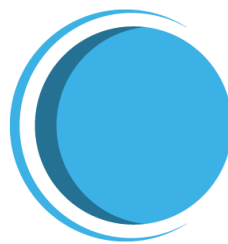




From **Natural Capital Partners**



carbon smart

ASOS PLC

Greenhouse Gas
Assessment Report

1st September 2014 to 31st August 2015



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1. Welcome and introduction

This report is prepared on behalf of CarbonNeutral® from Natural Capital Partners for ASOS PLC. CarbonNeutral® from Natural Capital Partners works with clients all over the world to develop carbon reduction strategies including; footprint measurement, establishing reduction targets and delivering carbon offset programmes.

ASOS, one of the world's leading online clothing retailers, are a global brand based in the UK. ASOS are conscious of their environmental impact and as such have publically committed to *"measuring and taking action to reduce the carbon footprint of ASOS's business activities"*. In line with this commitment, ASOS have been calculating their carbon footprint since 2008.

The organisation continues to grow year-on-year with total revenue exceeding £1.15 billion and sales of just under 30 million items in the reporting period. These figures have increased 20% and 18% respectively on 2013/14 totals. Given the rapid expansion of ASOS, the organisation track their annual environmental performance with intensity metrics, which have been recalculated this year to provide a more holistic analysis of ASOS's operations.

ASOS's carbon footprint has been calculated for the reporting period 01/09/2014 to 31/08/2015. This carbon footprint includes building emissions from nine operational sites across five countries, business travel, outbound courier deliveries, third party deliveries to customers, ASOS's external data centre and emissions from mailing packaging.

Organisation name:	ASOS PLC
Organisation key contact and role:	Jess Blincow, Corporate Responsibility Coordinator
Head office address:	Greater London House, Hampstead Road, London, NW1 7FB
Number of staff (FTE):	1,928
Author:	Daniel Murray

2. ASOS Greenhouse Gas (GHG) Assessment Summary

ASOS's total GHG emissions for 2014/15 were 48,336.2 tCO₂e:

		2014/15	
Scope	Resource type	tCO ₂ e	% of total
Scope 1	Refrigerants	315.6	0.7%
	Other fuels	5.1	0.0%
	Natural gas	550.4	1.1%
Scope 2	Electricity	5,448.1	11.3%
Scope 3	Electricity T&D	441.0	0.9%
	Waste	17.3	0.0%
	Water & Wastewater	54.5	0.1%
	Cars	17.3	0.0%
	Taxi	77.8	0.2%
	Trains	306.4	0.6%
	Flights	1,833.8	3.8%
	Hotels	209.4	0.4%
	Data Centre	273.4	0.6%
	Outbound couriers	1.5	0.0%
	3rd party delivery emissions	35,386.3	73.2%
	Mailing packaging	3,398.2	7.0%
Total Note: to avoid double counting, distribution emissions from mailing packaging (1,295.8 tCO ₂ e) have been excluded as these emissions are accounted for in 3 rd party deliveries – see section 7 for further details		48,336.2	100.0%

Table 1: ASOS GHG assessment total emission

3. Executive summary

CarbonNeutral® from Natural Capital Partners has commissioned Carbon Smart to calculate ASOS's carbon footprint. ASOS's total carbon footprint for 2014/15 is 48,336 tCO₂e, which represents a 13% increase on 2013/14. Emissions from the delivery of products to customers continues to represent the most significant proportion of ASOS's carbon footprint at just over 73%, up from 71% in 2013/14.

A number of material emissions sources, including building electricity, business travel and customer delivery emissions, all rose in 2014/15 – this is primarily due to improved data quality and coverage. There were significant reductions in the emissions from flights and outbound couriers (both due to an improved reporting methodology) and the data centre (due to the decommissioning of equipment).

About

ASOS is a British online fashion and beauty store, primarily aimed at young adults. The organisation sells over 850 unique brands as well as its own range of clothing and accessories. The company continues to expand annually, with revenue exceeding £1 billion for the first time in 2014/15.

ASOS deliver items to 243 countries from their fulfilment centres in the UK and Europe. In order to meet their ever growing demand, ASOS have offices around the globe. This report covers sites in the UK, Germany, USA, China and finally Australia. ASOS have closed their Lille office, so that is not included within this report.

ASOS are keenly aware of the environmental impact of their business and have actively been trying to limit this for a number of years. For example, since ASOS's first carbon footprint was calculated in 2008, the organisation have reported on reductions in waste to landfill at London & Barnsley by 99%, reduced deliveries to Barnsley from 150 to 8 per day and their move to ensure delivery boxes are made from 100% recycled materials. As part of work, ASOS have offset their emissions through The CarbonNeutral® Company for a number of years. In 2014/15 ASOS will be offsetting emissions from their business travel (including flights and hotels) and external data centre, a total of 2,719 tCO₂e.

4. Scope

Your organisation's environmental performance has been assessed using an organisational control approach. Activities that have a material and measurable impact on environmental performance have been quantified.

Carbon footprint	In scope	Out of scope
	Scope 1 – Direct emissions: Refrigerants, Diesel, Heating oil, Natural gas	None
	Scope 2 – Indirect emissions: Purchased electricity	None
	Scope 3 – Other indirect emissions: Transmission and distribution losses, Waste, Water, Wastewater, Business travel (inc. cars, taxi's, rail, underground, flights & hotels), Data centre (inc. electricity, transmission/distribution losses & refrigerants), outbound couriers, third party delivery emissions to customers & mailing packaging	None

Scope 1 (Direct emissions): Emissions from activities owned or controlled by your organisation that release emissions into the atmosphere. They are direct emissions. For example, scope 1 emissions are generated from natural gas use.

Scope 2 (Energy indirect): Emissions released into the atmosphere associated with your consumption of purchased electricity. These are indirect emissions that are a consequence of your organisation's activities but which occur at sources you do not own or control. For example, scope 2 emissions are generated from purchase of grid electricity.

