

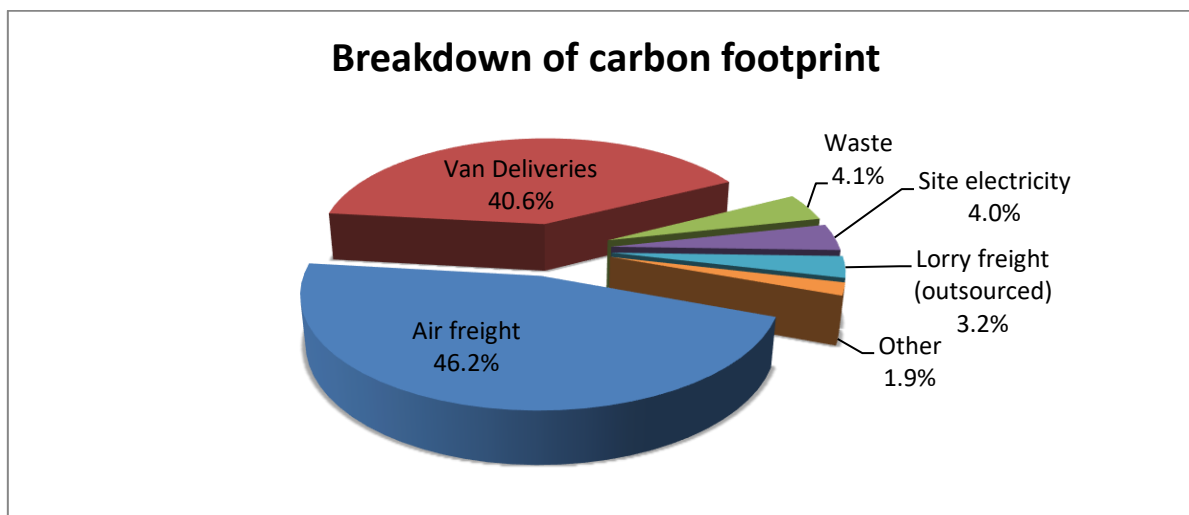
# Carbon Footprint Appraisal Report



Assessment Period:  
1<sup>st</sup> July 2017 – 30<sup>th</sup> June 2018

## Executive Summary

Carbon Footprint Ltd has assessed the greenhouse gas (GHG) emissions of theprintspace from 1<sup>st</sup> July 2017 to 30<sup>th</sup> June 2018 based on a dataset provided by the company. The majority of GHG emissions are associated with outbound air freight and van deliveries, which combined account for 86.9% of the emissions total.



*Other includes: employee commuting, water (and wastewater), company van, rail, taxi, bus and air travel.*

The table below demonstrates theprintspace’s total carbon footprint as well as two carbon intensity metrics (employee and turnover) that theprintspace can benchmark themselves against in future years to set targets and monitor/track performance against the baseline year. To reduce emissions going forward the focus should be on electricity consumption.

	2017/2018
Total Tonnes CO <sub>2</sub> e	757.10
Tonnes of CO <sub>2</sub> e per employee	29.12
Tonnes of CO <sub>2</sub> e per £M turnover	252.37

### Key Recommendations

- **Data collection and accuracy** - record the travel itineraries for taxi and rail travel to include departure and destination locations, so that the accuracy of the calculations can be improved by using distance rather than cost.
- **Take actual electricity meter readings and submit to your supplier to ensure accurate billing.**
- **Review employee behaviours in the office** to promote energy saving to aid in reducing site electricity consumption.
- Consolidate your **environmental management programme** as part of ISO 14001.
- Look into further supply chain management, especially packaging and freighting to ensure materials are being sourced sustainably and suppliers are maximising on resource efficiency.
- Complete **carbon offsetting** to mitigate against unavoidable emissions.

# Table of Contents

Executive Summary.....	I
1. Introduction.....	3
2. Calculation Scope and Accuracy.....	6
3. Carbon Footprint Results.....	9
4. Comparison and Benchmarking .....	16
5. References.....	19
A. Annex A – Calculation Methodology (Additional Notes).....	20
B. Annex B – Supplied Data and Emissions Breakdown .....	21

## Quality Control

**Report issue number:** 1.0  
**Date:** 13 June 2019

**Calculations completed by:** Emma Percy  
**Calculations reviewed by:** Georgina Whitlock

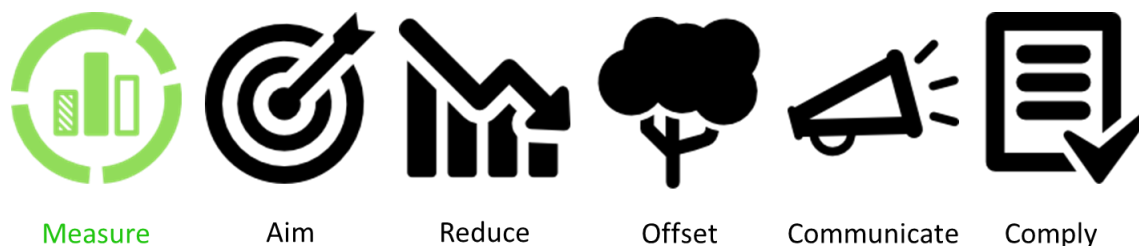
**Report produced by:** Emma Percy  
**Report reviewed by:** Georgina Whitlock

**Director approval:** Dr. Wendy Buckley

# 1. Introduction

## 1.1. theprintspace’s carbon management journey

Carbon Footprint provides a simple six step annual journey to enhance your sustainability credentials whilst complying to best practice and differentiating your brand. theprintspacehas completed the first step of its carbon management journey.



The purpose of this report is to:

- Summarise the results of your carbon footprint assessment.
- Recommend realistic aims for your carbon reduction target.
- Provide practical recommendations to enhance your sustainability programme and reduce your emissions.

## 1.2. What is a carbon footprint?

A carbon footprint is a measure of the impact our activities have on the environment in terms of the amount of greenhouse gases produced, measured in units of carbon dioxide equivalents (CO<sub>2</sub>e). A carbon footprint is made up of two parts, direct and indirect emissions.

### 1. Direct emissions:

Direct emissions are produced by sources which are owned or controlled by the reporting organisation and include electricity use, burning oil or gas for heating, and fuel consumption as a result of business travel or distribution. Direct emissions correspond to elements within scopes 1, 2 and 3 of the World Resources Institute GHG Protocol, as indicated in Table 1.

**Table 1: Direct emissions sources**

Footprint	Activity	Scope
Direct	Electricity, heat or steam generated on-site	1
	Natural gas, gas oil, LPG or coal use attributable to company owned facilities	1
	Company owned vehicle travel	1
	Production of any of the six GHGs (CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFCs, PFCs and SF <sub>6</sub> )	1
	Consumption of purchased electricity, heat steam and cooling	2
	Employee business travel (using transport not owned by the company)	3

## 2. Indirect emissions:

Indirect emissions result from a company's upstream and downstream activities. These are typically from outsourced/contract manufacturing, and products and the services offered by the organisation. Indirect emissions correspond to scope 3 of the World Resources Institute GHG Protocol excluding employee business travel as indicated in Table 2.

**Table 2: Indirect emissions sources**

Footprint	Activity	Scope
Indirect	Employee commuting	3
	Transportation of an organisation's products, materials or waste by another organisation	3
	Outsourced activities, contract manufacturing and franchises	3
	GHG emissions from waste generated by the organisation but managed by another organisation	3
	GHG emissions from the use and end of life phases of the organisation's products and services	3
	GHG emissions arising from the production and distribution of energy products, other than electricity, steam and heat, consumed by the organisation	3
	GHG emissions from the production of purchased raw or primary materials	3
	GHG emissions arising from the transmission and distribution of purchased electricity	3

For businesses, the assessment focuses on direct emissions, as these lie under the control of the organisation. However, we ask companies to recognise that there is an indirect emissions footprint and select suppliers based on their environmental credentials alongside price and performance.

