



# BDO LLP Carbon Footprint Report 2016/17

## Final report

**Version:** 1.0

**Date:** 25<sup>th</sup> September 2017





## This year emissions rose due to an increase in headcount and business travel. This was partially offset by further reductions in buildings emissions

BDO LLP is a leading provider of tax, audit and assurance, advisory and business outsourcing services to companies across all sectors of the economy. We take our environmental responsibilities seriously and have been managing and reporting on our performance since 2011/12.

### Our 2016/17 performance:

**9,086** tCO<sub>2</sub>e

Total emissions

**+ 18%**

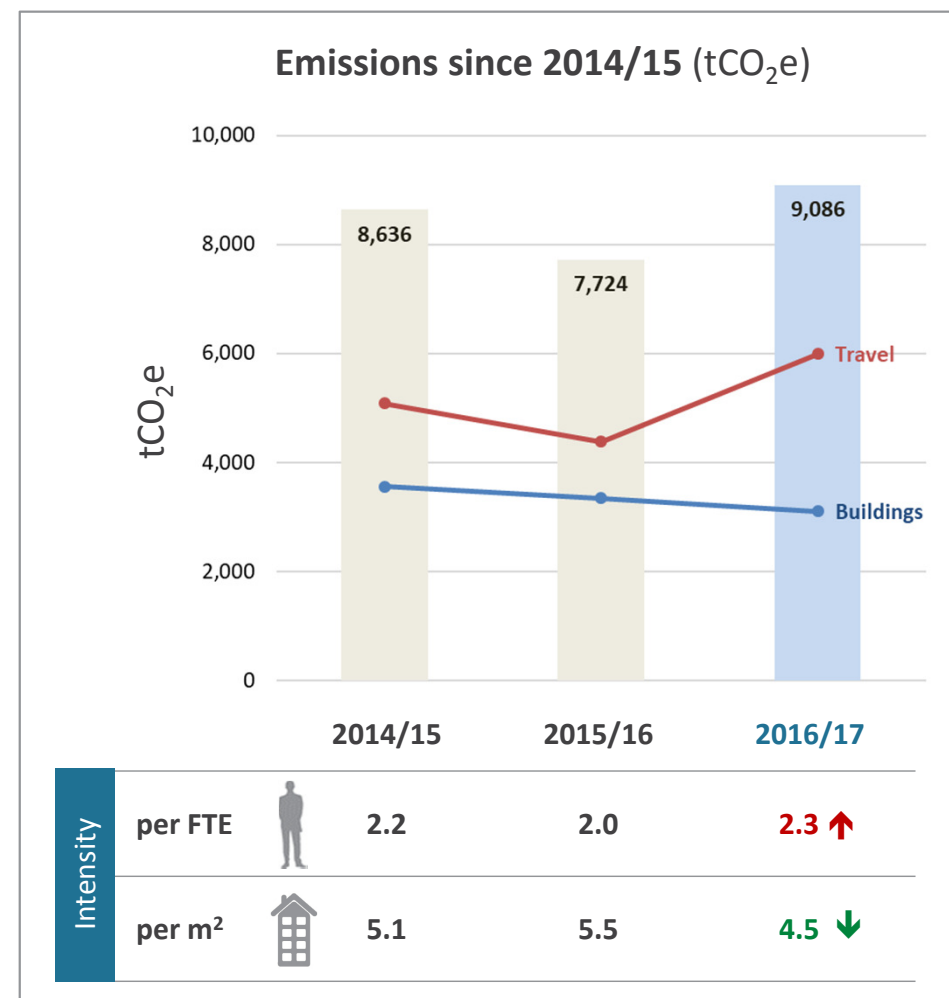
vs. last year

**+ 5%**

vs. baseline

### Highlights

- In 2016/17, total emissions increased primarily driven by an increase in headcount (+ 3%) and business travel (+37%).
- Increased travel emissions were offset by a further reductions in building emissions (down 7%) as we continue to consolidate our office portfolio.
- We are pleased to report a significant reduction in electricity consumption this year (down 5%), partly attributable to moving to more efficient offices and further improvements in data quality.
- In 2016/17, we significantly improved our approach to managing and monitoring environmental performance, expanding the number of emissions sources in scope and increasing our internal engagement.
- For the first time, all BDO LLP emissions are now attributed to individual offices, which will greatly assist our efforts to deliver further performance improvements in subsequent years.