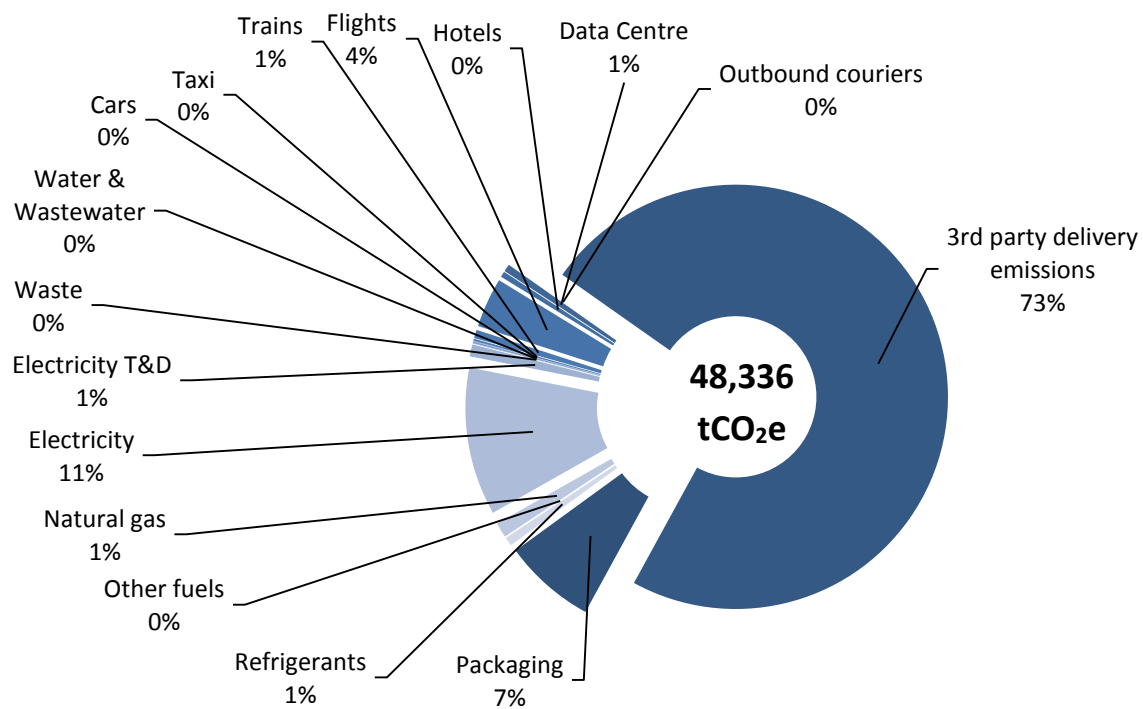
Scope 3 (Other indirect): Emissions that are a consequence of your actions, which occur at sources which you do not own or control and which are not classed as scope 2 emissions. Examples of scope 3 emissions are your business travel and waste disposal.

5. ASOS GHG assessment

Scope	Resource type	Berlin	Birmingham	Eurohub	Greater London House	Hemel Hempstead	Sydney	Barnsley	New York	China	Total
Scope 1	Refrigerants	-	5.5	-	258.8	24.3	2.3	-	3.6	21.1	315.6
	Other fuels	-	-	-	-	0.0	-	5.1	-	-	5.1
	Natural gas	1.3	0.8	35.8	342.6	12.1	1.0	155.2	1.6	-	550.4
Scope 2	Electricity	11.6	13.0	211.4	967.9	131.8	16.2	4,058.2	15.4	22.7	5,448.1
Scope 3	Electricity T&D	0.5	1.1	9.9	79.9	10.9	1.0	335.1	1.1	1.6	441.0
	Waste	0.0	0.7	0.6	1.2	0.7	0.1	10.7	0.1	3.2	17.3
	Water & Wastewater	0.1	0.2	0.0	14.7	1.6	0.1	37.6	0.1	0.1	54.5
	Cars	0.1	0.2	-	12.4	3.6	0.1	0.5	0.1	0.4	17.3
	Taxi	0.3	1.0	-	55.4	16.3	0.4	2.1	0.4	2.0	77.8
	Trains	1.1	3.8	-	218.3	64.0	1.4	8.1	1.6	7.9	306.4
	Flights	6.7	22.8	-	1,306.9	383.3	8.6	48.5	9.5	47.6	1,833.8
	Hotels	0.8	2.6	-	149.2	43.8	1.0	5.5	1.1	5.4	209.4
	Data Centre	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	273.4
	Outbound couriers	0.0	-	0.6	0.4	0.3	0.0	-	0.0	0.2	1.5
	3rd party delivery emissions	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35,386.3
	Mailing packaging	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,398.2
Total		22.5	51.7	258.3	3,407.7	692.7	32.1	4,666.5	34.7	112.2	48,336.2

Table 2 – Total GHG emissions for all sites and emission sources (note: mailing packaging emissions exclude distribution emissions as these are accounted for in 3rd party deliveries – see section 7)

ASOS's total carbon footprint for 2014/15 is 48,336.2 tCO₂e. Just 19% of total emissions arise from ASOS's nine sites. The additional emissions emanate from 3rd party delivery emissions to customers (73%), mailing packaging (7% - excluding 3rd party deliveries within the packaging assessment) and the data centre (1%). The graph below illustrates the proportional breakdown of each emission source that contributes to ASOS's total carbon footprint:



The proportional breakdown of emissions sources for 2014/15 vs. 2013/14 can be seen below in table 3:

Scope	Resource type	2014/15		2013/14	
		tCO2e	% of total	tCO2e	% of total
Scope 1	Refrigerants	315.6	0.7%	195.5	0.5%
	Other fuels	5.1	0.0%	-	0.0%
	Natural gas	550.4	1.1%	708.2	1.7%
Scope 2	Electricity	5,448.1	11.3%	4,702.7	11.0%
Scope 3	Electricity T&D	441.0	0.9%	403.6	0.9%
	Waste	17.3	0.0%	19.0	0.0%
	Water & Wastewater	54.5	0.1%	58.2	0.1%
	Cars	17.3	0.0%	19.3	0.0%
	Taxi	77.8	0.2%	20.7	0.0%
	Trains	306.4	0.6%	68.9	0.2%
	Flights	1,833.8	3.8%	2,000.6	4.7%
	Hotels	209.4	0.4%	109.6	0.3%
	Data Centre	273.4	0.6%	478.7	1.1%
	Outbound couriers	1.5	0.0%	399.2	0.9%
	3rd party delivery emissions	35,386.3	73.2%	30,064.6	70.5%
	Mailing packaging	3,398.2	7.0%	5,080.2	11.9%
	Staff commuting	-	0.0%	-	0.0%
Total		48,336.2	100.0%	42,672.4	100.0%