### 1.3. Why is it important?

Over the past two decades the effects of climate change have accelerated. Considerable evidence exists proving climate change has been exacerbated by human activity. Changes in our post-industrial lifestyles have altered the chemical composition of the atmosphere, generating a build-up of greenhouse gases – primarily carbon dioxide, methane, and nitrous oxide levels – raising the average global temperature.

The consequences of inaction will be disastrous. Sea level will continue to rise and local climate conditions to be altered causing an increase in extreme weather events, affecting forests, crop yields, and water supplies. It will also affect human health, accelerate species extinction, and disrupt many ecosystems.

Climate change is a global threat which will impact the lives of everyone on the planet. Hence, it is vital that all individuals, businesses, organisations and governments work towards the common goal of reducing greenhouse gas emissions. This carbon footprint assessment will enable theprintspace to begin doing their bit by monitoring, reducing and offsetting their emissions.

## 1.4. BS ISO 14064-1:2006

This GHG report has been prepared in accordance with Part 1 of BS ISO 14064: 2006. The GHG inventory, report, or assertion has not been verified.

## 1.5. Calculation methodology

The carbon footprint appraisal is derived from a combination of client data collection and data computation by Carbon Footprint's analysts.

Carbon Footprint's analysts have calculated theprintspace's footprint using the 2018 conversion factors developed by the UK Department for Environment, Food and Rural Affairs (Defra) and the Department for Business, Energy & Industrial Strategy (BEIS). These factors are multiplied with the company's GHG activity data. Carbon Footprint has selected this preferred method of calculation as a government recognised approach and uses data which is realistically available from the client, particularly when direct monitoring is either unavailable or prohibitively expensive.

Additional methodology information is presented in Annex A

## 1.6. Data supplied for the carbon footprint appraisal

A summary of the data supplied by theprintspace for the appraisal is presented in Annex B.

## 1.7. Abbreviations

BEIS	Department for Business Energy & Industrial Strategy
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
Defra	Department for Environment, Food and Rural Affairs
EU	European Union
GHG	Greenhouse Gas
IPCC	Intergovernmental Panel on Climate Change
ISO	International Standards Organisation
km	Kilometres
kWh	Kilowatt Hours
PR	Public Relations
UN	United Nations

## 2. Calculation Scope and Accuracy

### 2.1. Scope of this work

Carbon Footprint has assessed the GHG emissions from 1<sup>st</sup> July 2017 to 30<sup>th</sup> June 2018 resulting from the energy consumption at theprintspace’s facilities and its business transport activities.

This report will set the base year for all further reporting emissions to be compared to.

### 2.2. Organisational & operational boundaries

The organisation has accounted for all quantified GHG emissions and/or removals from facilities over which it has financial control. The assessment covers the following operational boundaries:

**Figure 1: Assessment boundary**

Scope 1 Direct Emissions	Scope 2 Energy Indirect	Scope 3 Other Indirect
<u>Fuel combustion</u> <b>n/a</b>	<u>Consumption of purchased electricity, heat steam and cooling</u> <b>Electricity</b>	<u>Purchased materials and fuels</u> <b>Water</b>
<u>Owned Transport</u> <b>Company van</b>		<u>Transmission and distribution of energy</u> <b>Electricity</b>
<u>Process emissions</u> <b>None</b>		<u>Leased assets outsourcing and franchising</u> <b>Outsourced air and road logistics</b>
<u>Fugitive emissions</u> <b>Refrigerants</b>		<u>Transport related activities</u> <b>Taxi, flights, bus, rail travel and employee commuting</b>
		<u>Sold goods and services</u> <b>None</b>
		<u>Waste Disposal</u> <b>Residual &amp; Recyclable</b>

Key:

Within the assessment boundary	Not included within assessment boundary
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Indirect GHG sources that are outside the assessment boundary have been excluded from quantification as it is not technically feasible or cost effective, to include these in the GHG assessment.

### 2.3. Calculation accuracy & materiality

The result of a carbon footprint calculation varies in accuracy depending on the data set provided. The more accurate the data supplied, the more accurate the final result which will subsequently allow for better targeting of areas where improvements can be made. Materiality is determined by the percentage contribution of each element to the overall footprint.

The data provided is derived from energy bills, expenses claims and data collected by theprintspace.

Further information and an overview of the expected accuracy provided per element for this assessment is shown in Table 3.

**Table 3: Assessment accuracy & materiality**

Dataset	Source of data and comments	Accuracy	Materiality
Air Freight	Annual tonne.km data and percentage split between long and short haul flights.	Very Good	High (>40%)
Van Deliveries	Annual tonne.km data and percentage split between vehicle types.	Very Good	High (>40%)
Waste	Waste type and quantity (kg) per week data was provided by theprintspace. This was extrapolated to tonne/year by Carbon Footprint Ltd. It was assumed that the non-recyclable waste (general waste) was sent to landfill.	Very Good	Low (1-5%)
Site electricity (actual)	Electricity consumption in kWh provided for two sites – theprintspace and London Picture Framing. Utility bills pro-rated to match data period.	Excellent	Low (1-5%)
Lorry Freight (outsourced)	Annual tonne.km data and percentage split between vehicle types.	Very Good	Low (1-5%)
Employee Commuting	Company records	Excellent	Low (1-5%)
Site electricity (estimated)	Electricity consumption for the Hoxton site required estimation using the office space floor area and CIBSE guide F Energy Efficiency in Buildings (Table 20.6).	Average	Very Low (<1%)
Water (and wastewater)	Average water consumption (m <sup>3</sup> ) per year (over the last 3 years) was provided by theprintspace. The data was sourced originally from utility bills.	Good	Very Low (<1%)
Company van travel	Annual (12 months) mileage from vehicle MOT records.	Very Good	Very Low (<1%)
Rail travel	Company receipts including cost of journey (£). Where destinations were provided, theprintspace office location (E2 8DL) to the	Good	Very Low (<1%)



Dataset	Source of data and comments	Accuracy	Materiality
	destination postcode was used instead to calculate distance and emissions.		
Flights	Company receipts including flight type, departure and destination location and return journey.	Excellent	Very Low (<1%)
Taxi travel	Company receipts including cost of journey (£). Where destinations were provided, theprintspace office location (E2 8DL) to the destination postcode was used instead to calculate distance and emissions.	Good	Very Low (<1%)
Bus travel	Company receipts. Information provided included 'London Bus' and number of passenger trips. An average distance of 10km was used for the various trips around London.	Average	Very Low (<1%)



## 3. Carbon Footprint Results

### 3.1. Summary of results

The total carbon footprint for theprintspace for the period ending 30<sup>th</sup> June 2018 was 757.10 tonnes CO<sub>2</sub>e. The following table and graphs provide a summary of results for theprintspace's carbon footprint calculation by scope and source activity.

**Table 4: Results of theprintspace's carbon footprint assessment by scope and source activity**

Scope	Activity	Tonnes CO <sub>2</sub> e
<b>Scope 1</b>	Van travel	0.35
<b>Scope 1 Sub Total</b>		<b>0.35</b>
<b>Scope 2</b>	Electricity generation	27.70
<b>Scope 2 Sub Total</b>		<b>27.70</b>
<b>Scope 3</b>	Air freight	350.02
	Van deliveries	307.65
	Waste	31.09
	Lorry freight	24.09
	Employee Commuting	13.10
	Electricity transmission & distribution	2.36
	Water (and wastewater)	0.40
	Rail travel	0.18
	Flights	0.11
	Taxi travel	0.04
Bus travel	0.003	
<b>Scope 3 Sub Total</b>		<b>729.04</b>
<b>Total tonnes of CO<sub>2</sub>e</b>		<b>757.10</b>
<b>Tonnes of CO<sub>2</sub>e per employee</b>		<b>29.12</b>
<b>Tonnes of CO<sub>2</sub>e per £M turnover</b>		<b>252.37</b>

Figures 2 and 3 show the breakdown of the total GHG emissions produced by theprintspace. It can be seen that 46.2% of the total emissions is produced through the use of air freight. In comparison, the amount of CO<sub>2</sub>e caused by bus travel (included in 'other') is very low at less than 0.001%.