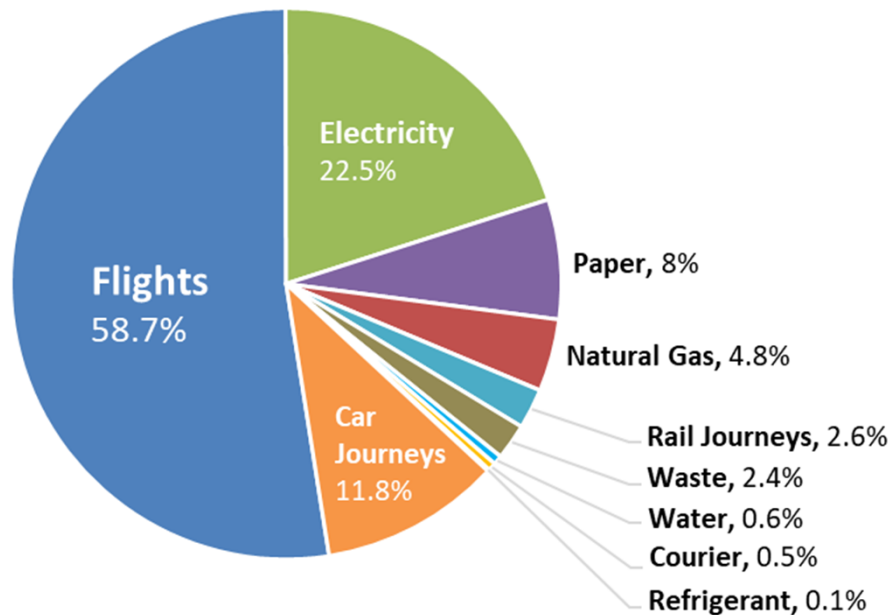


# Business travel emissions increased by 37% whilst buildings emissions fell 7% following a reduction in electricity consumption and UK grid emissions intensity

## Summary:

- In 2016/17, our headcount increased by 3% contributing towards an increase in travel for business purposes, which now accounts for 66% of our overall footprint (up from 57% last year).
- Flights emissions rose considerably following a modest rise in the number of flights and significant greater distance flown.
- Electricity emissions were substantially reduced following improved data quality and coverage, reduced consumption and the continued decarbonisation of the UK grid, which led to a 14% reduction in the conversion factor for electricity.

## 2016/17 Emissions breakdown by source:



*Our emissions breakdown with the majority of emissions from travel and electricity is comparable with our competitors and other professional services organisations*

		2016/17	Variance	2015/16	2014/15
	Flights	4,768	↑ 45%	3,292	4,082
	Electricity	1,825	↓ 27%	2,507	2,346
	Car Journeys	962	↑ 15%	840	888
	Paper	638	↑ 220%	199	413
	Natural Gas	386	↓ 0.2%	387	399
	Rail Journeys	214	↓ 12%	244	111
	Waste	192	↑ 27%	151	152
	Water	49	↑ 6%	46	50
	Courier	43	n/a	-	-
	Refrigerant	10	↓ 83%	59	196



