



ASOS

2012-13 Company Greenhouse Gas Assessment

On behalf of The CarbonNeutral Company

441501R(05)

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RSK GENERAL NOTES

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1 CARBON NEUTRAL CERTIFICATION SUMMARY

CarbonNeutral certification: **CarbonNeutral® company**
 Organisation: **ASOS**
 Reporting period: **1st September 2012 to 30th August 2013**

Table 1. CarbonNeutral Certification Scope & Emissions to be Offset:

Scope	Emissions Source Category		Required / Recommended	Included?	tCO ₂ e
Scope 1	Direct emissions from owned or leased stationary sources that use fossil fuels or emit fugitive emissions		Required	✓	486.7
	Direct emissions from owned or leased mobile sources		Required	N/a	--
Scope 2	Emissions from the generation of purchased electricity and/or steam		Required	✓	13,174.2
Scope 3	Purchased services	Water supply	Recommended	✓	0.1
	Fuel and energy related activities	Upstream emissions of purchased electricity	Recommended	X	--
		Transmission and distribution losses	Required	✓	1,101.6
	Upstream transport & distribution	Outbound courier deliveries of packages	Recommended	X	--
		Third party transportation and storage of production-related goods	Required	N/a	--
		Third party transportation and storage of sold products	Required	✓	23,602.2
	Waste generated	Wastewater	Recommended	✓	0.1
		Other waste	Required	✓	9.4
	Business travel	Transport by air, public transport, rented/leased vehicle and taxi	Required	✓	3,535.4
		Emissions from hotel accommodation	Recommended	✓	94.3
	Employee commuting		Recommended	✓	909.2
Overall compliance				✓	42,913.2
TOTAL FOR OFFSET (tCO ₂ e)					42,914

Please note total calculated GHG emissions are rounded up to the nearest whole tCO₂e for the purposes of offsetting.

2 GHG ASSESSMENT SUMMARY

This greenhouse gas (GHG) assessment has been prepared by RSK, on behalf of The CarbonNeutral Company, to estimate GHG emissions associated with the operations of ASOS during the 1st September 2012 to 30th August 2013 financial year.

ASOS is the UK's largest independent online fashion and beauty retailer, with over 65,000 branded and own label womenswear and menswear products delivered worldwide. This assessment covers GHG emissions resulting from ASOS' operations at the following locations:

Table 2. ASOS Locations, Function, Staff Number & Floor Area

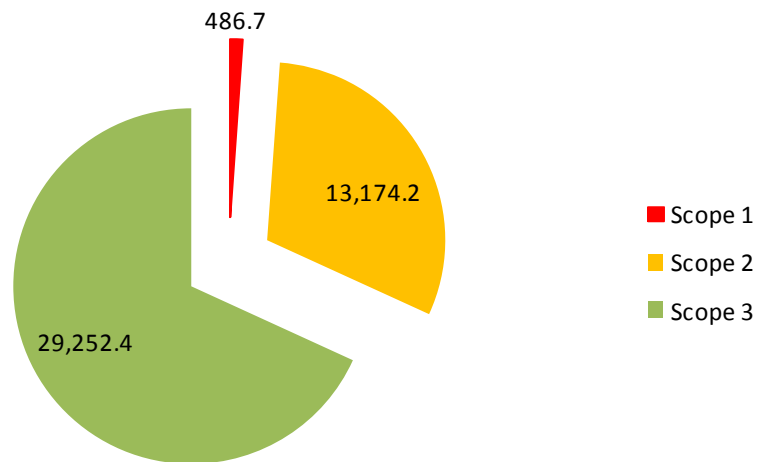
Location	Function	Full Time Equivalent (FTE) Staff	Floor Area (sqm)
Barnsley, UK	Warehouse	1,693	49,239
London, UK	Office	1,219	15,028
Hemel Hempstead, UK	Office	404	25,113
Birmingham, UK	Office	15	262
New York, USA	Office	15	2,500
Berlin, Germany	Office	8	185
Lille, France	Office	8	239
Sydney, Australia	Office	7	96
Total		3,369	92,662