**'Other' includes: employee commuting, water (and wastewater), company van, rail, taxi, bus and air travel.**

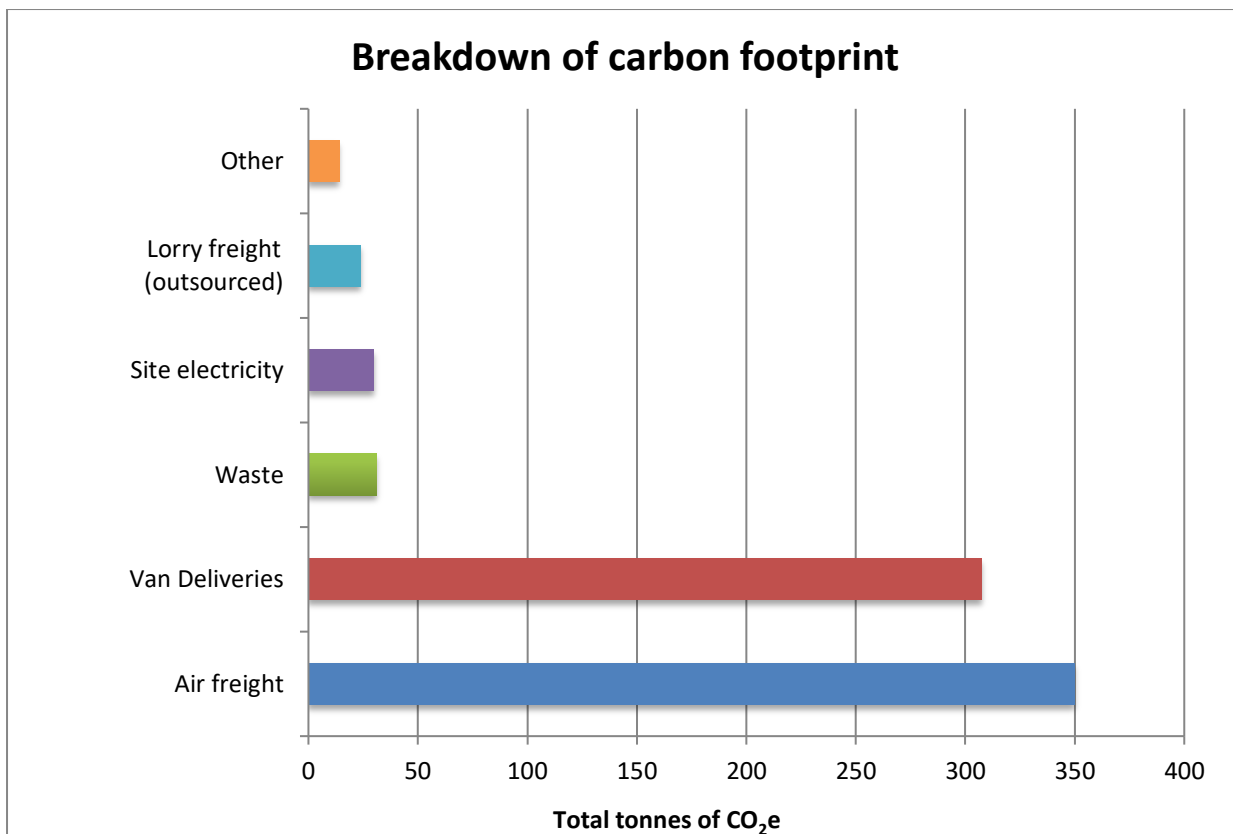


Figure 2: Contribution in tonnes of CO<sub>2</sub>e of each element of theprintspace’s carbon footprint