## Travel emissions



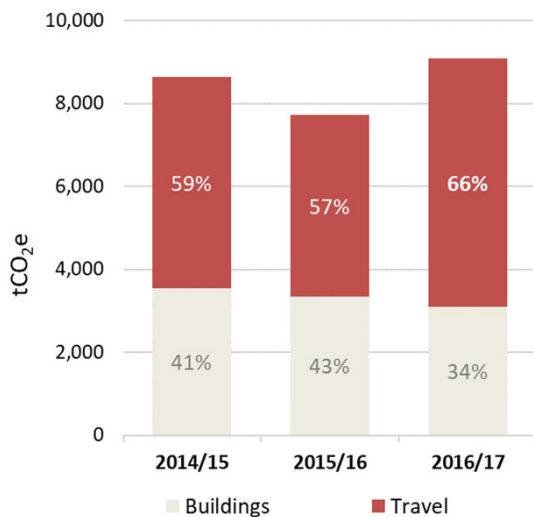


Following an increase in both flights and car journeys, business travel now accounts for 66% of total emissions, up from 57% last year.

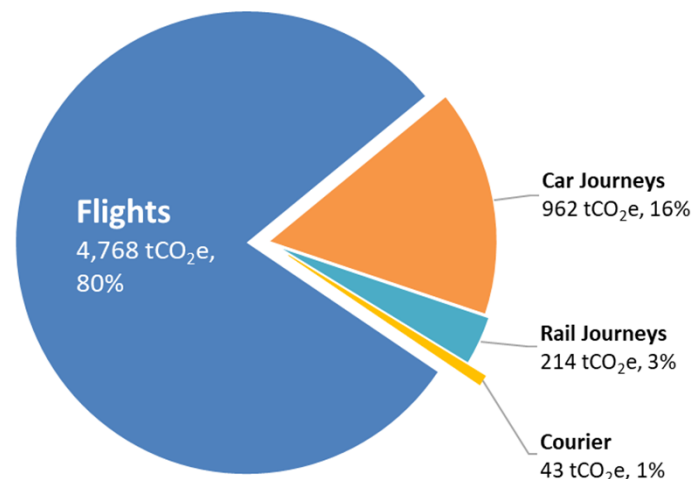
### Summary:

- Business travel accounts for the majority of our emissions, with flights the single largest emissions source.
- Following a sharp increase in 2016/17, flights now account for 80% of business travel emissions although emissions from car journeys also increased by 15% to 962 tCO<sub>2</sub>e (up from 840 tCO<sub>2</sub>e in 2015/16).
- As part of our continued efforts to extensively measure, manage and report on our environmental performance, we have included courier emissions for the first time, contributing an additional 43 tCO<sub>2</sub>e to total emissions (less than 1% overall).
- Whilst flights and car emissions increased last year, rail emissions fell to 214 tCO<sub>2</sub>e (down 12% from 244 tCO<sub>2</sub>e in 2015/16), although still significantly higher than the 111 tCO<sub>2</sub>e reported in 2014/15.