Table 3 – Comparison of 2014/15 vs 2013/14 for each emissions source – note: mailing packaging emissions excluded distribution emissions – see section 7 for further details

Scope 1

- **Refrigerants** rose by 61%. This was driven primarily by an increase in emissions from Greater London House of 163%, where purchases are tracked rather than usage. In reality, usage was probably spread across the two reporting periods.
- **Other fuels** are being reported for the first time and include diesel (for a back-up generator) & heating oil
- **Natural gas** decreased 22%. This was predominantly due to an improvement in data quality for 2014/15 at Barnsley.

Scope 2

- **Electricity** increased by 14% in 2014/15. This was due to an improvement in data quality at Barnsley.

Scope 3

- **Electricity T&D** increased by 9% in 2014/15 due to an improvement in data quality at Barnsley.
- **Waste** fell by 9%. This was likely due to an improvement in data accuracy but remains largely unexplained.

- **Waste & wastewater** fell by 6%. This was likely due to an improvement in data accuracy but remains largely unexplained.
- **Business travel** from cars (expensed mileage) decreased by 10% this year.
- **Business travel** from taxi's and trains increased by 276% and 345% respectively this year. This is due to the fact that ASOS are now collecting more comprehensive and accurate data.
- **Flights** decreased by 8% in 2014/15 despite total flight mileage increasing by 20%. This is predominantly due to a shift in the class of flight taken. In 2013/14, 47% of total flight mileage was long haul, business class where as in 2014/15, just 8% of flights were long haul, business class. The majority of these flights are now taken as long haul, premium economy, which represents 52% of total flight mileage this year. Premium economy seats take up less space than business class seats and thus have a lower GHG conversion factor.

Please note that air travel emissions exclude the impact of radiative forcing as there is currently scientific uncertainty over the multiplier and its appropriate factor.

- **Hotel** related emissions rose by 91% due to business growth.
- **Data centre** emissions fell by 43% due to the decommissioning of equipment housed at the outsourced data centre and the procurement of more efficient equipment.
- **Outbound courier** emissions fell by 100% in 2014/15. This is likely to be due to an identified flaw in the methodology in 2013/14. In 2013/14 the data provided for Greater London House included total courier mileage and number of deliveries. Rather than multiplying just the total mileage by the conversion factor, the total mileage was multiplied by the number of deliveries and subsequently by the conversion factor, leading to a significant overestimation of outbound courier emissions.
- **Third party delivery** emissions rose by 18%. Third party delivery emissions are currently calculated by using a historical average emissions per delivery (0.00119 tCO₂e) and multiplying this figure by the number of deliveries made in the reporting period. Emissions are then split proportionally between sea (0.03%), air (97.38%) and road freight (2.59%). This approach has been taken to ensure consistency with the methodology applied in previous years, with origins in 2009/10. This approach does mean that delivery emissions increase or decrease proportionally with deliveries made. Consequently the impact of any efficiency projects implemented by ASOS will not be seen in the carbon footprint. It is recommended that a fresh approach is applied for the 2015/16 GHG assessment.

- **Mailing packaging** emissions have fallen by 8% due to a 7% decrease in the total quantity of packaging used by ASOS. This corresponds with an 18% increase in total deliveries made, indicating that ASOS have made significant strides in reducing total packaging used.

6. Intensity metrics

Due to rapid expansion, ASOS have historically measured environmental performance using the following intensity metrics:

Reported Intensity Metrics (excluding data centre & mailing packaging)	2011/12	2012/13	2013/14	2014/15
Total emissions (tCO ₂ e)	19,497.9	42,913.2	38,770.6	N/A
tCO ₂ e/item delivered	0.0016	0.0022	0.0015	N/A
tCO ₂ /FTE	21.8	12.7	10.7	N/A
tCO ₂ e/£m	N/A	N/A	N/A	N/A

Table 4 – Historic intensity metrics

These intensity metrics are based on the following performance data:

ASOS performance data	2011/12	2012/13	2013/14	2014/15
Total employees	893	3,369	3,619	3,787
Total revenue (£m)	553	769	955	1,151
Total items delivered	12,095,722	19,854,125	25,290,847	29,767,563