2.1 GHG Emissions by Scope

Table 3. GHG Emissions by Scope

Emissions Scope	GHG Emissions (tCO ₂ e)
Scope 1 – Direct Emissions	486.7
Scope 2 – Indirect Electricity Emissions	13,174.2
Scope 3 – Other Indirect Emissions	29,252.4
Total	42,913.2

Figure 1. GHG Emissions by Scope (tCO₂e)



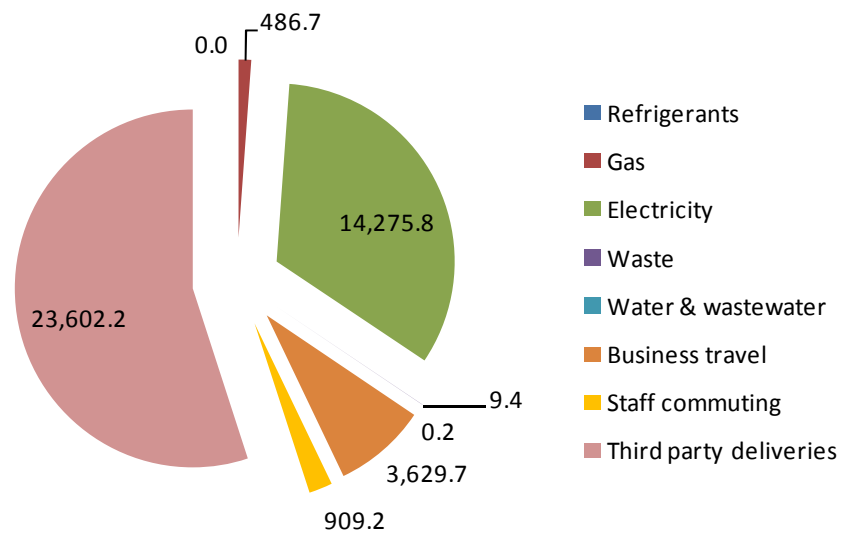
2.2 GHG Emissions by Source

Table 4. GHG Emissions by Source (tCO₂e)

Activity	GHG Emissions (tCO ₂ e)	Sub Total (tCO ₂ e)
Premises		
Refrigerant gases	--	14,772.1
Gas	486.7	
Electricity	13,174.2	
Electricity T&D losses	1,101.6	
Waste	9.4	
Water & wastewater	0.2	
Business travel		
Taxi	19.2	3,629.7
Train	64.1	
Flights	3,452.0	
Hotels	94.3	
Staff commuting		
Petrol car	362.2	909.2
Diesel car	75.5	
Motorcycle	34.0	
Bus	52.8	

Activity	GHG Emissions (tCO ₂ e)	Sub Total (tCO ₂ e)
Train	252.8	
Underground	132.0	
Third party deliveries		
Road	610.6	23,602.2
Sea	6.9	
Air	22,984.7	
Total		42,913.2

Figure 2. GHG Emissions by Source (tCO₂e)



2.3 GHG Emissions by Location

Table 5. GHG Emissions by Location

GHG Emissions (tCO ₂ e)									
Emissions Source	Barnsley, UK	London, UK	Hemel Hempstead, UK	Birmingham, UK	New York, USA	Berlin, Germany	Lille, France	Sydney, Australia	TOTAL
	Refrigerants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Gas	244.6	176.1	58.4	2.2	2.2	1.2	1.0	486.7
	Electricity	7,173.9	5,165.4	1,711.9	63.6	63.6	33.9	29.7	14,275.8
	Waste	4.7	3.4	1.1	0.0	0.0	0.0	0.0	9.4
	Water & wastewater	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2
	Business travel	1,824.0	1,313.3	435.3	16.2	16.2	8.6	7.5	3,629.7
	Staff commuting	456.9	329.0	109.0	4.0	4.0	2.2	1.9	909.2
	Third party deliveries	23,602.2	0.0	0.0	0.0	0.0	0.0	0.0	23,602.2
	Total	33,306.4	6,987.3	2,315.7	86.0	86.0	45.9	45.9	40.1

2.4 Company GHG Emissions Intensity Metrics

Absolute greenhouse gas (GHG) emissions can vary over time and often correspond to the expansion or contraction of an organisation. It is therefore useful to use reporting metrics that take these effects into account to establish emissions intensity.