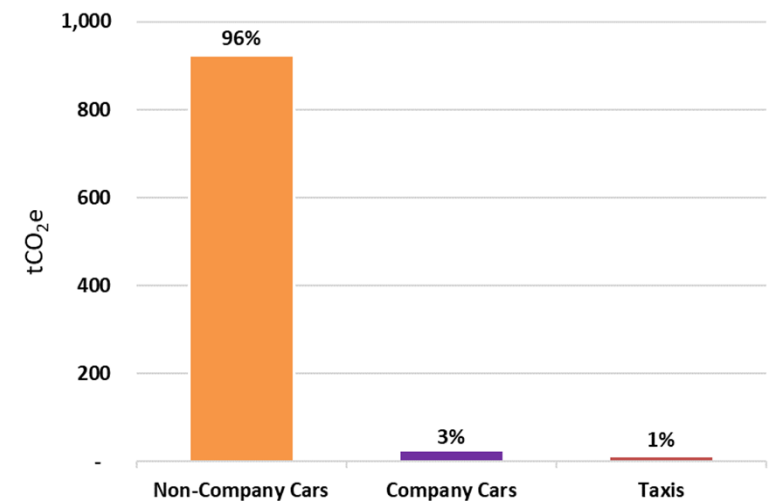
#### Emissions by type



#### Travel emissions by source



#### Car journey emissions in 2016/17



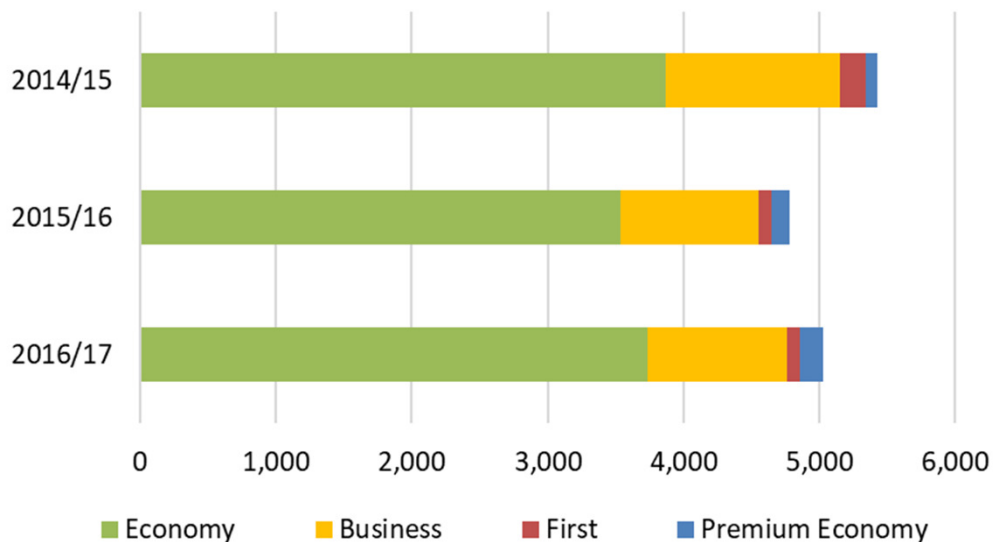


# Total flights emissions rose sharply in 2016/17 to 4,768 tCO<sub>2</sub>e (up 45% from 2015/16) driven by a significant increase in the total distance flown

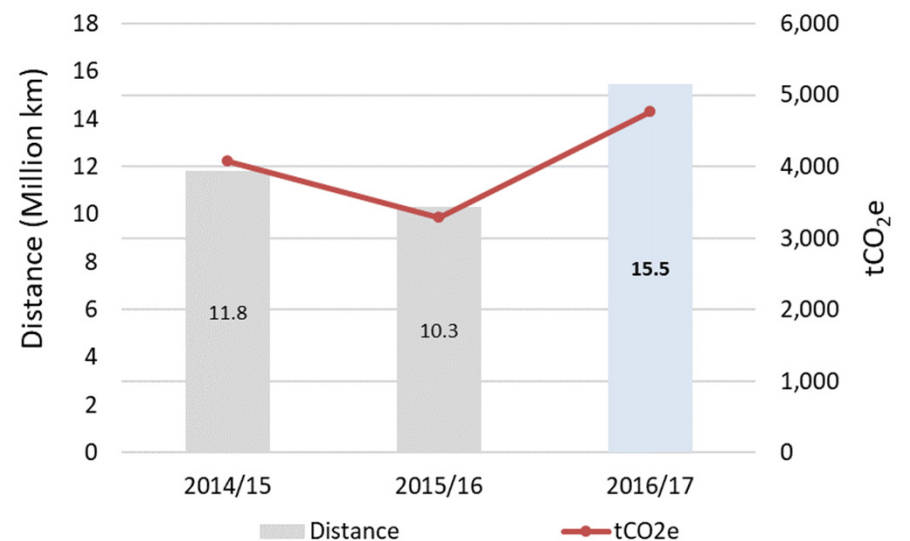
## Summary:

