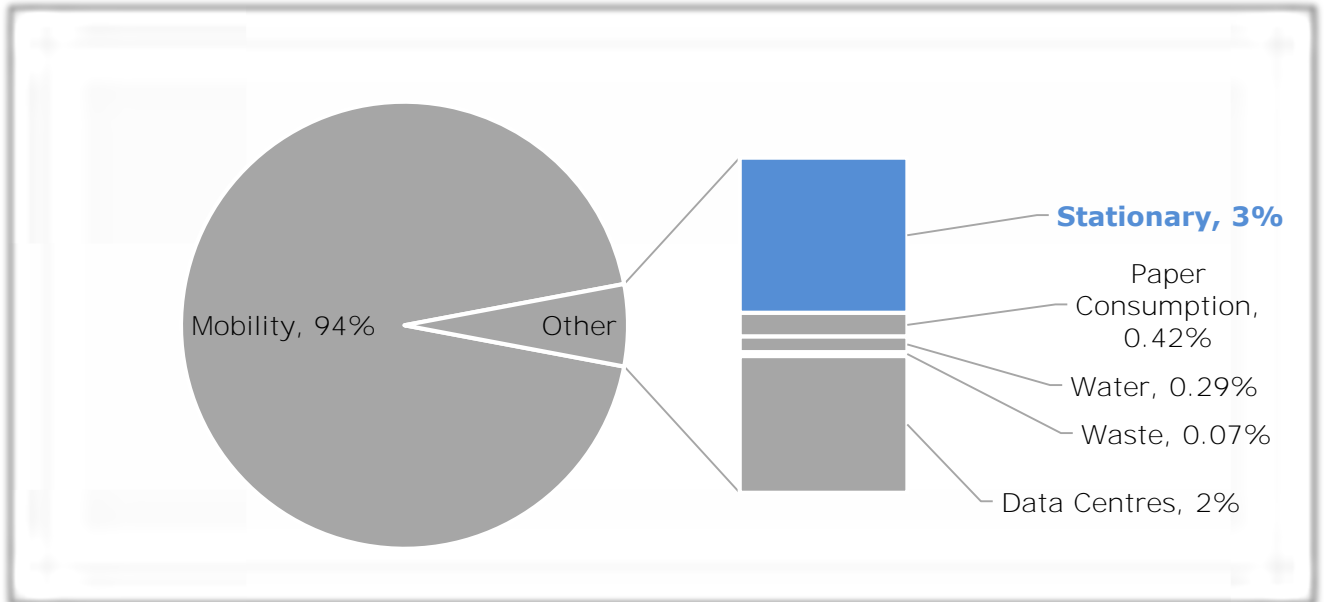
**Table 4: Owned vehicles**

Notes to Table 4:

<sup>1</sup> Vehicle #1 is an electric car used by the IT department to visit data centres. No emissions are recorded because electricity is accounted for under building use.

<sup>2</sup> Vehicle #2 is a full hybrid car.

### 5.3 Stationary emissions analysis



**Figure 7: Contribution of stationary emissions**

Stationary energy emissions were 480tCO<sub>2</sub>e (0.2tCO<sub>2</sub>e per employee) in 2014, representing 3% of total net emissions. This is 45% lower than 2013 (874tCO<sub>2</sub>e), and 60% lower than 2007 (1,206tCO<sub>2</sub>e).

Stationary emissions relate to the combustion of fuels in stationary equipment owned or controlled by the EIB for heating and power (scope 1), and from purchased heat and power (scope 2).

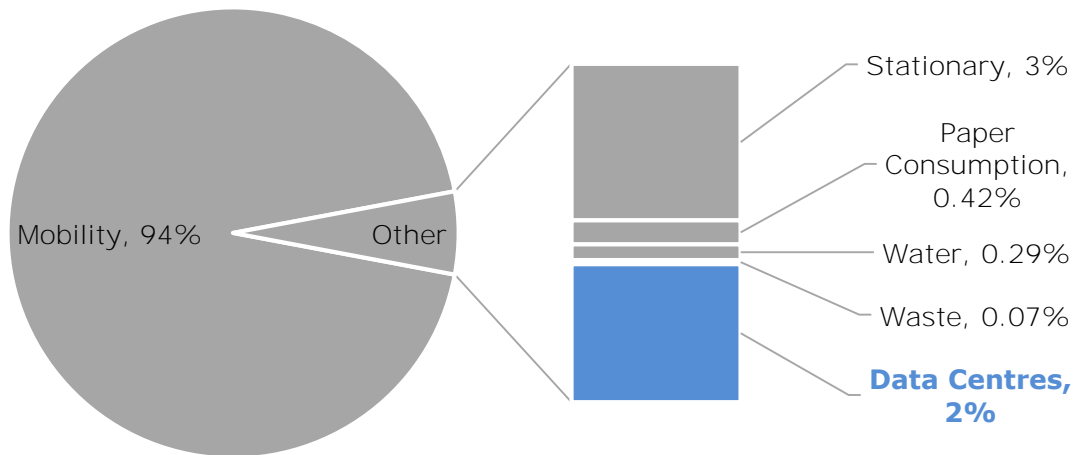
The activity data provided by the EIB and resulting emissions are shown in Table 5.