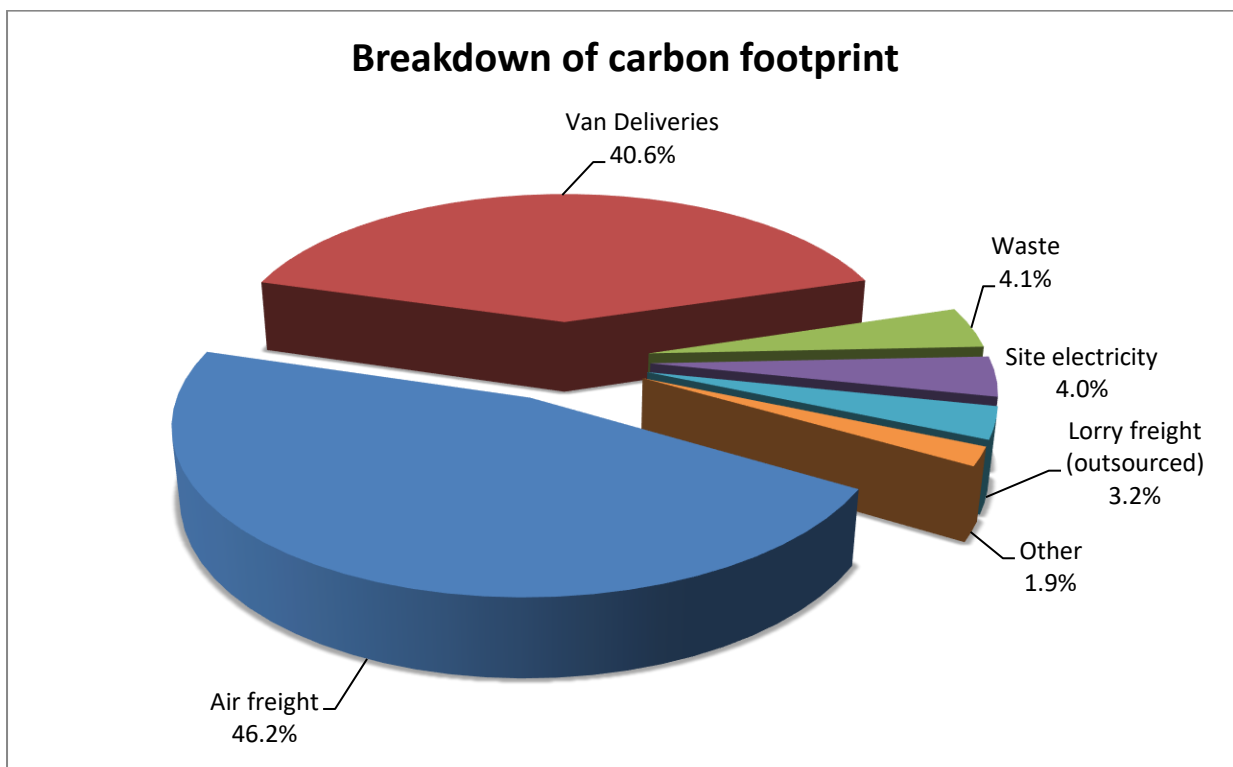


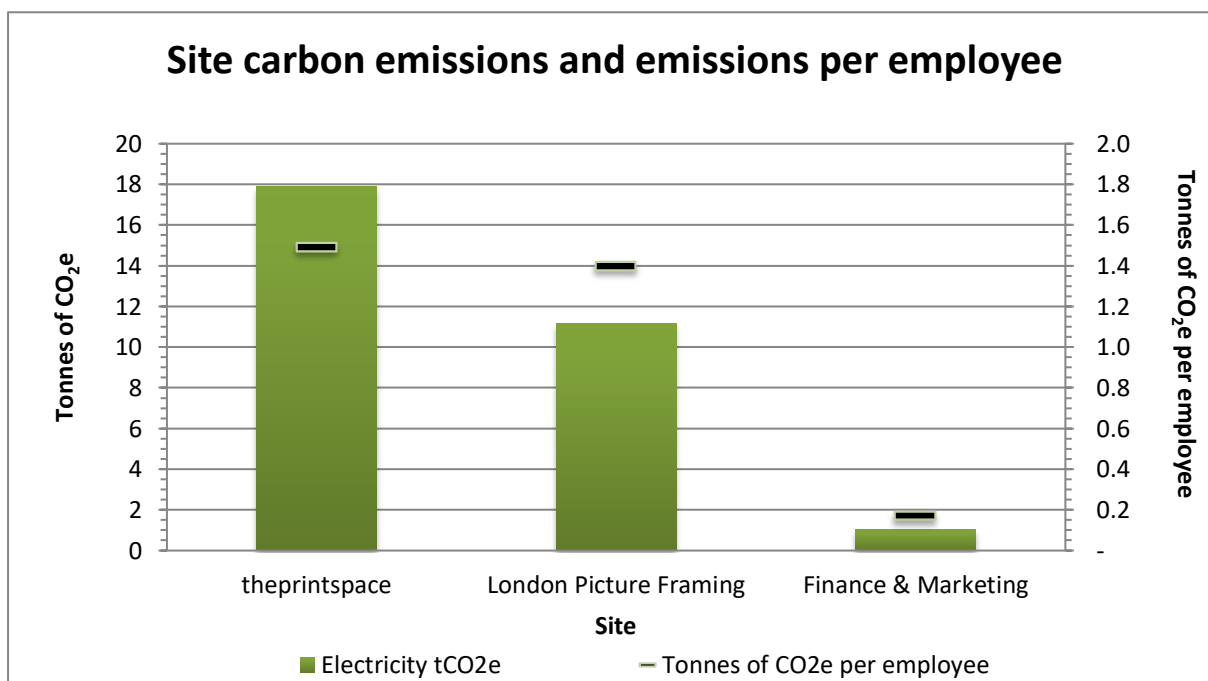
Figure 3: Percentage contribution of each element of theprintspace’s carbon footprint

### 3.2. Emissions from energy usage at site facilities

Table 5 and Figure 4 show the breakdown of emissions from on-site energy usage at each of theprintspace’s sites. It can be seen that theprintspace head office is the site which produces the highest amount of GHG emissions, whilst the finance and marketing office (Hoxton) produces the lowest amount. When comparing the sites, we note that theprintspace and London Picture Framing sites are based on actual utility bill data, whereas finance and marketing is based on an estimate from floor area and an average kWh/m<sup>2</sup> benchmark figure from *CIBSE Guide F Energy Efficiency in Buildings* (Table 20.6)<sup>1</sup>.

**Table 5: CO<sub>2</sub>e emissions as a result of site energy consumption and per employee**

Site	Employee Numbers	Electricity tCO <sub>2</sub> e	tCO <sub>2</sub> e per employee
theprintspace	12	17.87	1.49
London Picture Framing	8	11.17	1.40
Finance & Marketing (Hoxton)	6	1.02	0.17
<b>Total / Average (for tCO<sub>2</sub>e per employee)</b>	<b>26</b>	<b>30.06</b>	<b>1.16</b>



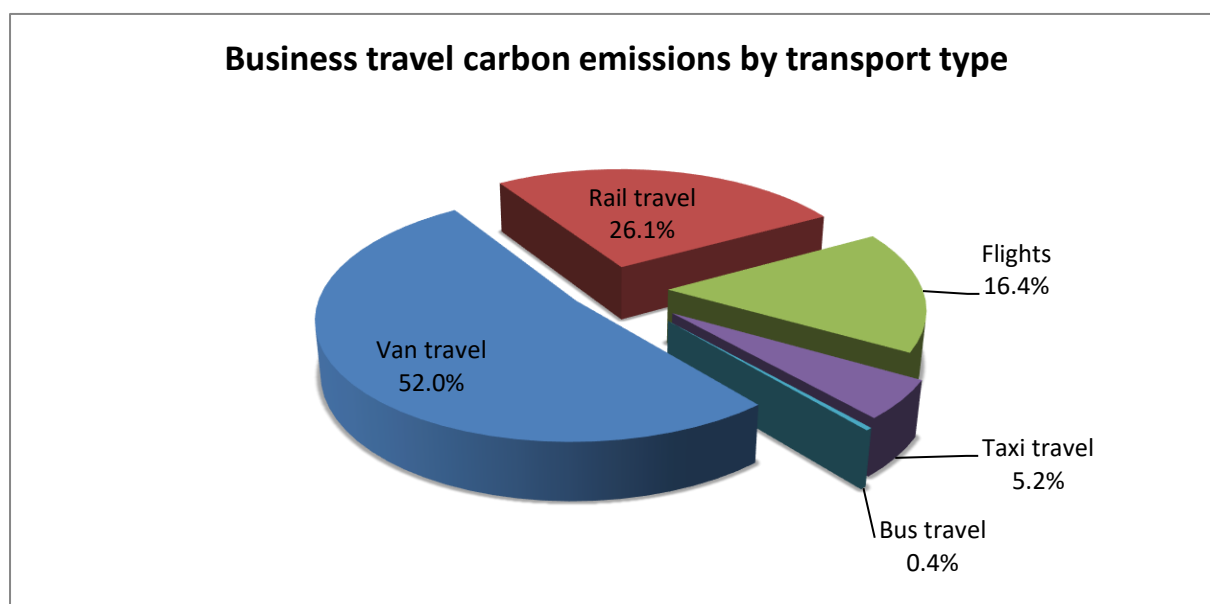
**Figure 4: CO<sub>2</sub>e emissions on a per site and employee basis**

<sup>1</sup> The Chartered Institution of Building Services Engineers (CIBSE) Guide F Energy Efficiency in Buildings. Third Edition (May 2012) (Table 20.6)

### 3.3. Emissions from business travel

The next graph and table show the GHG emissions resulting from business travel. Van travel involves a daily run between the sites and is the largest contributor to transport emissions, accounting for 52.0% of the total transport emissions (Figure 5). In comparison, the amount of CO<sub>2</sub>e caused by bus travel is very low at about 0.4%. **I recommend for future assessments, to record the travel itineraries for taxi and rail travel to include departure and destination locations, so that the accuracy of the calculations can be improved by using distance rather than cost.**

The majority of theprintspace's travel is via public transport, which will aid to keep emissions from transport relatively low. In 2017/18 theprintspace flew to Paris, resulting in 0.11 tCO<sub>2</sub>e. If the train was taken instead, theprintspace would have made a saving of up to 89% on the carbon footprint of the journey. Therefore, I recommend that in future theprintspace consider the environmental impact of various travel options before finalising travel plans. In addition, if van travel is conducted for short distances between branches, theprintspace could consider an electric van. Not only would this reduce GHG emissions and local air pollution, it would also help reduce daily running costs (as electricity is cheaper than fuel) and assist with the London Ultra Low Emission Zone (ULEZ) charges.