- In 2016/17, the number of flights rose by 250 (+18%) to 5,030 flights but still less than the 5,424 flights reported in 2014/15.
- The total distance flown increased by nearly 50% and the proportion of business and first class trips fell further to 22% in 2016/17 (down from 23% last year and 27% in 2015/16).
- Consequently, this year's increase in flights emissions is largely due to a greater number of long distance, economy and premium economy flights.
- In our efforts to improve data quality and coverage, we have also included additional flights emissions for our BDO Scotland offices booked through an alternative travel provider. These are mostly domestic flights accounting for around 13% of total flights and just 2% of total flights emissions.
- Finally any flights to and from non-UK offices are now calculated using DEFRA's international emissions factor, to more accurately reflect emissions.

**Total flights taken by cabin class**



**Total distance and emissions**





## Buildings emissions



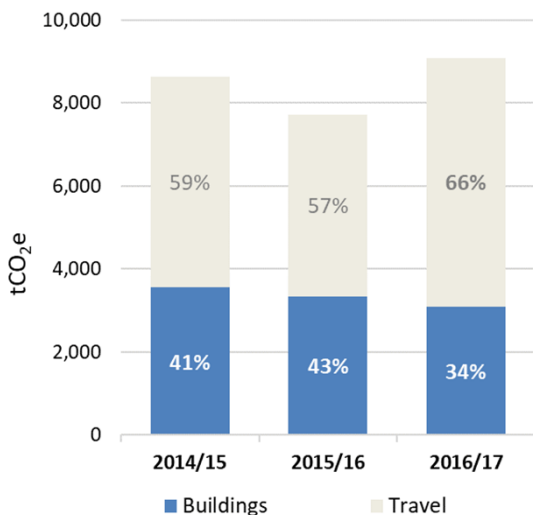


# Buildings emissions fell more than 7% in 2016/17 to 3,100 tCO<sub>2</sub>e (down from 3,348 tCO<sub>2</sub>e last year) primarily driven by a large reduction in electricity emissions

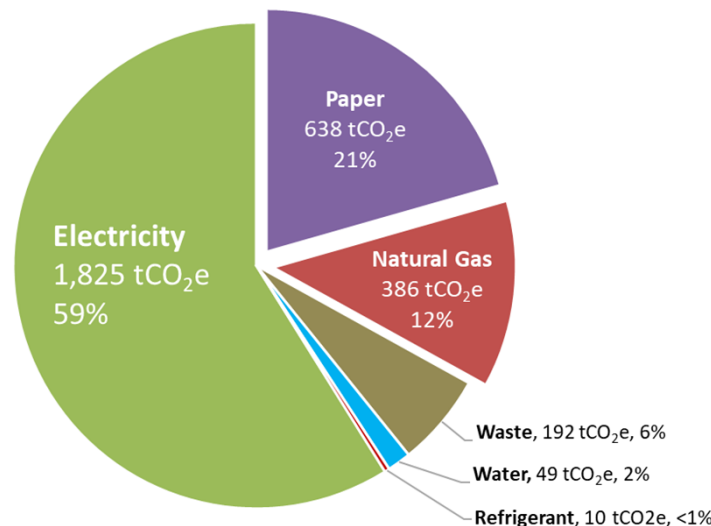
## Summary

- Total buildings emissions fell to 3,100 tCO<sub>2</sub>e (down from 3,348 tCO<sub>2</sub>e) due to significant reductions in electricity consumption and emissions.
- We continue to our efforts to move to more efficient buildings wherever possible and six offices now hold a BREEAM rating.
  - Since 2014/15, by consolidating our UK offices, we can now accommodate broadly the same headcount with a 9% reduction in floor area.
- Overall reported electricity consumption is down 5% to 4,748 MWh, despite an increase in headcount, and a 14% reduction in this year’s electricity conversion factor made a significant to the overall reduction, as the UK grid continues to decarbonise.
- Emissions reductions were also achieved for natural gas (down 0.2%) and refrigerants (down 83%), linked to our use of more efficient offices.
- These reductions were offset by a significant increase in paper emissions (up 220%) to 638 tCO<sub>2</sub>e and also waste (up 27%) to 192 tCO<sub>2</sub>e following additional data obtained for reporting confidential waste.
- Finally, we also made significant changes to our data collection and reporting process in 2016/17, leading to improved data quality and coverage.