Site	Emission source	Energy (MWh)	Emissions (tCO <sub>2</sub> e)	tCO <sub>2</sub> e Variance to 2013	tCO <sub>2</sub> e Variance to 2007
West Kirchberg	Heating (steam)	5,542	238	-33%	-1%
East Kirchberg	Heating (steam)	2,175	94	-26%	n/a
PKI	Heating (steam) or Boiler (gas) TBD	360	65	n/a	n/a
BHK	Boiler (gas)	454	83	-10%	n/a
All	Power (electricity)	15,142	5,860	-15%	-2%
<b>Total energy emissions</b>		<b>23,675</b>	<b>6,340</b>		
<i>Less green tariff electricity</i>			<i>-5,860</i>		
<b>Total net energy emissions</b>			<b>480</b>	<b>-45%</b>	<b>-60%</b>

**Table 5: Stationary emissions and activity data**

The reduction in emissions reflects termination of the Hamm site, as well as measures taken to improve the energy efficiency of existing buildings, as described in Section 8.1 below.

## 5.4 Data centres analysis

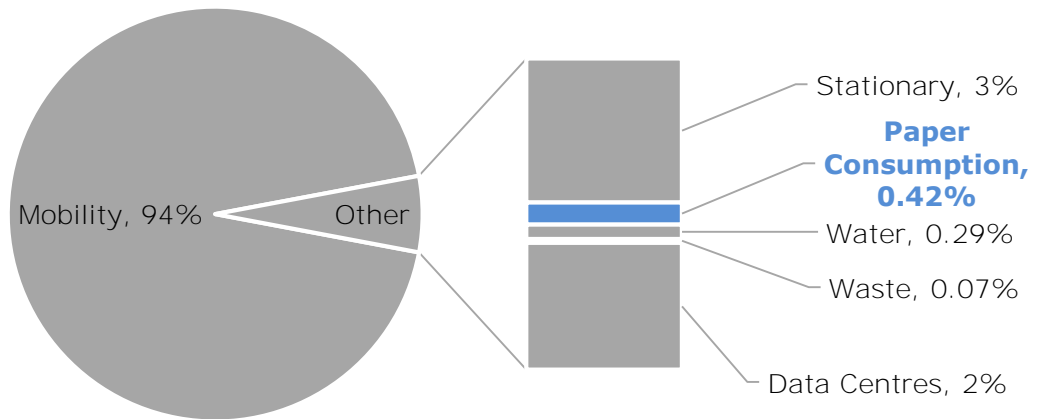


**Figure 8: Contribution of data centres emissions**

Data centres emissions relate to the consumption of electricity in EIB’s external data centres located in Luxembourg. The emissions from the data centres are accounted as scope 3 emissions as the data centres are not owned or operated by EIB but they hold data associated with the activities of EIB. In 2014, emissions associated with data centres account for 422 tCO<sub>2</sub>e ( 1,091,500 kWh).

Emissions from data centres are being reported for the first time in 2014 and is part of the EIB’s overall commitment to continual expansion and improvement in the measurement and reporting of its overall value chain (scope 1, 2 and 3) GHG emissions. Going forward, emissions from data centres will be reported on an annual basis.