Table 6 presents ASOS' GHG emissions normalised by full time equivalent (FTE) staff number and the number of items sold and delivered during the assessment period.

Table 6. GHG Emissions per FTE Staff and Items Delivered

Metric	GHG Emissions (tCO ₂ e)
Total GHG emissions	42,913.2
GHG emissions per FTE staff (3,369)	12.7
GHG emissions per item delivered (19,854,125)	0.0022

3 GHG ASSESSMENT CONTEXT

3.1 Introduction

Greenhouse gas (GHG) emissions assessments quantify the total greenhouse gases produced directly and indirectly from a business or organisation's activities. GHG emissions assessments may also be conducted for particular products or services. Also known as a "Carbon Footprint", it is an essential tool, providing your business with a basis for understanding and managing its climate change impacts.

GHG assessments quantify all six Kyoto GHGs, where applicable, and are measured in terms of tonnes carbon dioxide (CO₂) equivalence, or tCO₂e, where equivalence means having the same warming effect over as CO₂ a period of 100 years. The six Kyoto gases are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), sulphur hexafluoride (SF₆) and perfluorocarbons (PFCs). The global warming potential (GWP) of each GHG is presented in Table 7.

Table 7. Kyoto Protocol GHGs and their Global Warming Potential (GWP)

Greenhouse Gas	Chemical Formula	GWP (CO ₂ e)
Carbon dioxide	CO ₂	1
Methane	CH ₄	25
Nitrous oxide	N ₂ O	298
Hydro fluorocarbons	HFCs	Depends on specific gas
Sulphur hexafluoride	SF ₆	22,800
Perfluorinated compounds	PFCs	Depends on specific gas

GHG assessments use client-supplied activity data on fuel and material consumption (for example kWh of electricity or litres of fuel), from which GHG emissions estimates are quantified by applying relevant emission factors.

3.2 Reporting Standards

Carbon footprint assessments are generally carried in accordance with one of two internationally recognised standards for accounting and reporting corporate greenhouse gas emissions. The best known is the "Greenhouse Gas Protocol - Corporate Accounting and Reporting Standard" (GHG Protocol) developed in a partnership of the World Business Counsel for Sustainable Development (WBCSD) and the World Resource Institute (WRI). The International Standard Organisation (ISO) developed a standard similar to the Greenhouse Gas Protocol. This is the *ISO14064-1* specification, part of the environmental 14000 series. These two standards are very similar and both

provide guidelines regarding organisational and operational boundaries, quantification and reporting practice.

The Carbon Neutral Protocol developed by the Carbon Neutral Company is an additional quality layer on top of the above mentioned standards and describes the requirements for achieving the CarbonNeutral brand mark. This GHG assessment is based on the WBCSD/WRI GHG Protocol while incorporating further guidance from the Carbon Neutral Protocol.

3.3 Emissions Sources

The above mentioned standards break down emission sources in three categories or 'Scopes', as follows:

- **Scope 1** – Direct emissions released from sources that are owned or controlled by the company e.g. corporate car fleets, captive power generation facilities and fuel combustion for heat and power;
- **Scope 2** – Indirect emissions associated with the generation of purchased electricity, heat or steam; and
- **Scope 3** – All other indirect emissions sources not released from Scope 1 or 2 sources e.g. business travel, waste disposal and outsourced activities such as deliveries.

The GHG protocol describes the quantification of Scope 1 and 2 as mandatory whereas Scope 3 emissions are considered optional. Depending on the nature/remit of an organisation, Scope 3 activities can contribute a significant portion of overall emissions and therefore in order to have a proper understanding of an organisation's GHG emissions, it is advisable to include relevant Scope 3 emissions.

3.4 Why Measure GHG Emissions?

A GHG assessment is an essential tool in the process of monitoring and reducing an organisation's climate change impact as it allows reduction targets to be set and action plans formulated. GHG assessment results can also allow organisations to be transparent about their climate change impacts through reporting of GHG emissions to customers, shareholders, employees and other stakeholders. Regular assessments allow clients to track their progress in achieving reductions over time and provide evidence to support green claims in external marketing initiatives such as product labelling or Corporate Social Responsibility (CSR) reporting.