**Emissions by type**



**Buildings emissions by source**



**Buildings efficiency over time**

	2014/15	2015/16	2016/17
<b>Building emissions (tCO<sub>2</sub>e)</b>	3,555	3,348	<b>3,100</b>
<b>Headcount (FTE)</b>	3,929	3,796	<b>3,914</b>
<b>Floor area (m<sup>2</sup>)</b>	44,361	42,513	<b>40,555</b>
<b>Buildings intensity (tCO<sub>2</sub>e per m<sup>2</sup>)</b>	5.1	5.5	<b>4.5</b>





Baker Street remains the largest determinant of overall building emissions, whilst all other emissions can now be apportioned to individual offices following changes to our management process this year

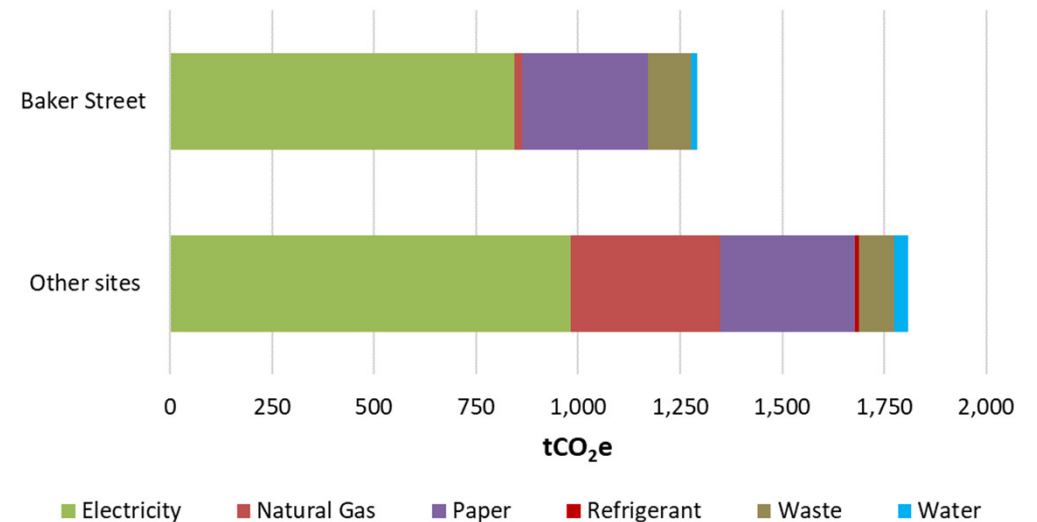
### Summary

- Our head office at Baker Street is our largest site, accounting for 46% of headcount and 42% of total buildings emissions.
- Following improvements to our environmental performance management and monitoring process, we are now able to apportion all travel emissions to individual offices. This capability will greatly assist our efforts to deliver further performance improvements in subsequent years.
- Including business travel, Baker Street accounts for 54% of total emissions, whilst buildings and travel emissions for other offices are more evenly distributed.
- Although electricity and natural gas emissions fell in 2016/17, paper consumption emissions at Baker Street and other offices increased significantly, partly attributable to the increase in available data and paper types reported in scope.
- The inclusion of confidential waste data and emissions for all offices in 2016/17 contributed an additional 5 tCO<sub>2</sub>e, with the remaining increase in waste emissions attributable to the increase in headcount.
- We are also pleased to report a significant reduction in fugitive emissions (down 83% to 5 tCO<sub>2</sub>e), with only one office reporting refrigerants top-up in 2016/17.