## 5.5 Paper consumption analysis



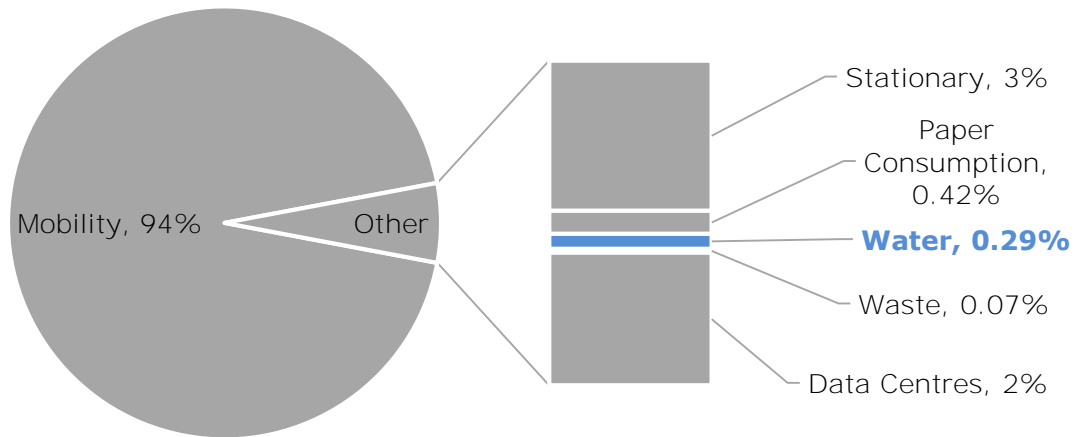
**Figure 9: Contribution of paper consumption emissions**

Emissions relating to the 76 tonnes of office paper used accounts for 73tCO<sub>2</sub>e, 0.4% of total emissions. This is a decrease of 31% compared to 106tCO<sub>2</sub>e in 2013, and a decrease of 63% compared to 200tCO<sub>2</sub>e in 2007. However, 38% of the paper relates to the copy centre which was not accounted for in prior years (an additional 28tCO<sub>2</sub>e, without which emissions would have decreased by 57% compared to 2013).

Paper consumption emissions relate to the emissions released in the production of office paper that is then used by the EIB (not paper waste which is accounted for under waste).

The EIB sourced recycled paper for all paper consumed in the copy centre during 2014.

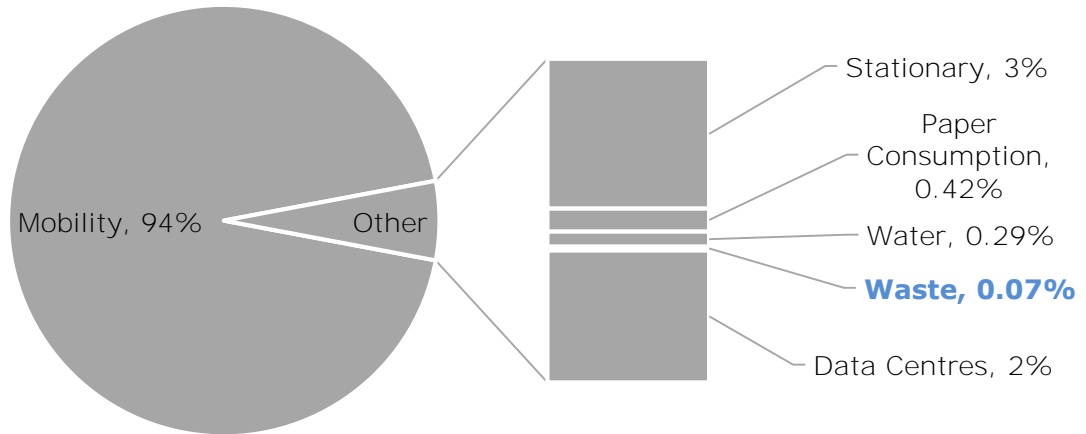
## 5.6 Water analysis



**Figure 10: Contribution of water emissions**

Emissions associated with water use (supply and waste water treatment) account for 48tCO<sub>2</sub>e (45,697m<sup>3</sup>). This data shows that water consumption has decreased by 5% since 2013 (51tCO<sub>2</sub>e, 48,432m<sup>3</sup>) and decreased by 26% since 2007 (65tCO<sub>2</sub>e, 61,706m<sup>3</sup>), despite increases in employee numbers.