4 GHG ASSESSMENT METHODOLOGY

This corporate greenhouse gas (GHG) assessment has been carried out in accordance with the following guidance documents:

- The Greenhouse Gas Protocol - Corporate Accounting and Reporting Standard developed by the WBCSD and WRI;
- The DEFRA / DECC – Guidance for businesses and organisations on how to measure and report their greenhouse gas emissions; and
- The CarbonNeutral Protocol – developed by The CarbonNeutral Company.

4.1 Emissions Factors

GHG emissions from each source are calculated by multiplying the activity data with the appropriate emission factor(s).

Carbon dioxide (CO₂) emission factors are sourced from DEFRA / DECC's Environmental Reporting: guidelines for company reporting on greenhouse gas emissions (2011).

4.2 Operational Boundary & Data Availability

In line with the GHG Protocol and The CarbonNeutral Protocol, this assessment encompasses the mandatory emissions Scopes 1 and 2, as well as relevant Scope 3. Table 8 provides an overview of data provided for this assessment.

It is understood that staff turnover and the opening of several new international offices has contributed to the provision of limited data by ASOS for this assessment. It has therefore been agreed with ASOS and the CarbonNeutral Company that ASOS' 2012-13 carbon emissions should be estimated by extrapolating the results of their more comprehensive 2011-12 GHG assessment according to FTE staff numbers and the number of items sold and delivered.

ASOS 2011-12 GHG assessment relates to Greater London House, People Building, Barnsely warehouse, Century House, Swallowdale Lane warehouse, hosted servers and distribution of goods, where 893 FTE staff were employed and during which time 12,095,722 items were sold and delivered.

Appendix A provides the 2011-12 activity data, and **Appendix B** the applied emissions factors.

Table 8. Data Quality

GHG Protocol Scope	Emissions Source	Data Quality
Scope 1 – Direct emissions	Refrigerant gases	Estimated
	Gas	Estimated
Scope 2 – Indirect electricity emissions	Electricity	Estimated
Scope 3 – Other indirect emissions	Electricity T&D losses	Estimated
	Waste	Estimated
	Water & wastewater	Estimated
	Business travel	Estimated
	Staff commuting	Estimated
	Third party deliveries	Estimated

4.3 Key Assumptions

The following key assumptions have been made as part of this assessment:

- Emissions from premises (electricity, gas, water & waste), staff commuting and business travel at each of ASOS' locations have been estimated by extrapolating results of the previous GHG assessment (covering ASOS' UK operations in the 2011-12 financial year) according to FTE staff number. ASOS' FTE staff numbers increased from 839 to 3,369 between these periods; and
- Emissions from third party delivery of sold products have been estimated by extrapolating from the 2011-12 GHG assessment according to the number of items sold (12,095,772 items in 2011-12, and 19,854,125 items in 2012-13).

4.4 References

Principle Emission Factor References

- 2011 Guidelines to DEFRA / DECC's GHG Conversion Factors for Company Reporting (2011).

Reporting Protocol References

- GHG protocol – A Corporate Accounting and Reporting Standard, April 2004;
- The DEFRA / DECC – Guidance for businesses and organisations on how to measure and report their greenhouse gas (GHG) emissions, August 2011; and
- CarbonNeutral Protocol – A framework for effective action on climate change; Publication by the Carbon Neutral Company, April 2012.

5 RESULTS

5.1 GHG Emissions

Table 9 presents total company GHG emissions during 2012-13, together with emissions normalised by FTE and sqm floor area.

Table9. Company GHG Emissions

Metric	GHG Emissions (tCO ₂ e)
Total GHG emissions	42,913.2
GHG emissions per FTE staff (3,369)	12.7
GHG emissions per item delivered (19,854,125)	0.0022