**Figure 5: Percentage contribution of each element to transportation emissions**

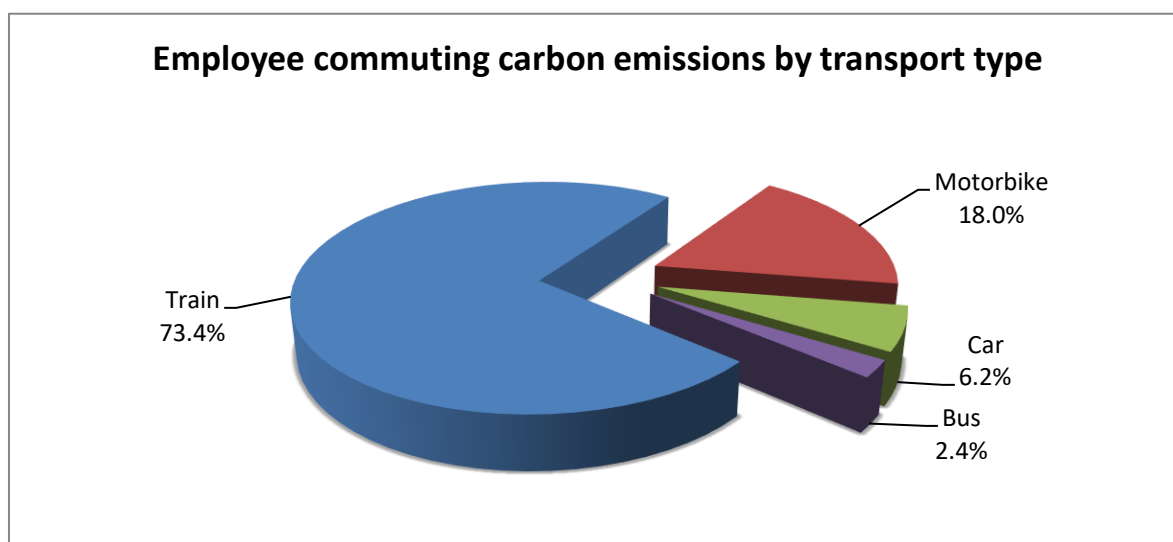
**Table 6: CO<sub>2</sub>e emissions due to transportation**

Type of Travel / Transport	Tonnes of CO <sub>2</sub> e
Van travel	0.35
Rail travel	0.18
Flights	0.11
Taxi travel	0.04
Bus travel	0.003
<b>Total</b>	<b>0.68</b>

The detailed results are given in Annex B.

### 3.4. Emissions from employee commuting

Figure 6 and Table 7 show the total and breakdown of emissions from employee commuting. The majority of emissions from employee commuting occur from train travel (national rail and underground), accounting for 73.4% of employee commuting emissions. For comparison, if the equivalent commuting distance was completed by car (average unknown fuel) the emissions would equate to 40.68 tCO<sub>2</sub>e. Thereby, travelling by rail effectively results in a GHG emissions saving of 76% compared to travelling by car.



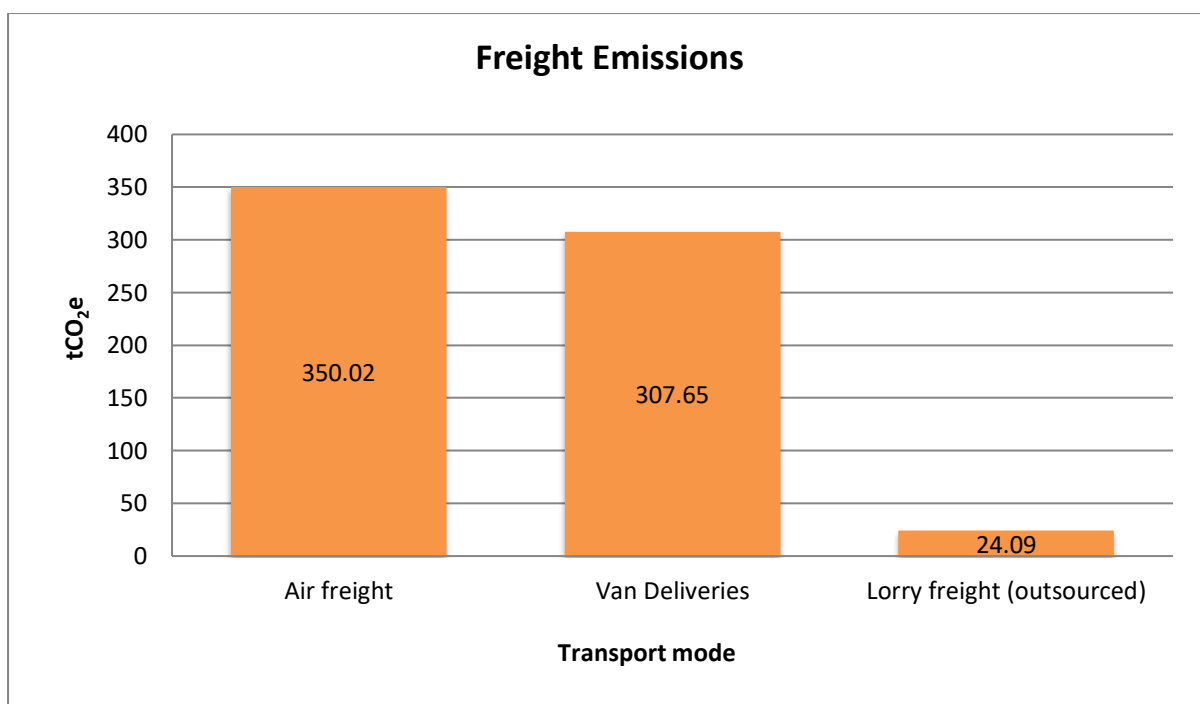
*Figure 6: Percentage contribution of each mode of employee commuting transport*

*Table 7: CO<sub>2</sub>e emissions as a result of employee commuting to and from work*

Type of Employee Travel / Transport	Annual mileage	Tonnes of CO <sub>2</sub> e
Train	139,934	9.62
Motorbike	12,710	2.36
Car	2,784	0.81
Bus	1,624	0.31
<b>Total</b>		<b>13.10</b>

### 3.5. Emissions from freight activity

The breakdown of emissions from outbound freight transportation can be seen in Figure 7. Approximately 90% of the air freight tonne.km travel is from short haul journeys to European countries and the remaining 10% is long haul to the United States and Asia. For road freight, the tonne.km travelled was split between 33% transit van, 33% cityvan and 33% by articulated vehicles (lorry). Freight travel collectively accounts for 90.0% of theprintspace's total GHG emissions.



**Figure 7: Breakdown of emissions per freighting activity**

Table 8 below shows that despite road freight accounting for 82% of the total tonne.km transported, GHG emissions from this source are lower than air freight. This is due to the higher carbon intensity of the emissions factor for air freight compared to other modes of freighting. The least carbon intensive mode of freight transport according to Defra/BEIS is sea freight.

**Table 8: Breakdown of tonne.km travelled and GHG emissions for each freight type**

Type of Freight activity	Description	Tonne.km	Tonnes of CO <sub>2</sub> e
Air Freight	Short Haul	167,972.40	327.03
	Long Haul	18,663.60	22.99
<b>Subtotal</b>		<b>186,636</b>	<b>350.02</b>
Road Freight	Van (transit and cityvan)	565,114	307.65
	Articulated (lorry)	282,557	24.09
<b>Subtotal</b>		<b>847,671</b>	<b>331.74</b>
<b>Total</b>		<b>1,034,307</b>	<b>681.76</b>