## 5.7 Waste analysis



**Figure 11: Contribution of waste emissions**

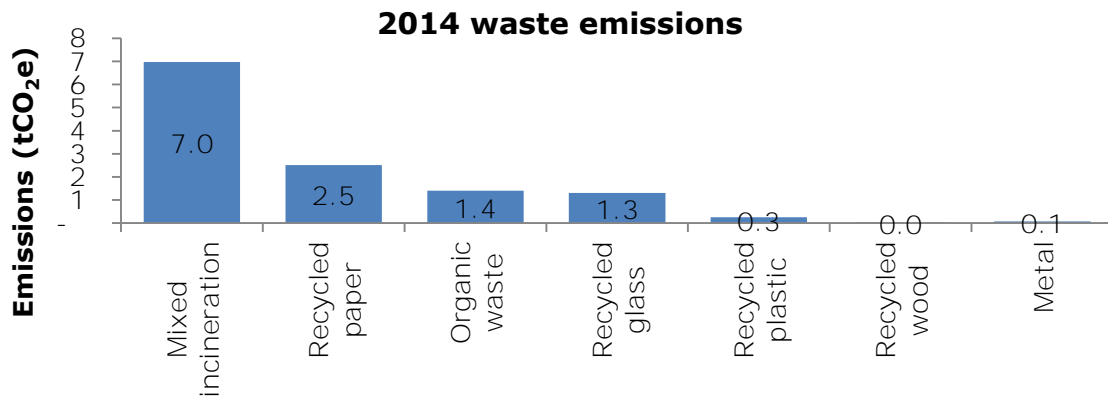
Emissions from waste disposal account for 13tCO<sub>2</sub>e, representing less than 1% of total net emissions.

The activity data provided by the EIB and resulting emissions are shown in Table 6 and Figure 12 below. Due to the small figures involved, variances are not meaningful.

Type	Treatment	Volume (tonnes)	tCO <sub>2</sub> e
Mixed	Incineration <sup>1</sup>	331.9	7
Organic	Compost	234.44	1
Paper	Recycled	119.797	3
Glass	Recycled	62.3165	1
Plastic	Recycled	12.2415	0
Metal	Recycled	3.6485	0
Wood	Recycled	0.932	0
<b>TOTAL</b>		<b>765</b>	<b>13</b>
<i>Excluded hazardous waste</i>		<i>8</i>	<i>n/a</i>

**Table 6: Waste emissions and activity data**





**Figure 12: Waste emissions by type**

Hazardous waste, which includes Waste Electrical and Electronic Equipment (WEEE), florescent light bulbs, batteries, toner cartridges and other harmful substances, continues to be excluded. Data is collected for regulatory purposes as per 2014 but cannot be converted into emissions because some items are measured in m<sup>3</sup> or units rather than weight and there is insufficient information about waste treatment – it may be sent to landfill, recycled or incinerated. Nonetheless, it would not have a material impact on the total carbon footprint given the weight of its waste emissions—excluding waste for which weight data was not available - equates to 0.07% of total waste.

## 6 DATA ASSESSMENT AND METHODOLOGY CHANGES

### 6.1 Data quality and completeness

Table 7 sets out our assessment of the activity data and assumptions applied in 2014.

Emission source	Activity data	Assumptions applied
Boiler (Hamm & BHK)	Primary data	n/a
Co-generation (Hamm)	Primary data	n/a
Steam heating (Kirchberg)	Primary data	n/a
Purchased electricity	Primary data	n/a
Owned cars	Primary data	Fuel efficiency conversion based on manufacturer's data
Minibus	Primary data	Fuel efficiency conversion based on manufacturer's data
Business travel – air	Primary data	Short- / long-haul split at 4,000km
Business travel – train	Primary data	n/a
Commuting	Number of vehicles is inferred from available spaces and an average count of empty spaces at Kirchberg	All commuting is by car and the average daily distance of 35km is applied 220 days per year
Paper consumption	Primary data	n/a
Waste	Primary data	All general waste is incinerated with heat recovery
Data centres	Primary Data	n/a

Key: 

Weak – priority area for improvement	Satisfactory – could be improved	Good – no changes recommended
--------------------------------------	----------------------------------	-------------------------------

**Table 7: Data quality and completeness assessment**

EIB regional offices are excluded because data was not available and they are assumed to be less than 5% of total emissions (allowable for exclusion under the GHG Protocol). Hazardous waste is excluded because there is insufficient information about its treatment to calculate emissions and many of the waste streams are measured in size (m<sup>3</sup>) or units rather than weight (kg), which is needed to calculate emissions. Again, emissions are likely to be very small as total waste contributes only 0.07% of the total net carbon footprint.

In 2014, a data quality check revealed anomalies in the water, electricity and heating data of the BHK building for the year 2013. Upon investigation, it was ascertained that inaccurate activity data for water, electricity and heating was used in the 2013 report. The impact was that the EIB over-reported overall GHG emissions by approximately 2.5% in the 2013 report. In this report, all references to 2013 data have been updated to the correct figures.