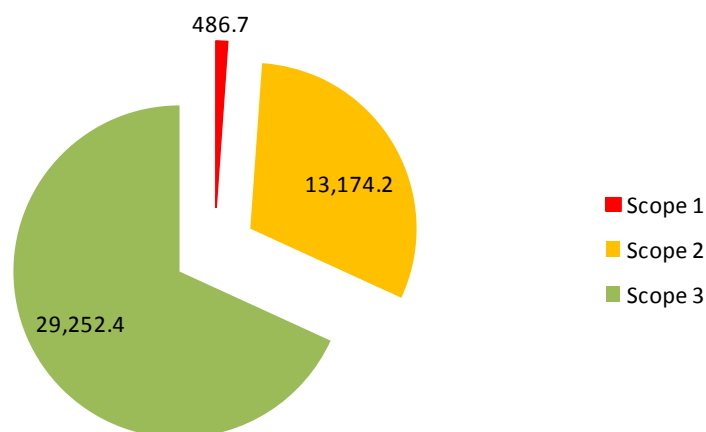
5.2 GHG Emissions by Scope

Table 10 and Figure 3 present GHG emissions estimated under each Scope of the Greenhouse Gas Protocol.

Table 10. GHG Emissions by Scope

Emissions Scope	GHG Emissions (tCO ₂ e)
Scope 1 – Direct Emissions	486.7
Scope 2 – Indirect Electricity Emissions	13,174.2
Scope 3 – Other Indirect Emissions	29,252.4
Total	42,913.2

Figure 3. GHG Emissions by Scope (tCO₂e)



Scope 3 (other indirect) emissions from waste disposal, water supply, wastewater, business travel, staff commuting and the delivery of sold products account for the majority (68%) of ASOS' GHG emissions. Scope 2 (indirect electricity) emissions represent approximately 31% of the emissions total whilst Scope 1 (indirect) emissions account for approximately 1% of the total.

5.3 GHG Emissions by Source

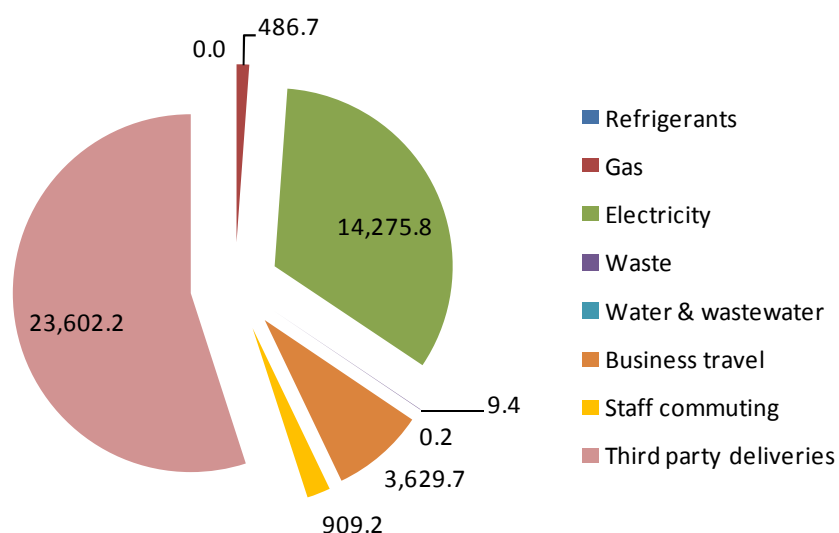
Table 11 presents GHG emissions calculated for each separate emissions source for which activity data has been provided by Louise Galvin, and this data is presented visually in Figure 4.

Table 11. GHG Emissions by Source (tCO₂e)

Activity	GHG Emissions (tCO ₂ e)	Sub Total (tCO ₂ e)
Premises		
Refrigerant gases	--	14,772.1
Gas	486.7	
Electricity	13,174.2	
Electricity T&D losses	1,101.6	
Waste	9.4	
Water & wastewater	0.2	
Business travel		
Taxi	19.2	3,629.7
Train	64.1	
Flights	3,452.0	
Hotels	94.3	
Staff commuting		
Petrol car	362.2	909.2
Diesel car	75.5	
Motorcycle	34.0	
Bus	52.8	
Train	252.8	
Underground	132.0	
Third party deliveries		
Road	610.6	23,602.2
Sea	6.9	

Activity	GHG Emissions (tCO ₂ e)	Sub Total (tCO ₂ e)
Air	22,984.7	
Total		42,913.2

Figure 4. GHG Emissions by Source (tCO₂e)



Regarding GHG emissions sources, emissions from mains electricity consumption (generation and transmission & distribution losses) account for 48% of total emissions, followed by third party delivery of sold products (35%) – of which 97% result from air freight. Business travel and accommodation represent the next largest emissions source (12%), followed by staff commuting (3%) and mains gas consumption (2%). Emissions from waste disposal, water supply, wastewater and refrigerant gas losses each account for less than 0.1% of the emissions total.