### 3.6. Emissions from waste

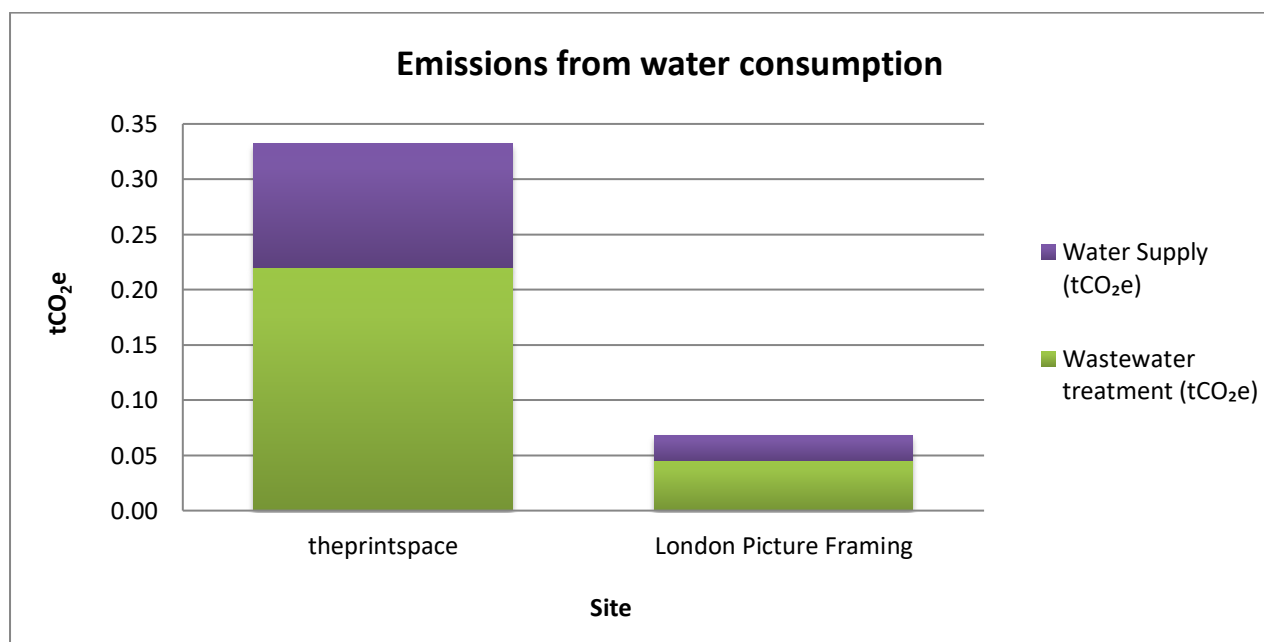
Theprintspace provided weekly weight (kg) waste per waste type which was extrapolated to waste produced in tonnes over the appraisal year by Carbon Footprint. Table 8 shows the split between waste at each site, with waste accounting for 4.1% of theprintspace’s total emissions. It has been assumed that non-recyclable (‘general’) waste has been sent to landfill.

**Table 9: CO<sub>2</sub>e emissions due to waste**

Site	Category	Waste produced per year (tonnes)	Total Emissions (tCO <sub>2</sub> e)
TPS	General Waste	5.80	3.40
	Recycling waste	6.03	0.13
	Cardboard	2.32	0.05
<b>Subtotal</b>		<b>14.15</b>	<b>3.58</b>
LPF	General Waste	46.40	27.22
	Recycling waste	13.92	0.30
<b>Subtotal</b>		<b>60.32</b>	<b>27.51</b>
<b>Total</b>		<b>74.47</b>	<b>31.09</b>

### 3.7. Emissions from water

Figure 8 below shows the breakdown of GHG emissions from water consumption per site. Water consumption only accounts for 0.1% of theprintspace’s total emissions.



**Figure 8: Breakdown of water consumption emissions per site**





## 4. Comparison and Benchmarking

### 4.1. Comparison to base year emissions

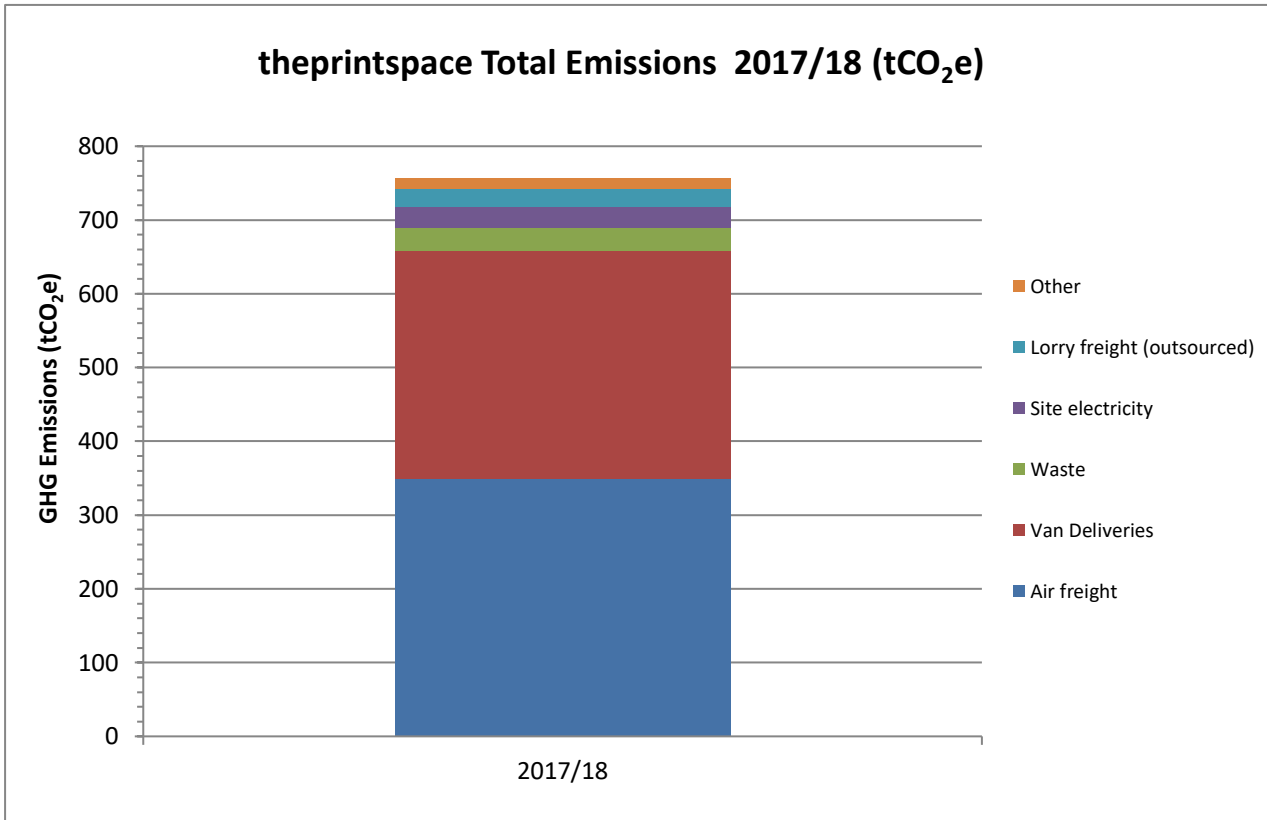
This is the first carbon footprint assessment theprintspace has carried out and, therefore, it will serve as a base year for future carbon footprint assessments.

The table and graph below show emissions per activity, with Table 9 also showing theprintspace's total carbon footprint, tonnes of CO<sub>2</sub>e per employee and tonnes of CO<sub>2</sub>e per £M turnover.

**Table 10: theprintspace's carbon footprint comparison and percentage change**

Element	2017/18
Air freight	350.02
Van deliveries	307.65
Waste	31.09
Lorry freight (outsourced)	24.09
Site electricity	30.06
Employee commuting	13.10
Water (and wastewater)	0.40
Company van travel	0.35
Rail travel	0.18
Flights	0.11
Taxi travel	0.04
Bus travel	0.003
<b>Total Tonnes of CO<sub>2</sub>e</b>	<b>757.10</b>
<b>Tonnes of CO<sub>2</sub>e per employee</b>	<b>29.12</b>
<b>Tonnes of CO<sub>2</sub>e per £M turnover</b>	<b>252.37</b>

Carbon Footprint recommends that organisations use the base-year GHG inventory as a benchmark to measure against. When using the base-year GHG inventory as a benchmark, organisations can set realistic reduction targets and measure their progress year on year. Setting objectives using carbon intensity metrics (e.g. based upon turnover (£M) and employee numbers), rather than absolute emissions, will allow you to accurately reflect any future changes in business size and operations. This can also provide excellent marketing opportunities, where real figures can demonstrate your commitment towards helping fight climate change.