The EIB is committed to continually improving the data quality of previously reported data. Going forward, the EIB will also consider new methods of calculating emissions **when new data becomes available and/or the activity becomes a material part of EIB's** overall GHG footprint.

## 6.2 Change to relative carbon footprint calculation

The EIB corporate carbon footprint is calculated and reported as both an absolute value in terms of total tonnes of Carbon Dioxide equivalent (tCO<sub>2</sub>e), and also as a relative metric compared to the number of employees measured in terms of tCO<sub>2</sub>e per employee.

In 2014 the EIB Group changed the methodology for calculating numbers of employees from an FTE (full time equivalent) basis to a total number of contracted employees. This is to be consistent with EIB Financial Report<sup>6</sup> and EIF Annual Report<sup>7</sup>. Previously, there were some minor variations in the methodology for calculating FTEs, thus going forward a consistent approach will be followed year by year.

Thus direct comparisons of the relative carbon footprint per employee with previous years are indicative only as they are not calculated on precisely the same basis.

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<sup>6</sup> EIB Financial Report – Note R, p.55 <http://www.eib.org/infocentre/publications/all/financial-report-2014.htm>

<sup>7</sup> EIF Annual Report – 7.6 General administrative expenses, p.97  
[http://www.eif.org/news\\_centre/publications/EIF\\_annual\\_report\\_2014.htm?lang=-en](http://www.eif.org/news_centre/publications/EIF_annual_report_2014.htm?lang=-en)

## 7 ENVIRONMENTAL INDICATORS 2014

### 7.1 Emissions by scope

Emissions (tCO <sub>2</sub> e)	2014	2013	2012	2011	2010	2009	2008	2007
Natural gas	148	389	399	433	329	464	743	833
Owned transport	69	75	96	103	112	107	99	100
<b>Total Scope 1</b>	<b>217</b>	<b>464</b>	<b>495</b>	<b>536</b>	<b>441</b>	<b>570</b>	<b>842</b>	<b>933</b>
Purchased electricity <sup>1</sup>	5,860	6,900	6,876	7,061	7,111	7,367	7,454	6,085
Purchased steam	332	485	459	390	502	490	374	249
Purchased cold supply							28	32
<b>Total Scope 2</b>	<b>6,192</b>	<b>7,385</b>	<b>7,335</b>	<b>7,451</b>	<b>7,613</b>	<b>7,857</b>	<b>7,857</b>	<b>6,366</b>
Business travel	13,677	11,163	9,168	12,131	11,413	10,858	13,489	12,407
Outsourced minibus	27	56	52	141	130	130	270	270
Commuting	2,701	2,042	6,190	6,369	6,369	4,407	4,363	3,749
Courier	70	70						
Water <sup>2</sup>	48	51	56	68	65	82	70	65
Waste	13	10	-6	-2	-4	0	-1	0
Paper consumption	73	106	83	115	146	120	227	200
Data centres	422	0						
<b>Total Scope 3</b>	<b>17,031</b>	<b>13,498</b>	<b>15,488</b>	<b>18,754</b>	<b>18,054</b>	<b>15,515</b>	<b>18,348</b>	<b>16,626</b>
<b>Total Gross emissions</b>	<b>23,440</b>	<b>21,346</b>	<b>23,317</b>	<b>26,741</b>	<b>26,108</b>	<b>23,943</b>	<b>27,047</b>	<b>23,926</b>
Green tariff	-5,860	-6,900	-6,876	-7,061	-7,111	-7,367	-7,392	-5,993
Offset courier emissions	-70	-70						
<b>Total net emissions<sup>3</sup></b>	<b>17,510</b>	<b>14,377</b>	<b>16,441</b>	<b>19,682</b>	<b>18,997</b>	<b>16,576</b>	<b>19,653</b>	<b>17,932</b>
<i>% change from previous year</i>	22%	-13%						
<i>% change from 2007</i>	-2%	-20%	-8%	10%	6%	-8%	10%	0%
Number of employees <sup>4</sup>	2,556	2,369	2,185	2,175	2,079	1,906	1,769	1,501
<b>Net emissions per employee<sup>4</sup></b>	<b>6.85</b>	<b>6.07</b>	<b>7.52</b>	<b>9.05</b>	<b>9.14</b>	<b>8.69</b>	<b>11.11</b>	<b>11.92</b>
<i>% change from previous year</i>	13%	-19%						
<i>% change from 2007</i>	-43%	-49%	-37%	-24%	-24%	-27%	-7%	0%

<sup>1</sup> Assumes the grid average emission conversion factor for Luxembourg in 2009 (latest available) for all years for comparability.