**Buildings and travel emissions – All sites (tCO<sub>2</sub>e)**



**Buildings emissions excl. travel – All sites (tCO<sub>2</sub>e)**





## Greenhouse Gas (GHG) emissions by scope





# GHG emissions by scope

## Summary

Our reporting year runs from 1<sup>st</sup> July to 30<sup>th</sup> June.

BDO LLP has adopted an operational control approach to defining our organisational boundary. In 2016/17, our location-based greenhouse gas emissions from business activities amounted to:

- **421 tCO<sub>2</sub>e** resulting from the combustion of fuel and the operation of any facilities (Scope 1)
- **1,669 tCO<sub>2</sub>e** from the purchase of electricity by the company for its own use (Scope 2).

During 2016/17 we transitioned our Leeds office from Bridgewater Place to Central Square thereby increasing our reporting boundary. It has not been practical to gather data on energy use at our new Central Square office and we have therefore used Bridgewater Place as a proxy to calculate the energy use based on FTE.

### Dual reporting - market based emissions:

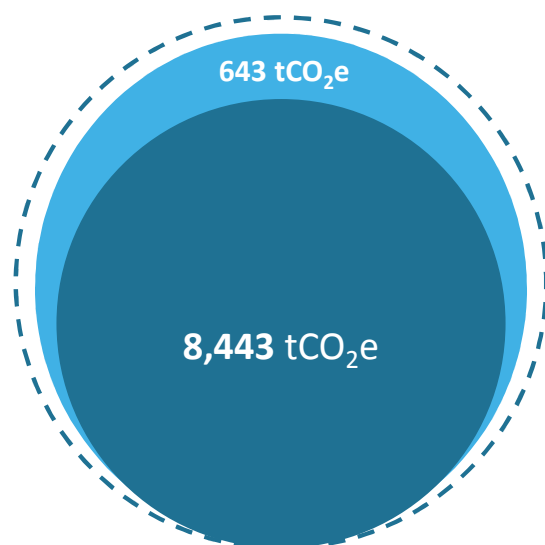
Our scope 2 market based emissions have been calculated using a combination of our suppliers standard fuel mix where possible and the European Residual Mixes 2014 where supplier and tariff information was unavailable.

		2016/17		2015/16		2014/15
		Location	Market	Location	Market	Location only
<b>Scope 1</b>	Natural gas	386	386	387	387	399
	Company cars	25	25	21	21	28
	Refrigerants	10	10	59	59	196
	<b>Total Scope 1</b>	<b>421</b>	<b>421</b>	<b>467</b>	<b>467</b>	<b>623</b>
<b>Scope 2</b>	Purchased electricity	1,669	2468	2,316	2,264	2,167
	<b>Total Scope 2</b>	<b>1,669</b>	<b>2,468</b>	<b>2,316</b>	<b>2,264</b>	<b>2,167</b>
<b>Scope 3</b>	Business travel	5,962	5,962	4,354	4,354	5,053
	Paper	638	638	199	199	413
	Waste	192	192	151	151	152
	Water	49	49	46	46	50
	Electricity transmission & distribution	156	156	191	191	179
	<b>Total Scope 3</b>	<b>6,996</b>	<b>6,996</b>	<b>4,941</b>	<b>4,941</b>	<b>5,846</b>
	<b>Total tonnes CO<sub>2</sub>e</b>	<b>9,086</b>	<b>9,885</b>	<b>7,724</b>	<b>7,672</b>	<b>8,636</b>
<b>Emissions intensities</b>						
	Headcount	3,914	3,914	3,796	3,796	3,929
	Emissions per FTE (tCO <sub>2</sub> e/FTE)	2.3	2.5	2.0	2	2.2
	Office space (m <sup>2</sup> )	40,555	40,555	42,513	42,513	44,391
	Emissions per m <sup>2</sup> (kgCO <sub>2</sub> e/m <sup>2</sup> )	224	244	182	180	195



## 93% of reported emissions are complete, accurate and based on actual data, with additional emissions sources included to further increase coverage