**Figure 9: Breakdown of theprintspace’s 2017/18 GHG emissions**

**‘Other’ includes: employee commuting, water (and wastewater), company van, rail, taxi, bus and air travel.**



## 4.2. Carbon Footprint Standard

### 4.2.1. Brand endorsement

Theprintspace in conjunction with Carbon Footprint Ltd, has assessed its carbon footprint. By achieving this theprintspace has qualified to use the Carbon Footprint Standard branding. This can be used on all marketing materials, including website and customer tender documents, to demonstrate your carbon management achievements.



The Carbon Footprint Standard is recognition of your organisation's commitment to carbon management. The text to the right-hand side of the logo demonstrates what level you have achieved in line with international best practice.

### 4.2.2. Communicate

Make sure you communicate your actions and achievements effectively, both within your organisation, to help develop your culture, and externally to help improve your brand image.

When promoting your actions, be sure to utilise all marketing channels available to you, such as website, newsletters, brochures, press releases, conferences/events and social media etc.

You should:

- Explain why climate change matters to you (for more information visit: [www.carbonfootprint.com/warming.html](http://www.carbonfootprint.com/warming.html))
- Tell the story of where you have come from, the progress you have made and what your commitment is for the future (e.g. targets).
- Be clear and accurate about what you have achieved – take care not to exaggerate.
- Use the Carbon Footprint Standard branding, certificates, images of offset projects you are supporting and graphs of your carbon performance to help communicate your point in a clear and enticing manner.

## 5. References

1. BEIS GHG Conversion Factors for Company Reporting (June 2018)
2. Guidelines to Defra's Greenhouse Gas (GHG) Conversion Factors for Company Reporting – annexes (June 2013)
3. The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition (March 2004)
4. The Chartered Institution of Building Services Engineers (CIBSE) Guide F Energy Efficiency in Buildings. Third Edition (May 2012) (Table 20.6)

## A. Annex A – Calculation Methodology (Additional Notes)

### A.1 How is the carbon footprint calculated?

Carbon Footprint confirms that the methodology used to quantify the carbon footprint meets the following principles:

- a) The subject and its boundaries have been clearly identified and documented.
- b) The carbon footprint has been based on primary activity data unless the entity could not demonstrate that it was not practicable to do so, in which case an authoritative source of secondary data relevant to the subject was used.
- c) The methodology employed minimised uncertainty and yielded accurate, consistent and reproducible results.
- d) Emission factors used are relevant to the activity concerned and current at the time of quantification.
- e) Conversion of non-CO<sub>2</sub> greenhouse gases to CO<sub>2</sub>e has been based upon the 100-year Global Warming Potential figures published by the IPCC or national (Government) publication.
- f) Carbon footprint calculations have been made exclusive of any purchases of carbon offsets.
- g) All carbon footprints have been expressed as an absolute amount in tCO<sub>2</sub>e.

### A.2 Biomass

There are no CO<sub>2</sub> emissions from the combustion of biomass to be considered within this report.

### A.3 Greenhouse gas removals

Within the calculation of the printspace's carbon footprint, there are no business processes resulting in the reduction of greenhouse gases from the atmosphere to be deducted from the calculation.

## B. Annex B – Supplied Data and Emissions Breakdown

This annex shows the data that theprintspace has supplied Carbon Footprint Ltd for the calculation of its emissions. At the end of each table one or several columns have been added that display the emissions and calculations associated for each item of data provided by theprintspace. It should be noted that the latter has been calculated by Carbon Footprint Ltd, and not provided by theprintspace.

### B.1 Data used for Scope 1 emissions assessment

This section contains the data related to the direct emissions attributable to theprintspace. These include the energy usage in theprintspace's buildings (excluding purchased electricity, since this corresponds to Scope 2, indirect emissions), any company owned vehicle transport and any of the other six greenhouse gases produced.

**Table 11: Data supplied and emissions breakdown for company owned van transportation**

Registration Plate	Make	Model	Engine Size (cc)	Fuel Type	Emissions Rating (gCO <sub>2</sub> /km)	Travel Distance (mile)	Emissions (tCO <sub>2</sub> e)
YL08OFV	Ford	Transit	2,198	Diesel (retail)	208	879	0.35

### B.2 Data used for Scope 2 emissions assessment

This section contains the data associated to the energy indirect emissions attributable to theprintspace. The table below shows the purchased electricity, heat or steam usage in theprintspace's buildings.

**Table 12: Data supplied and emissions breakdown for purchased electricity usage**

Site Name	No. of staff	Grid Electricity (kWh)	Country	Electricity Generation (tCO <sub>2</sub> e)
theprintspace	12	58,181	United Kingdom	16.47
London Picture Framing	8	36,346	United Kingdom	10.29
Finance & Marketing*	6	3,324*	United Kingdom	0.94
<b>Total</b>	<b>26</b>	<b>97,850</b>		<b>27.70</b>

\*Data for the finance and marketing office has been estimated based on the occupied floor area and an average kwh/m<sup>2</sup> figure from CIBSE.

### B.3 Data used for Scope 3 emissions assessment

The tables below demonstrate the company's employee business travel (not including staff commuting), any outsourced transport, and emissions from the transmission and distribution of purchased energy.

**Table 13: Data supplied and emissions breakdown for the transmission and distribution of purchased electricity.**

Site Name	No. of staff	Grid Electricity (kWh)	Country	Electricity Transmission & Distribution (tCO <sub>2</sub> e)
theprintspace	12	58,181	United Kingdom	1.40
London Picture Framing	8	36,346	United Kingdom	0.88
Finance & Marketing	6	3,324	United Kingdom	0.08
<b>Total</b>	<b>26</b>	<b>97,850</b>		<b>2.36</b>

\*Data for the finance and marketing office has been estimated based on the occupied floor area.

**Table 14: Data supplied and emissions breakdown for staff business flights**

No. of passenger trips	Type	Leg 1	Leg 2	Return Trip?	Leg 1 Airport Name	Leg 2 Airport Name	Total Distance (km)	Passenger km	Total Emissions (tCO <sub>2</sub> e)
1	Economy	LHR	CDG	Yes	London Heathrow	Paris	348	695	0.11

**Table 15: Data supplied and emissions breakdown for staff business travel by bus**

Type of Bus	No. of passenger trips	Departure	Return Trip?	Distance (km)*	Passenger Distance (km)	Emissions (tCO <sub>2</sub> e)
London bus	1	various trips		10.0	10.00	0.0007
London bus	1	various trips		10.0	10.00	0.0007
London bus	1	various trips		10.0	10.00	0.0007
London bus	1	LPF Site	No	5.0	5.00	0.0004
<b>Total</b>	<b>4</b>			<b>35.00</b>	<b>35.00</b>	<b>0.003</b>

\*An estimate of distance was used for bus travel around London

Table 16: Data supplied and emissions breakdown for staff business travel by train