Emissions from the air freighting of sold products represent 97% of ASOS' third party delivery emissions, or 54% of their total carbon footprint for 2012-13.

5.4 Emissions by Location

Table 12. GHG Emissions by Location

Emissions Source	GHG Emissions (tCO ₂ e)							
	Barnsley, UK	London, UK	Hemel Hempstead, UK	Birmingham, UK	New York, USA	Berlin, Germany	Lille, France	Sydney, Australia
Refrigerants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gas	244.6	176.1	58.4	2.2	2.2	1.2	1.2	1.0
Electricity	7,173.9	5,165.4	1,711.9	63.6	63.6	33.9	33.9	29.7
Waste	4.7	3.4	1.1	0.0	0.0	0.0	0.0	0.0
Water & wastewater	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Business travel	1,824.0	1,313.3	435.3	16.2	16.2	8.6	8.6	7.5
Staff commuting	456.9	329.0	109.0	4.0	4.0	2.2	2.2	1.9
Third party deliveries	23,602.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	33,306.4	6,987.3	2,315.7	86.0	86.0	45.9	45.9	40.1
								42,913.2

5.5 Comparison with Previous Results

Table 13 compares the results of ASOS' current and previous GHG assessment results.

Table 13. Comparison of 2012-13 and 2011-12 GHG Assessment Results

Emissions Source	GHG Emissions (tCO ₂ e)		
	2011-12	2012-13	Difference
Refrigerants	0.0	0.0	--
Gas	129.0	486.7	+ 357.7
Electricity	3,784.0	14,275.8	+ 10,491.8
Waste	2.5	9.4	+ 6.9
Water & wastewater	0.1	0.2	+ 0.1
Business travel & accommodation	962.1	3,629.7	+ 2,667.6
Staff commuting	241.0	909.2	+ 668.2
Third party deliveries	14,379.2	23,602.2	+ 9,223.0
Total	19,497.9	42,913.2	+ 23,415.3
Emissions per FTE staff	21.8	12.7	- 9.1
Emissions per item delivered	0.0016	0.0022	+ 0.0006

Most company GHG emissions relate to staff activities, therefore emissions from the majority of ASOs' sources increased between the 2011-12 and 2012-13 assessments in line with the significant increase in staff from 893 in 2011-12 to 3,369 in 2012-13.

Emissions from third party deliveries, however, relate to the number of items sold rather than number of staff, and as a result have also increased in line with the number of items sold – from 12,095,722 in 2011-12 to 19,854,125 in 2012-13. Emissions per product delivered have increased slightly from 0.0016 to 0.0022 tCO₂e per item.

The reduction in GHG emissions per FTE staff is explained by the fact that no sold products are delivered from ASOS' new international office locations (a large portion of ASOS' footprint), therefore the addition of these locations to their portfolio serves to reduce average emissions per staff.

Appendix A – 2011-12 Activity Data

A list of activity data provided for ASOS' 2011-12 GHG assessment is provided in Table 14.

Table 14. ASOS' 2011-12 Activity Data

Activity	Data	Units
Greater London House		
Electricity - consumption (Green Tariff)	382,435	kWh
Electricity - consumption	73,502	kWh
Electricity - T&D losses	455,937	kWh
Waste – composted	10,600	kg
Waste – incinerated	260	kg
Waste – recycled	13,714	kg
Business travel – taxi	15,044	miles
Business travel – train	37,043	£
Business travel – domestic flight	93,391	passenger.km
Business travel – short haul flight	973,076	passenger.km
Business travel – long haul flight	1,272,227	passenger.km
Business travel – hotel stays	811	nights
Staff commuting – petrol car	284,835	miles
Staff commuting – diesel car	65,802	miles
Staff commuting – hybrid car	1,536	miles
Staff commuting – motorcycle	45,035	miles
Staff commuting – bus	59,535	passenger.miles
Staff commuting – train	732,830	passenger.miles
Staff commuting – underground	298,214	passenger.miles
People Building		
Electricity - consumption	106.460	kWh
Electricity - consumption T&D losses	106.460	kWh
Natural gas consumption	4,590	m ³
Waste – landfilled	3,154	kg
Business travel – long haul	3,413,779	passenger.km
Barnsley warehouse		
Electricity - consumption (Green Tariff)	5,860,015	kWh
Electricity – T&D losses	5,860,015	kWh
Natural gas consumption	69,992	kWh
Waste - recycled	826,000	kg
Water supply	7,948	litres
Century House		
Electricity - consumption	133,5234	kWh