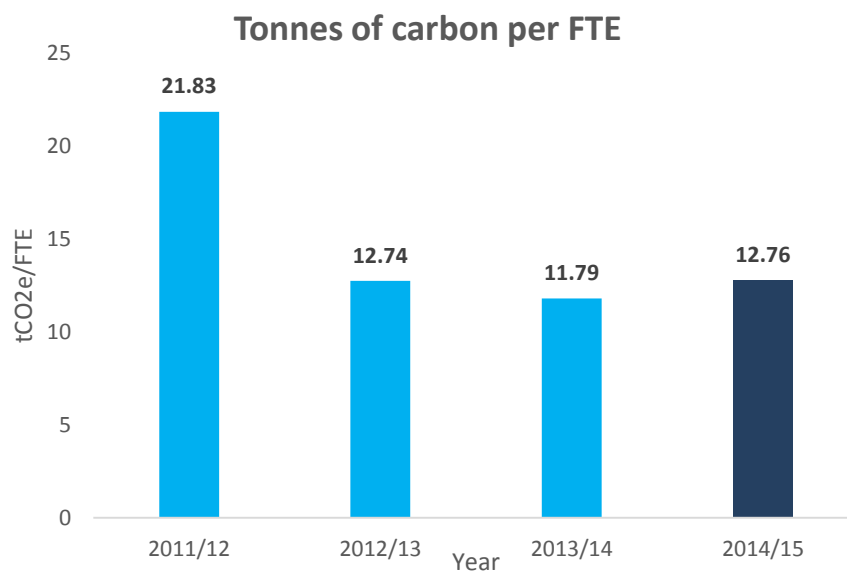
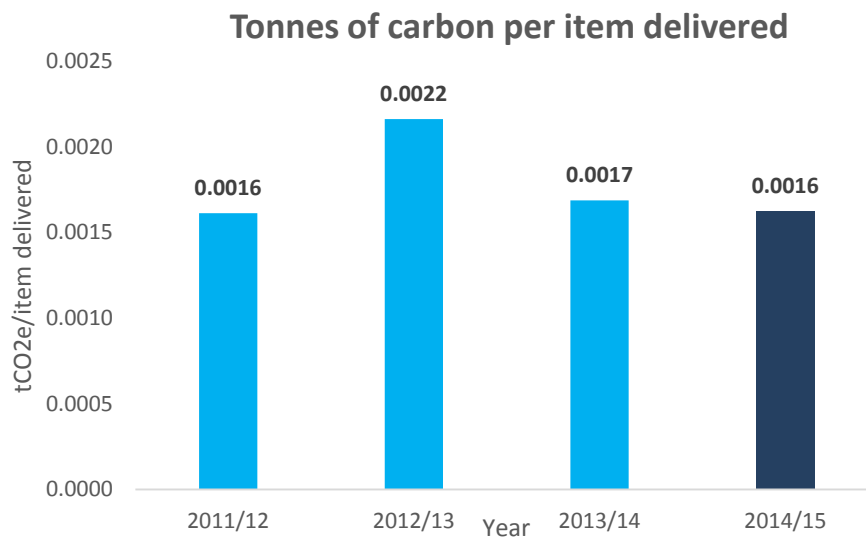
Table 5 – Performance data for intensity metrics

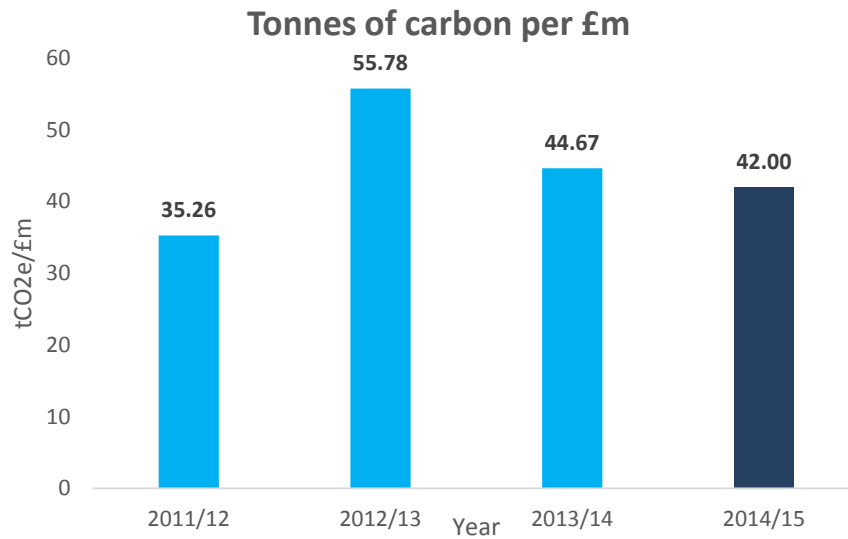
Intensity metrics need to be re-calculated this year as the scope of ASOS's carbon footprint now includes the data centre and a packaging assessment. Both these emission sources were included in last year's GHG assessment, however neither were included when calculating intensity metrics. An additional intensity metric, tonnes of carbon per £m, has been added for 2014/15 and calculated for previous years:

Intensity metrics	2011/12	2012/13	2013/14	2014/15	% change between 2011/12 and 2014/15	% change between 2013/14 and 2014/15
Total emissions (tCO ₂ e)	19,497.9	42,914.1	42,672.4	48,336.2	+148%	+13%
tCO ₂ e/item delivered	0.0016	0.0022	0.0017	0.0016	+1%	-4%
tCO ₂ e/FTE	21.83	12.74	11.79	12.76	-42%	+8%
tCO ₂ e/£m	35.26	55.78	44.67	42.00	+19%	-6%

Table 6 – Revised intensity metrics

Total carbon emissions have increased by 13% since 2013/14, however two of the three intensity metrics have decreased. Tonnes of carbon per item delivered has decreased by 4% whilst tonnes of carbon per £m revenue has decreased by 6%. These metrics indicate that although the total carbon associated with ASOS's activities have increased online with the company's growth, ASOS have been operating more efficiently in 2014/15. Accordingly the tonnes of carbon per FTE has increased by 8%, indicating that ASOS's total deliveries and revenue are growing faster each year than their number of employees. Progress against each intensity metric has been plotted below:





As ASOS continue to grow year on year, measuring performance through intensity metrics will be an important way to track whether the organisation is improving emissions, given that the total carbon footprint of ASOS is likely to continue growing with revenue.