Train Type	No. of Trips	Origin	Destination	Return Trip?	Distance (km)	Cost (£)	Emissions (tCO <sub>2e</sub> )
International Rail	2	SNFC - Train-Artes Festival Paris-July17-€24.6				£22.32	0.002
National rail	1	Heathrow Rail - Travel to Airport to go to France	Heathrow Airport		22.0	£22.00	0.001
National rail	1	Travel Expenses to Attend Board Meeting-10/07/17	Oxford	Yes	106.0	£39.45	0.009
National rail	1	TFL - Train Fare for Sergio Travel to Brighton	Brighton	Yes	80.0	£31.00	0.007
National rail	1	TSGN(Ticket) -Travel for Staff Evening	London Kingscross	Yes		£33.90	0.013
National rail	1	Travel Expenses to Attend Board Meeting-Aug&Sep17	Oxford	Yes	106.0	£78.30	0.009
National rail	1	Train to Cambridge - Travel to Deliver an Order - TPS	Cambridge	Yes	87.0	£16.90	0.008
Eurostar	2	Eurostar -Ticket- SW&LS Travel to Paris For Photo Trade Show	Paris	Yes	436.0	£241.00	0.021
Light rail and tram	2	RATP - Travel by Train in Paris - Photo Trade Show -09/11/17				£9.13	0.003
Light rail and tram	2	RATP - Travel by Train in Paris - Photo Trade Show -10/11/17				£1.74	0.001
Light rail and tram	2	RATP - Travel by Train in Paris - Photo Trade Show -11/11/17				£1.74	0.001
National rail	1	Travel Expenses to Attend Board Meeting - Jan 18	Oxford	Yes	106.0	£41.55	0.009
National rail	1	Travel Expenses to Attend Board Meeting-Nov/Dec-17	Oxford	Yes	106.0	£80.90	0.009
National rail	1	Travel to FujiFilm For Research & Development Product Demo	Bedford	Yes	80.0	£42.30	0.007
London Underground	1	TFL - Travel Ticket				£6.30	0.002
London Underground	1	TFL - Travel Ticket				£6.80	0.002
London Underground	1	TFL - Travel Ticket				£4.80	0.002
London Underground	1	TFL - Travel Ticket				£10.30	0.003
National rail	1	New Southern Rail	Brighton	Yes	80.0	£36.40	0.007
London Underground	1	TFL - Travel Ticket				£6.80	0.002
London Underground	1	TFL - Travel Ticket				£6.80	0.002
London Underground	1	TFL - Travel Ticket				£7.90	0.003
National rail	1	GWR Ticket - Travel for Meeting with the RPS	Bristol	Yes	187.0	£48.00	0.017
National rail	1	Travel Expenses to Attend Board Meeting-April 18	Oxford	Yes	106.0	£41.55	0.009
National rail	1	Train to FujiFilm Event - Professional Lab Meeting	London Kingscross	Yes		£35.10	0.013
National rail	1	Train - After Taking the Staff Out	London Kingscross	Yes		£35.10	0.013
London Underground	3	Underground-Travel to London Eye-TPS	Waterloo		4.6	£14.70	0.001
London Underground	3	Underground-Travel to London Eye-TPS	Waterloo		4.6	£14.70	0.001
<b>Total</b>	<b>37</b>				<b>1,511.2</b>	<b>£937.48</b>	<b>0.18</b>



**Table 17: Data supplied and emissions breakdown for staff business travel by taxi**

Type of Taxi	Annual cost (£)	No of Journeys	Departure	Destination	Distance (mile)	Emissions (tCO <sub>2</sub> e)
Regular Taxi	£9.62	1	Taxi - Arts Festival Paris July 17 - HS			0.001
Regular Taxi	£38.20	1	Cityfleet Cab-Taxi Festival Paris - July 17			0.007
Regular Taxi	£8.52	1	Uber - DG Travel to Deliver Order 889765 Prints to Client			0.001
Regular Taxi	£11.04	1	Uber - Travelled for Art Exhibition Opening			0.002
Black Cab	£6.60	1	CMT UK Ltd - Travel Fare For			0.001
Regular Taxi	£8.52	1	Uber in Paris - Photo Trade Show - 10/11/17			0.001
Regular Taxi	£11.65	1	Uber in Paris - Photo Trade Show - 11/11/17			0.002
Regular Taxi	£11.70	1	Uber - Staff Travel to Christmas Party Venue - 14/12/17			0.002
Regular Taxi	£8.18	1	Uber - Travel for Guardian Meeting - 17/01/18	London, N1 9GU	4.62	0.001
Regular Taxi	£16.19	1	Uber to Exhibition - Private View - TPS			0.003
Regular Taxi	£20.12	1	Uber - Travel for Dave Hogan's Private View Exhibition			0.003
Black Cab	£5.14	1	Zach Travel to Collect Wine for an Art Catalogue Exhibition			0.001
Regular Taxi	£37.75	1	Uber - Travel to Sony World Photography Awards	London WC2R 1LA	12.14	0.003
Regular Taxi	£10.80	1	Uber - To London Eye Meeting - TPS	London SE1 7PB	7.98	0.002
Regular Taxi	£26.19	1	Uber - TPS Staff Travel to Sony World Photography Awards	London WC2R 1LA	12.14	0.003
Regular Taxi	£5.29	1	Uber - Travel to Barbican	London EC2Y 8DS	2.33	0.001
Regular Taxi	£5.29	1	Uber - Travel to Barbican	London EC2Y 8DS	2.33	0.001
Regular Taxi	£11.15	1	Uber to Barbican - Meeting with Stuart	London EC2Y 8DS	2.33	0.001
Regular Taxi	£15.62	1	Uber - Travel to Somerset House For Meeting	London SE1 7PB	7.98	0.002
<b>Total</b>	<b>£267.57</b>	<b>19</b>			<b>51.85</b>	<b>0.04</b>



**Table 18: Data supplied and emissions breakdown for air freight**

Flight Type	Tonne.km	Emissions (tCO <sub>2</sub> e)
Short Haul International	167,972.40	327.03
Long Haul International	18,663.60	22.99
<b>Total</b>	<b>186,636</b>	<b>350.02</b>

**Table 19: Data supplied and emissions breakdown for lorry freight**

Type of Lorry	tonne.km	tCO <sub>2</sub> e
All articulated (UK average)	282,557.0	24.09

**Table 20: Data supplied and emissions breakdown for van distribution**

Type of Van	tonne.km	tCO <sub>2</sub> e
Average Diesel Van	565,113.99	307.65

**Table 21: Data supplied and emissions breakdown for employee commuting**

Type of Transport	Annual Distance (miles)	Emissions (tCO <sub>2</sub> e)
Car	2,784	0.81
Motorbike	12,710	2.36
Bus	1,624	0.31
Rail	139,934	9.62
<b>Total</b>	<b>157,052</b>	<b>13.10</b>



**Table 22: Data supplied and emissions breakdown for water consumption**

Site	Water supply (m <sup>3</sup> )	Water Supply (tCO <sub>2</sub> e)	Estimated wastewater %	Wastewater treatment (tCO <sub>2</sub> e)	Total emissions from water consumption (tCO <sub>2</sub> e)
theprintspace	327	0.11	95%	0.22	0.33
London Picture Framing	67	0.02	95%	0.05	0.07
<b>Totals</b>	<b>394</b>	<b>0.14</b>		<b>0.27</b>	<b>0.40</b>

**Table 23: Data supplied and emissions breakdown for waste**

Site	Category	Disposal method	Waste produced per week (kg)	Waste produced per year (tonnes)	Total Emissions (tCO <sub>2</sub> e)
TPS	Recycling waste	Recycle	130	46.40	27.22
	Cardboard	Recycle	50	13.92	0.30
	General Waste	Landfill	125	2.32	0.05
<b>Subtotal</b>			<b>305</b>	<b>62.64</b>	<b>27.56</b>
LPF	General Waste	Landfill	1,000	5.8	3.40
	Recycling waste	Recycle	300	6.0	0.13
<b>Subtotal</b>			<b>1,300</b>	<b>11.83</b>	<b>3.53</b>
<b>Total</b>			<b>1,605</b>	<b>74.47</b>	<b>31.09</b>