<sup>2</sup> Water emissions not reported prior to 2013. Figures here are back-calculated from water usage per employee.

<sup>3</sup> Small differences in total due to rounding.

<sup>4</sup> Note, that in 2014 the methodology for calculating numbers of employees was changed from an FTE basis to a total number of contracted employees. (See section 6.2 for more details).

## 7.2 Net emissions by type

Indicators	Total tCO <sub>2e</sub> 2014	tCO <sub>2e</sub> per employee <sup>4</sup> 2014	tCO <sub>2e</sub> per FTE 2013	tCO <sub>2e</sub> per FTE 2012	tCO <sub>2e</sub> per FTE 2011	tCO <sub>2e</sub> per FTE 2010	tCO <sub>2e</sub> per FTE 2009	tCO <sub>2e</sub> per FTE 2008	tCO <sub>2e</sub> per FTE 2007
Energy emissions <sup>1</sup>	480	0.19	0.37	0.39	0.38	0.41	0.52	0.68	0.82
Mobility emissions <sup>1</sup>	16,474	6.45	5.63	7.1	8.62	8.67	8.13	10.31	11.1
Copying paper emissions	73	0.03	0.04	0.04	0.053	0.1	0.06	0.13	0.13
Water emissions <sup>2</sup>	48	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04
Waste emissions	13	0.0049	0.0042	-0.0026	-0.0007	-0.002	0.0001	-0.0007	0.0002
Data centres emissions	422	0.17	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Total (net emissions)<sup>3</sup></b>	<b>17,510</b>	<b>6.85</b>	<b>6.07</b>	<b>7.52</b>	<b>9.05</b>	<b>9.14</b>	<b>8.69</b>	<b>11.11</b>	<b>11.92</b>

<sup>1</sup> Based on net emissions therefore does not include grid electricity under scope 2 or courier services under scope 3.

<sup>2</sup> Water emissions not reported prior to 2013. Figures here are back-calculated from water usage per employee.

<sup>3</sup> Small differences in total due to rounding.

## 7.3 Other indicators

	Total m <sup>3</sup> 2014	m <sup>3</sup> per employee <sup>4</sup> 2014	m <sup>3</sup> per FTE 2013	m <sup>3</sup> per FTE 2012	m <sup>3</sup> per FTE 2011	m <sup>3</sup> per FTE 2010	m <sup>3</sup> per FTE 2009	m <sup>3</sup> per FTE 2008	m <sup>3</sup> per FTE 2007
Water	45,697	17.88	20.44	24.17	29.88	29.57	40.89	37.34	41.11

	Total kWh 2014	kWh per employee <sup>4</sup> 2014	kWh per FTE 2013	kWh per FTE 2012	kWh per FTE 2011	kWh per FTE 2010	kWh per FTE 2009	kWh per FTE 2008	kWh per FTE 2007
Purchased electricity with green certificates	15,142,110	5,924	7,107	8,043	8,297	8,743	9,879	10,680	10,205

	Total tonnes	t per employee <sup>4</sup> 2014	t per FTE 2013	t per FTE 2012	t per FTE 2011	t per FTE 2010	t per FTE 2009	t per FTE 2008	t per FTE 2007
Total copying paper	76	0.03	0.05	0.04	0.04	0.05	0.05	0.07	0.07

<sup>4</sup> Note, that in 2014 the methodology for calculating numbers of employees was changed from an FTE basis to a total number of contracted employees. (See section 6.2 for more details).

## 8 ANNEX – SPECIFIC RESPONSES TO GRI INDICATORS

### 8.1 G4-EN6: Reduction in energy consumption

Energy savings due to conservation and efficiency improvements have resulted in a decrease by 45% of the fuel and energy purchased by the EIB per employee since 2007, as shown in the following table.

Energy source	2014	2007	Variance	% change
Natural gas (kWh)	814,609	4,040,540	-3,225,931	-80%
Electricity (kWh)	15,142,110	15,619,594	-477,484	-3%
Steam (kWh)	7,717,790	5,785,063	1,932,727	33%
Biogas (kWh)	n/a	n/a	n/a	n/a
<b>Total (kWh)</b>	<b>23,674,509</b>	<b>25,445,197</b>	<b>-1,770,688</b>	<b>-7%</b>
Number of employees <sup>1</sup>	2,556	1,501	954	64%
<b>Energy per employee<sup>1</sup></b>	<b>9,262</b>	<b>16,952</b>	<b>-7,309</b>	<b>-43%</b>

**Table 8: Energy consumption per employee**

*Note to table 8:*

<sup>1</sup>In 2014 the methodology for calculating numbers of employees was changed from an FTE basis to a total number of contracted employees. See section 6.2 for more details.