Activity	Data	Units
Electricity – T&D losses	133,5234	kWh
Natural gas consumption	442,900	kWh
Business travel – domestic flight	1,885	passenger.km
Business travel – short haul flight	9,956	passenger.km
Business travel – long haul flight	783,500	passenger.km
Swallowdale Lane		
Electricity - consumption	622,474	kWh
Electricity – T&D losses	622,474	kWh
Natural gas consumption	140,039	kWh
Hosted servers		
Electricity - consumption	475,179	kWh
Electricity – T&D losses	475,179	kWh
Deliveries to customers		
Road freight – UK	917,311	tonne.km
Road freight – international	1,960,303	tonne.km
Sea freight – UK	6,916	tonne.km
Sea freight – international	254,898	tonne.km
Air freight	20,916,008	tonne.km

Appendix B – Emission Factors

A list of GHG emission factors applied in ASOS' 2011-12 GHG assessment is provided below.

Table 15. Emissions Factors

Emissions Source	Notes	Factor	Unit	Reference
Electricity	Consumed	0.48403	kgCO ₂ e/kWh	DEFRA 2011
	T&D losses	0.03802	kgCO ₂ e/kWh	DEFRA 2011
Natural Gas	Gross CV	0.18404	kgCO ₂ e/kWh	DEFRA 2013
Waste	Landfilled	22.2	kgCH ₄ /t	IPCC 2006
Waste	Composted	0.3	kgN ₂ O/t	IPCC 2006
Water	Supply	0.34	kgCO ₂ e/m ³	DEFRA 2011
Petrol car	Average	0.2802	kgCO ₂ e/km	DEFRA 2011
Hybrid car	Average	0.13808	kgCO ₂ e/km	DEFRA 2011
Diesel car	Average	0.19207	kgCO ₂ e/km	DEFRA 2011
Taxi		0.21007	kgCO ₂ e/km	DEFRA 2011
Train		0.05304	kgCO ₂ e/pkm	DEFRA 2011
Underground		0.07302	kgCO ₂ e/pkm	DEFRA 2011
Bus		0.14811	kgCO ₂ e/pkm	DEFRA 2011
Flight - domestic	Average class	0.17801	kgCO ₂ e/pkm	DEFRA 2011
Flight - short haul	Economy class	0.09960	kgCO ₂ e/pkm	DEFRA 2011
	Business class	0.14941	kgCO ₂ e/pkm	DEFRA 2011
Flight – long haul	Economy class	0.08780	kgCO ₂ e/pkm	DEFRA 2011
	Premium economy	0.14050	kgCO ₂ e/pkm	DEFRA 2011
	Business class	0.25471	kgCO ₂ e/pkm	DEFRA 2011
Hotel stays	Asia	38.0	kgCO ₂ /night	IPCC 2006
	Africa	33.8	kgCO ₂ /night	IPCC 2006
	South America	20.5	kgCO ₂ /night	IPCC 2006
	USA	31.1	kgCO ₂ /night	IPCC 2006
	UK	28.1	kgCO ₂ /night	IPCC 2006
	Europe	25.3	kgCO ₂ /night	IPCC 2006
	World	30.1	kgCO ₂ /night	IPCC 2006
Road freight	Average HGV	0.12702	kgCO ₂ /tonne.km	DEFRA 2011
Sea freight	Average container	0.016	kgCO ₂ /tonne.km	DEFRA 2011
Air freight	Long haul	0.663	kgCO ₂ /tonne.km	DEFRA 2011