7. Packaging Assessment

The total emissions associated with ASOS's mailing packaging are 4,649 tCO₂e. It is important to note that the distribution element of this packaging assessment accounts for the transportation of sold products to the first customer, which is already accounted for in the third party delivery emissions. Therefore whilst the total emissions from this packaging assessment are 4,649 tCO₂e, only 3,398.2 tCO₂e have been counted towards the total GHG assessment in order to avoid double counting:

Emission source		2014/15 tCO ₂ e	Calculation methodology
Extraction & processing materials & packaging	Cradle to cradle embodied emissions of materials & inputs	3135.7	Tonnage of cardboard & plastic packaging multiplied by respective conversion factors
	Inbound deliveries of raw materials and inputs to production	98.6	Distance multiplied by number of deliveries multiplied by conversion factor specific to delivery type
Manufacture & storage of product & packaging	Direct emissions from on-site fossil fuel use and fugitive emissions	7.18	Percentage of delivered item that is packaging (3.7% in 2015) multiplied by total fuel emissions from Barnsley & Eurohub
	On site consumption of purchased electricity	156.3	Percentage of delivered item that is packaging (3.7% in 2015) multiplied by total electricity related emissions from Barnsley & Eurohub
	Emissions from waste disposal	0.4	Percentage of delivered item that is packaging (3.7% in 2015) multiplied by total waste related emissions from Barnsley & Eurohub
Distribution	Transport of sold product to first customers	1,295.8	Percentage of delivered item that is packaging (3.7% in 2015) multiplied by total 3rd party delivery emissions

Table 7 – Packaging assessment emissions

8. CarbonNeutral® certification

ASOS will be offsetting their data centre emissions and business travel emissions (including flights & hotels) for 2014/15, which in total equates to 2,719 tCO₂e. Below is a summary of the emissions associated with each:

Scope	Emissions source		Required or recommended	Included in assessment	tCO ₂ e
Scope 1	Direct emissions arising from owned or leased stationary sources that use or emit fossil fuels		Required	✓	0.5
Scope 2	Emissions from the generation of purchased electricity and/or steam		Required	✓	252.1
Scope 3		Water supplied to organisation and paper purchased	Recommended	n/a	n/a
	Fuel and energy related activities	Upstream emissions of purchased electricity	Recommended	n/a	n/a
		Transmission and distribution losses	Required	✓	20.8
	Upstream transportation and distribution	Outbound courier deliveries of packages	Recommended	n/a	n/a
	Waste generated in operations	Wastewater	Recommended	n/a	n/a
		Other waste	Required	n/a	n/a
	Business travel	All transportation by air, public transport, rented/leased vehicle and taxi	Required	n/a	n/a
		Emissions arising from hotel accommodation associated with business travel	Recommended	n/a	n/a
	Employee commuting		Recommended	n/a	n/a
Overall compliance				✓	
TOTAL CARBON FOOTPRINT (tCO ₂ e)					273.4
TOTAL FOR OFFSET (tCO ₂ e)					274

Table 8 – CarbonNeutral® data centre Certification Summary

Scope	Emissions source	Required or recommended	Included in assessment	tCO ₂ e
Scope 3	All transportation by air, public transport, rented/leased vehicle and taxi	Required	✓	2,235.3
	Emissions from hotel accommodation associated with business travel	Recommended	✓	209.4
Overall compliance			✓	
TOTAL CARBON FOOTPRINT (tCO₂e)				2,444.7
TOTAL FOR OFFSET (tCO₂e)				2,445

Table 9 – CarbonNeutral[®] business travel Certification summary

Appendix 1 – CarbonNeutral[®] company certification summary

Scope	Emissions source		Required or recommended	Included in assessment	tCO ₂ e
Scope 1	Direct emissions arising from owned, leased or directly controlled stationary sources that use fossil fuels and/or emit fugitive emissions (e.g. refrigerant gases)		Required	✓	871.1
	Direct emissions from owned or leased mobile sources		Required	n/a	-
Scope 2	Emissions from the generation of purchased electricity, heat, steam or cooling		Required	✓	5,448.1
Scope 3	Purchased goods and services	Water supplied to organisation	Recommended	✓	17.8
	Fuel and energy related activities	Upstream emissions of purchased electricity and fuels	Recommended	n/a	-
		Transmission and distribution losses	Required	✓	441.0
	Upstream transportation and distribution	Outbound courier deliveries of packages	Recommended	✓	1.5
		Third party transportation and storage of production-related goods	Required	n/a	-
		Third party transportation and storage of sold products	Required	✓	35,386.3
	Waste generated in operations	Wastewater	Recommended	✓	36.7
		Other waste	Required	✓	17.3
	Business travel	All transportation by air, public transport, rented/leased vehicle and taxi	Required	✓	2,235.3
		Emissions arising from hotel accommodation associated with business travel	Recommended	✓	209.4
Employee commuting		Recommended	n/a	-	
Overall compliance				n/a	
TOTAL CARBON FOOTPRINT (tCO ₂ e)					44,664.4
TOTAL FOR OFFSET (tCO ₂ e)					44,665

Table 10 – CarbonNeutral[®] company certification table summary

Appendix 2 – CarbonNeutral[®] data centre certification summary

Scope	Emissions source		Required or recommended	Included in assessment	tCO ₂ e
Scope 1	Direct emissions arising from owned, leased or directly controlled stationary sources that use fossil fuels and/or emit fugitive emissions (e.g. refrigerant gases)		Required	✓	0.5
Scope 2	Emissions from the generation of purchased electricity, heat, steam or cooling		Required	✓	252.1
Scope 3	Purchased goods and services	Water supplied to organisation	Recommended	n/a	-
	Fuel and energy related activities	Upstream emissions of purchased electricity and fuels	Recommended	n/a	-
		Transmission and distribution losses	Required	✓	20.8
	Upstream transportation and distribution	Outbound courier deliveries of packages	Recommended	n/a	-
	Waste generated in operations	Wastewater	Recommended	n/a	-
		Other waste	Required	n/a	-
	Business travel	All transportation by air, public transport, rented/leased vehicle and taxi	Required	n/a	-
		Emissions arising from hotel accommodation associated with business travel	Recommended	n/a	-
	Employee commuting		Recommended	n/a	-
Overall compliance				✓	
TOTAL CARBON FOOTPRINT (tCO ₂ e)					273.4
TOTAL FOR OFFSET (tCO ₂ e)					274