A major reason for the reduction in energy consumed per employee in 2014 was due to the termination of the HAMM office and the relocation of employees to other existing EIB offices.

Within existing buildings, a number of technical optimisations were implemented which led to energy reductions at site level. These optimisations included:

- Regulation and distribution optimization of heating and cooling systems (adapting consumption to demand in real time);
- Implementation of drive systems on heating circulation pumps;
- Improvement in lighting management;
- Optimisation of ventilation systems management.

In addition, a number of measures were undertaken to upgrade the EIB's office equipment, which had the effect of reducing energy use. These included:

- Replacement of old individual network printers (HP) and copiers (Xerox) with brand new multifunctional devices that can print, copy and scan. In 2014, 204 old printers and copiers were replaced by 121 functional devices;
- Overall, the EIB reduced the number of devices in its printing fleet from 1,049 in 2013 to 845 in 2014;
- Increase in the number of print/copy/scan devices per EIB user from 2.8 users per device to 3.8 users per device in 2014;

- Introduction of the “follow-me printing” functionality which removed the need for individuals to use personal printers to print confidential documents.

## 8.2 G4-EN19: Reduction of greenhouse gas (GHG) emissions

In addition to the energy saving measures described in the preceding section, the EIB has implemented a number of initiatives to further reduce its GHG emissions.

**Aiming at ‘carbon neutrality’ for its energy supplies**, the EIB has been buying 100% renewable energy (hydropower, biomass and wind) from its electricity supplier LEO SA. This has reduced the annual internal carbon emissions by an average of 6,674 tCO<sub>2</sub>e each year since 2011.

In 2014, the EIB purchased the equivalent tonnage of carbon credits from the Kasigau Corridor REDD+ Project to fully offset its entire 2013 corporate carbon footprint. The Kasigau Corridor project is the first Reduced Emissions from Deforestation and Degradation (REDD+) project to gain the Verified Carbon Standard (VCS), as well as Gold Level of the Climate Community and Biodiversity (CCB) Standard.

The project avoids the unplanned deforestation and degradation of tropical forests in the Tiata Taveta District in the Kasigau Corridor, Kenya, which in the absence of the project would have been deforested and/or degraded for subsistence agriculture. Historically, areas adjacent to the project areas were converted to crop land for the illegal charcoal trade as well as subsistence agriculture such as maize farming.

In addition to the GHG benefits from the protection of natural carbon sinks, a number of local community based, sustainable development initiatives have also resulted from the proceeds of the project. These include:

- The establishment of an organic greenhouse to grow citrus trees and jojoba trees, creating sustainable industries and employment for the local community;
- Setting up of ranger stations around the project areas to safeguard the project and to protect the land from deforestation and illegal production of charcoal;
- Construction of an eco-factory to produce organic clothing, helping to create local employment opportunities;
- Reforestation project to plant 20,000 indigenous hardwood trees;
- The construction of schools and the establishment of a bursary programme;
- Initiation of project to explore sustainable charcoal such as charcoal derived from bush trimmings.

### 8.3 G4-EN23: Total weight of waste by type and disposal method

The EIB disposes of waste through the Luxembourg municipal authorities. Waste is sorted in-house to the extent possible so that it can ultimately be recycled. All unsorted waste is incinerated with energy recovery. Details of the quantities of waste by the official categorisation are shown in Table 10 below.

The Luxembourg SuperDrecksKëscht® fir Betriber green label was first awarded to the Bank for its internal waste recycling practices in 2007 and renewed annually to date for the East and West Kirchberg buildings. The criteria for obtaining the label are as follows:

- Motivation of all participants;
- Transposition of all measures for waste prevention;
- Visible and accessible collection sites;
- Safe and environmentally correct storage;
- Waste collection according to types;
- High quality and transparent waste recycling and disposal;
- Environmentally correct management.

The SuperDrecksKëscht® fir Betriber label is certified in accordance with the internationally accepted ISO 14024:2000 standard. This certificate comprises among other things the control procedures and requirements the inspectors have to satisfy. Thus waste management in the certified businesses fully meets the requirements for ISO 14024.