### Total reported and unknown emissions



93%

Reported emissions based on actual data

7%

Reported emissions based on proxy data, estimation, extrapolation or benchmarking

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Unreported emissions of unknown scale

#### Reported emissions based on actual data

- In 2016/17, BDO LLP implemented a new approach to managing and reporting emissions performance on a quarterly basis to further improve the quality, coverage, accuracy and efficiency of our disclosure.
- This resulted in a reduction of estimations required to determine buildings emissions and the ability to link all emissions sources to individual offices
- Approximately **93%** of 2016/17 emissions were calculated based on actual data, including meter readings, utility statements, procurement data (flights, paper and rail travel) and detailed mileage claims for company and non-company cars.
- The inclusion of courier data, waste transfer notes for confidential waste data and taxi data across all offices further contributed to the reported emissions based on actual data.
- Overall, the data provided for 2016/17 represented a further improvement in the quality and accuracy in comparison to the previous year, with an additional 5% reported emissions based on actual data.
- All offices under BDO's control have been included in the 2016/17 report.

#### Reported emissions based on estimates, proxy data, extrapolation or benchmarking

- At 643 tCO<sub>2</sub>e the emissions based on estimations, proxy data and extrapolated data is 33% lower than the 958 tCO<sub>2</sub>e requiring estimations in 2015/16.
- Further improvements can be made in 2017/18, notably around natural gas meter readings and water

#### Unreported emissions of unknown scale

The proportion of unreported emissions is reducing, However, there are still some emission areas that may be under reported. For example:

**General waste** – these emissions were estimated using historic data, which included a combination of bin volumes and approximate bags / collections per week. Offices should focus on improving waste data quality and coverage for 2017/18



## The calculations were performed using the principles set out in the WRI GHG Protocol and followed Defra's guidelines on how to report

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**The GHG accounting and reporting followed the principles of relevance, completeness, consistency, accuracy and transparency.** We applied these principles when collecting, reviewing and performing the GHG emission calculations – as part of defining organisational and operational boundaries, verifying the integrity of data, checking the data audit trail and finally performing the calculations.

The data was collected, verified and calculated in accordance with the requirements of the following standards:

- World Resources Institute (WRI) Greenhouse Gas (GHG) Protocol (revised version)
- Defra's Environmental Reporting Guidelines: Including mandatory greenhouse gas emissions reporting guidance, October 2013

**UK office emissions have been calculated using the Defra 2017 issue of the conversion factor repository.**



## Based on the approach taken, we believe the emissions stated are representative of BDO's business impacts and in line with the WRI GHG Protocol principles

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### Conclusions

When assessed against each of the (WRI) Greenhouse Gas Protocol principles and within the levels of verification sought, we conclude the following:

- **Relevance** – The CO<sub>2</sub>e emissions reported reflect the GHG emissions of the company and the organisational boundary selected is representative. We believe the reporting of GHG emissions will serve the decision-making needs of any internal and external users. The boundary and approach selected is similar to peers in the industry, as is the level of estimation and exclusions based on the materiality and practicability of collecting data.
- **Completeness** – We believe that all relevant information is presented and where there are exclusions they have been disclosed and justified as per the Reporting Protocol.
- **Consistency** – The methodology used to calculate GHG emissions was consistent with 2015/16 which makes both years comparable. There might have been minor inconsistencies due to differences in data quality.
- **Transparency** – Once data was received from the office/designated contact there is a clear audit trail and any relevant assumptions have been documented. Appropriate references have been made to the accounting and calculation methodologies and data sources used.
- **Accuracy** – Data and information supporting the GHG assertion were calculated based on measured, as well as estimated, and extrapolated data. We have reduced uncertainties as far as practicable within the limits of the quality and completeness of the data provided. However, a number of estimations were made by extrapolating from actual data or estimating using proxy or benchmark data where actual data was unavailable. This accounts for 7% of all emissions.