Table 11 – CarbonNeutral[®] data centre certification table summary

Appendix 3 – CarbonNeutral® packaging certification summary

Category	Emissions source	Required or recommended	Included in assessment	tCO ₂ e
Extraction & processing materials & packaging	Cradle to cradle embodied emissions of materials & inputs	Required	✓	3,135.7
	Inbound deliveries of raw materials	Required	✓	98.6
Manufacture & storage of product & packaging	Direct emissions from on-site fossil fuel use and fugitive emissions	Required	✓	7.2
	On-site consumption of purchased electricity	Required	✓	156.3
	Emissions from waste disposal	Required	✓	0.4
Distribution	Transport of sold product to first customer	Required	✓	1,295.8
Onward distribution	Onward storage and distribution	Recommended	n/a	-
Retail	Direct fossil fuel & fugitive emissions	Recommended	n/a	-
	Consumption of electricity	Recommended	n/a	-
Use	Use, including maintenance	Recommended	n/a	-
Disposal	Disposal of sold products	Recommended	n/a	-
Overall compliance			✓	
TOTAL CARBON FOOTPRINT (tCO₂e)				4,694
TOTAL FOR OFFSET (tCO₂e)				4,694

Table 12 – CarbonNeutral® packaging certification table summary

Appendix 4 – China

ASOS's China office is unique within the portfolio of sites accounted for in this assessment as it is the only site which is part of ASOS PLC, but not ASOS.com. The site may therefore be excluded from the scope of next year's report. In line with this, the table below presents ASOS's 2014/15 carbon footprint, excluding China. ASOS's total carbon footprint would be 0.2% smaller without the China office:

		2014/15		
Scope	Resource type	tCO ₂ e including China	tCO ₂ e excluding China	% change
Scope 1	Refrigerants	315.6	294.5	-7%
	Other fuels	5.1	5.1	0%
	Natural gas	550.4	550.4	0%
Scope 2	Electricity	5,448.1	5,425.4	-0.4%
Scope 3	Electricity T&D	441.0	439.4	-0.4%
	Waste	17.3	14.1	-19%
	Water & Wastewater	54.5	54.5	-0.1%
	Cars	17.3	16.9	-3%
	Taxi	77.8	75.8	-3%
	Trains	306.4	298.4	-3%
	Flights	1,833.8	1,786.3	-3%
	Hotels	209.4	204.0	-3%
	Data Centre	273.4	273.4	0%
	Outbound couriers	1.5	1.3	-12%
	3rd party delivery emissions	35,386.3	35,386.3	0%
	Mailing packaging	3,398.2	3,398.2	0%
	Staff commuting	-	-	0%
Total		48,336.2	48,223.9	-0.2%

Table 13: Data quality summary - note: mailing packaging emissions exclude distribution emissions – see section 7 for further details

Appendix 5 – Dual reporting

Dual reporting is a change introduced by the World Resources Institute (WRI) to the Greenhouse Gas (GHG) Protocol for 2015. Organisations should now report two numbers for scope 2 emissions; location based scope 2 emissions and market based scope 2 emissions. Location based scope 2 emissions are calculated using a conversion factor based on the average grid mix in a given location (issued by Defra in the UK). Market based scope 2 emissions are calculated using a conversion factor specific to the electricity purchased by ASOS. Therefore at sites, such as Greater London House, where ASOS procure renewable electricity, the market based conversion factors will be far lower than grid average location based factors. Consequently in the future ASOS's market based emissions are likely to be less than their location based emissions. Dual reporting therefore allows organisations to influence their carbon footprint through their procurement decisions.

It was not possible to gather market based conversion factors for ASOS's various electricity supplies for this report for the following reasons:

- 1) Details of the electricity provider and tariff were unavailable for the majority of locations.
- 2) For those supplies where details were available, the electricity providers were unable to provide market based conversion factors for the reporting period.

In line with the GHG Protocol, location based conversion factors will be used to calculate market based emissions. Please see appendix 7 for further details on how ASOS can improve scope 2 reporting next year:

		2014/15			
		Location based emissions		Market based emissions	
Scope	Resource type	tCO ₂ e including China	tCO ₂ e excluding China	tCO ₂ e including China	tCO ₂ e excluding China
Scope 2	Electricity	5,448.1	5,425.4	5,448.1	5,425.4
Total	All	48,336.2	48,223.9	48,336.2	48,223.9

Table 14: Summary of location based and market based scope 2 emissions

Appendix 6 – Data quality

A guide to help you understand your data quality

Data quality is an important part of the carbon footprint calculation process. The higher quality the data submitted, the more accurate and meaningful carbon footprint calculations can become. It is also true that resource use that cannot accurately be measured, cannot accurately be managed, so collecting robust data is very important. This is probably quite an obvious statement, but a lot of organisations do not currently collect or monitor their energy and resource consumption at all. There are three important aspects to data quality that we take into account when we calculate your operational carbon emissions:

1. Source

The consumption figures you have been able to supply and where they came from e.g. the kWh consumption of electricity from meter readings or spend on fuel from receipts for a company car.

2. Completeness

The time period your data considers and the coverage within the business, e.g. natural gas data for one whole year, for two floors of a two storey building. Carbon Smart rates each individual piece of information you provide to us for the calculation of your carbon footprint following the three tier traffic light system. All pieces of data will be categorised by source (as primary, secondary or spend) and by completeness, as per the definitions below:

Primary – actual consumption of fuel / energy / or product with the appropriate units

Secondary – a figure we can convert into fuel / energy / product consumption simply i.e. mileage, bags of waste etc.

Spend – data that we can approximate to consumption through a series of assumptions but will include a number of other factors i.e. VAT, levies and other taxes.