To further optimize the EIB waste imprint further actions are planned, such as:

- Establishing a new collection process to reduce the volume of paper waste while maximising the security of confidential documents;
- Replacing biodegradable and compostable paper cups by a more sustainable approach.



The table below discloses 2014 EIB Waste split in accordance to the European Waste Catalogue as per European Commission's Decision 2000/532/EC of 3 May 2000.

Code CED	Official description of waste	Unit	Quantity (2014)	Quantity (2013)	Quantity (2012)
15 01 01	Paper and cardboard packaging	kg	22,847	80,076	75,606
20 01 01	Paper and cardboard	kg	96,950	84,165	77,958
15 01 07	Glass packaging	kg	62,250	38,897	39,444
17 02 02	Glass	kg	67	n/a	n/a
17 04 05	Iron and steel	kg	1,510	8 m3	0
17 04 11	Cables other than those in 170410	kg	21	0	141
20 01 40	Metals	kg	2,118	1,893	1,575
20 01 37*	Wood containing hazardous substances	m <sup>3</sup>	180	n/a	n/a
		kg	22	19,642	0
20 01 38	Wood other than that mentioned in 20 01 37	kg	910	0	82
15 01 02	Plastic packaging	kg	1,721	1,335	406
15 01 02 15 01 04 15 01 05	Plastic packaging Metallic packaging Composite packaging	kg	7,880	n/a	n/a
15 01 06	Mixed packaging	kg	233	5,967	5,952
20 01 39	Plastics	kg	2,408	1,554	1,438
17 01 07	Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	m <sup>3</sup>	1	n/a	n/a
20 02 01	Biodegradable waste	m <sup>3</sup>	100	n/a	n/a
20 01 25	Eedible oil and fat	kg	2,040	2,170	2,172
20 01 08	Biodegradable kitchen and canteen waste	kg	232,400	181,700	136
20 01 35*	Discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components(commercial)	kg	516	n/a	n/a
20 01 35*	Discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35 (household electrical appliances)	kg	437	774	392
16 02 14	Discarded equipment other than those mentioned in 16 02 09 to 16 02 13	kg	0	215	0
20 01 36	Discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	kg	215	6,348	6,421
20 03 01	Mixed municipal waste	kg	331,900	137,550	136,500
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances	kg	203	n/a	n/a
08 03 17*	waste printing toner containing hazardous substances	Cartridges	4,800	5,700	5,300
13 02 08*	Other engine, gear and lubricating oils	kg	29	61	0
15 01 10*	Packaging containing residues of or contaminated by hazardous substances	kg	532	917	964

Code CED	Official description of waste	Unit	Quantity (2014)	Quantity (2013)	Quantity (2012)
15 02 02*	Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	kg	96	1,363	-
15 02 03	Absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	kg	404	n/a	n/a
16 06 01*	Lead batteries	kg	55	145	0
16 06 02*	Ni Cd batteries	kg	60	n/a	n/a
18 01 03	Waste whose collection and disposal is subject to special requirements in view of the prevention of infection	kg	5	n/a	n/a
20 01 13*	Wastes whose collection and disposal is subject to special requirements in order to prevent infection	kg	24	n/a	n/a
20 01 21*	Fluorescent tubes and other mercury-containing waste	kg	526	263	230
20 01 27*	Paint, inks, adhesives and resins containing hazardous substances	kg	49	37	0
20 01 33*	Batteries and accumulators included in 160601, 160602 or 160603 and unsorted batteries and accumulators containing these batteries	kg	407	437	351
17 06 04	Insulation materials other than those mentioned in 170601 or 170603	kg	3,168	1,891	1,396
17 09 04	Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	kg	1,659	5,097	0
16 02 15*	Hazardous components removed from discarded equipment	kg	80	n/a	n/a
11 01 07*	Pickling bases	kg	0	96	0
14 06 01*	Chlorofluorocarbons, HCFC, HFC	kg	0	31	0
14 06 03*	Other solvents and solvent mixtures	kg	0	9	0
16 01 07*	Oil filters	kg	0	3	-
16 02 11*	Discarded equipment containing chlorofluorocarbons, HCFC, HFC	kg	0	715	0
17 04 01	Copper, bronze, brass	kg	0	90	0
17 05 04	Soil and stones other than those mentioned in 17 05 03	m3	0	9 m3	-

**Table 9: Waste categories**

Any waste marked with an asterisk (\*) in the list of wastes shall be considered as hazardous waste pursuant to Directive 2008/98/EC, unless Article 20 of that Directive applies.