3. Data Quality

The quality of your data is very important as you cannot manage what you cannot properly measure. The table below explains data quality:

	Good quality data Primary data sources have been used. Data completeness and accuracy is high
	Average data quality Mixed primary and secondary data sources. Limited extrapolation with average completeness and accuracy
	Poor data quality High levels of estimation and benchmarking. Poor completeness and accuracy

The table below presents the raw data supplied and the corresponding data quality rating for your carbon footprint covering from September 2014 to August 2015:

Scope	Resource type	Berlin	Birmingham	Eurohub	Greater London House	Hemel Hempstead	Sydney	Barnsley	New York	China	Total
Scope 1	Refrigerants	-	5.5	-	258.8	24.3	2.3	-	3.6	21.1	315.6
	Other fuels	-	-	-	-	0.0	-	5.1	-	-	5.1
	Natural gas	1.3	0.8	35.8	342.6	12.1	1.0	155.2	1.6	-	550.4
Scope 2	Electricity	11.6	13.0	211.4	967.9	131.8	16.2	4,058.2	15.4	22.7	5,448.1
Scope 3	Electricity T&D	0.5	1.1	9.9	79.9	10.9	1.0	335.1	1.1	1.6	441.0
	Waste	0.0	0.7	0.6	1.2	0.7	0.1	10.7	0.1	3.2	17.3
	Water & Wastewater	0.1	0.2	0.0	14.7	1.6	0.1	37.6	0.1	0.1	54.5
	Cars	0.1	0.2	-	12.4	3.6	0.1	0.5	0.1	0.4	17.3
	Taxi	0.3	1.0	-	55.4	16.3	0.4	2.1	0.4	2.0	77.8
	Trains	1.1	3.8	-	218.3	64.0	1.4	8.1	1.6	7.9	306.4
	Flights	6.7	22.8	-	1,306.9	383.3	8.6	48.5	9.5	47.6	1,833.8
	Hotels	0.8	2.6	-	149.2	43.8	1.0	5.5	1.1	5.4	209.4
	Data Centre	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	273.4
	Outbound couriers	0.0	-	0.6	0.4	0.3	0.0	-	0.0	0.2	1.5
	3rd party delivery emissions	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35,386.3
	Mailing packaging	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,398.2
Total		22.5	51.7	258.3	3,407.7	692.7	32.1	4,666.5	34.7	112.2	48,336.2

Table 15: Data quality summary - note: mailing packaging emissions exclude distribution emissions – see section 7 for further details

Appendix 7 – Improving reporting for 2015/16

Due to time constraints, this year's carbon footprint was calculated following historical methodologies, some of which could be improved on for the next reporting period. The following are key areas that ASOS can target to improve the accuracy of their reporting in 2016:

- **Third party delivery emissions** – the current methodology, which applies a tonnes of carbon per delivery figure against total deliveries made, means that delivery emissions increase proportionally in line with the amount of deliveries made (+18% in 2014/15). Given that this emissions source accounted for 73% of total emissions in 2014/15, this should be ASOS's priority area to target. Carbon Smart will be supporting ASOS to gather the appropriate data over the coming months.
- **Data collection champions** – A high number of building emissions sources increased or decreased significantly in 2014/15. There is a chance that this is, at least in part, due to human errors in the data collection process. ASOS should consider setting up a formal CSR Champion scheme, with a Champions tasked with collecting data on at least an annual basis. A webinar training session could be delivered to CSR Champions in order to engage Champions and ensure that they have the requisite skills to collect data. Ensuring consistency in the data collection process is likely to improve the accuracy of raw data and reduce the likelihood of major increases or decreases in raw data resulting from poor data quality.
- **Estimated data** – ASOS should engage Birmingham, Berlin, Hemel Hempstead, Sydney & New York earlier in the process to ensure that the amount of estimated data is reduced for these sites in 2015/16.

Appendix 8 – Conversion factors

The following conversion factors were used:

Emission source	Unit	Total Direct GHG conversion factor kg CO ₂ e/unit	Source
Scope 1			
Natural gas	kWh	0.18445	Defra conversion factor repository published May 2015
Gas oil	litre	2.90884	Defra conversion factor repository published May 2015
Burning oil	litre	2.53215	Defra conversion factor repository published May 2015
Refrigerants			
R407a	kg	2107.0	Defra conversion factor repository published May 2015
R404a	kg	3921.6	Defra conversion factor repository published May 2015
R410A	kg	2087.5	Defra conversion factor repository published May 2015
R407C	kg	1773.9	Defra conversion factor repository published May 2015
Diesel	litre	2.58390	Defra conversion factor repository published May 2015
Medium hybrid car	km	0.18942	Defra conversion factor repository published May 2015
Scope 2			
UK electricity generation	kWh	0.46219	Defra conversion factor repository published May 2015
USA	kWh	0.49845	Defra conversion factor repository published May 2015
Germany	kWh	0.47182	Defra conversion factor repository published May 2015
China	kWh	0.75245	Defra conversion factor repository published May 2015
Poland	kWh	0.77393	Defra conversion factor repository published May 2015
Australia	kWh	0.81360	Defra conversion factor repository published May 2015
UK electricity generation - 2014	kWh	0.49426	Defra conversion factor repository published May 2014
USA - 2014	kWh	0.50300	Defra conversion factor repository published May 2014
Germany - 2014	kWh	0.47700	Defra conversion factor repository published May 2014
China - 2014	kWh	0.76400	Defra conversion factor repository published May 2014
Poland - 2014	kWh	0.78000	Defra conversion factor repository published May 2014
Australia - 2014	kWh	0.82300	Defra conversion factor repository published May 2014
Scope 3			
UK Transmission and Distribution	kWh	0.03816	Defra conversion factor repository published May 2015
USA	kWh	0.03595	Defra conversion factor repository published May 2015
Germany	kWh	0.02204	Defra conversion factor repository published May 2015
China	kWh	0.05279	Defra conversion factor repository published May 2015
Poland	kWh	0.06868	Defra conversion factor repository published May 2015
Australia	kWh	0.04900	Defra conversion factor repository published May 2015
UK Transmission and Distribution - 2014	kWh	0.04322	Defra conversion factor repository published May 2014
USA - 2014	kWh	0.03445	Defra conversion factor repository published May 2014
Germany - 2014	kWh	0.02350	Defra conversion factor repository published May 2014
China - 2014	kWh	0.05342	Defra conversion factor repository published May 2014

Poland - 2014	kWh	0.06805	Defra conversion factor repository published May 2014
Australia - 2014	kWh	0.05194	Defra conversion factor repository published May 2014
Air travel (without radiative forcing) - UK			
Domestic (<785km)	passenger km	0.15757	Defra conversion factor repository published May 2015
International short haul - economy (785 - 3,699km)	passenger km	0.08795	Defra conversion factor repository published May 2015
International short haul - premium economy (785 - 3,699km)	passenger km	0.10995	Defra conversion factor repository published May 2015
International short haul - business (785 - 3,699km)	passenger km	0.13195	Defra conversion factor repository published May 2015
International short haul - first class (785 - 3,699km)	passenger km	0.13195	Defra conversion factor repository published May 2015
International long haul - economy (3,700+km)	passenger km	0.08024	Defra conversion factor repository published May 2015
International long haul - premium economy (3,700+km)	passenger km	0.12840	Defra conversion factor repository published May 2015
International long haul - business (3,700+km)	passenger km	0.23271	Defra conversion factor repository published May 2015
International long haul - first class (3,700+km)	passenger km	0.32098	Defra conversion factor repository published May 2015
Air travel (without radiative forcing) - International			
Economy	passenger km	0.07339	Defra conversion factor repository published May 2015
Premium economy	passenger km	0.11745	Defra conversion factor repository published May 2015
Business	passenger km	0.21286	Defra conversion factor repository published May 2015
First class	passenger km	0.29361	Defra conversion factor repository published May 2015
Rail			
National rail	passenger km	0.04506	Defra conversion factor repository published May 2015
International rail	passenger km	0.01205	Defra conversion factor repository published May 2015
Water			
Supply	m ³	0.34410	Defra conversion factor repository published May 2015
Waste water	m ³	0.70850	Defra conversion factor repository published May 2015
Waste			
General waste (landfill)	tonnes	459.0	Defra conversion factor repository published May 2015
General waste (anaerobic digestion)	tonnes	21.0	Defra conversion factor repository published May 2015
General waste (open loop recycling)	tonnes	21.0	Defra conversion factor repository published May 2015
General waste (combustion)	tonnes	21.0	Defra conversion factor repository published May 2015
Leased vehicles			
Large diesel car (2l +)	km	0.23	Defra conversion factor repository published May 2015
Medium diesel car (1.7l to 2l)	km	0.18	Defra conversion factor repository published May 2015
Small diesel car (<1.7l)	km	0.14	Defra conversion factor repository published May 2015
Large petrol car (2l+)	km	0.29	Defra conversion factor repository published May 2015
Medium petrol car (1.4l to 2l)	km	0.20	Defra conversion factor repository published May 2015
Small petrol car (<1.4l)	km	0.16	Defra conversion factor repository published May 2015
Large car - unknown fuel	km	0.24	Defra conversion factor repository published May 2015
Taxi			

Regular taxi	passenger km	0.17481	Defra conversion factor repository published May 2015
Black cab	passenger km	0.21872	Defra conversion factor repository published May 2015
Staff commute			
Bus	passenger km	0.10883	Defra conversion factor repository published May 2015
London underground	passenger km	0.05631	Defra conversion factor repository published May 2015
National rail	passenger km	0.04506	Defra conversion factor repository published May 2015
Average Car, Unknown	km	0.18635	Defra conversion factor repository published May 2015
Taxi	passenger km	0.17481	Defra conversion factor repository published May 2015
Average Motorbike	km	0.11966	Defra conversion factor repository published May 2015
Ferry - foot passenger	passenger.km	0.01927	Defra conversion factor repository published May 2015
Tram	passenger.km	0.05461	Defra conversion factor repository published May 2015
Delivery vehicles			
All HGV's (average laden)	km	0.91356	Defra conversion factor repository published May 2015
All arctic's (average laden)	km	0.99670	Defra conversion factor repository published May 2015
Rigid (3.5-7.5 tonnes) (average laden)	km	0.56530	Defra conversion factor repository published May 2015
Rigid (>7.5 - 17 tonnes) (average laden)	km	0.69178	Defra conversion factor repository published May 2015
Rigid (> 17 tonnes) (average laden)	km	0.99874	Defra conversion factor repository published May 2015
Medium diesel van (1.305 to 1.74 tonnes)	km	0.22833	Defra conversion factor repository published May 2015
Large diesel van (1.74 to 3.5 tonnes)	km	0.26775	Defra conversion factor repository published May 2015
Motorbike (average)	km	0.11966	Defra conversion factor repository published May 2015
Road freight			
HGV	tonne.km	0.13330	Defra conversion factor repository published May 2015
Rigid (>3.5 - 7.5 tonnes) (average laden)	tonne.km	0.55731	Defra conversion factor repository published May 2015
Rigid (>7.5 - 17 tonnes) (average laden)	tonne.km	0.36024	Defra conversion factor repository published May 2015
Rigid (>17 tonnes) (average laden)	tonne.km	0.17398	Defra conversion factor repository published May 2015
Arctic (average laden)	tonne.km	0.08550	Defra conversion factor repository published May 2015
Average van (unknown fuel)	tonne.km	0.53807	Defra conversion factor repository published May 2015
Freight flights (without radiative forcing)			
Short haul (<3700km)	tonne.km	1.22292	Defra conversion factor repository published May 2015
Long haul (>3700km)	tonne.km	0.67653	Defra conversion factor repository published May 2015
Sea freight			
Average general cargo ship	tonne.km	0.01316	Defra conversion factor repository published May 2015
Packaging			
Recycled cardboard	kg	0.99000	Ecoinvent data v2.2
Plastic	kg	2.60000	Ecoinvent data v2.2
Hotel stays			
Average hotel	Night	31.95000	CIBSE 2008

Table 15: Defra 2015 conversion factors used in the report (excluding air travel)

Appendix 9 – Floor areas and FTE's

The total number of employees and floor area of each site are included below:

Site	2014/15 Floor area (m ²)	2014/15 FTE's
Berlin	185	7
China	370	50
Birmingham	350	24
Eurohub Germany	3,300	-
Eurohub Poland	3,023	-
Greater London House	16,788	1,374
Hemel Hempstead	2,333	403
Sydney	149	9
Barnsley	62,024	51
New York	232	10
Total	88,754	1,928

Table 16: Floor areas & total employees for all ASOS sites

For raw data included in this report, please see the accompanying GHG inventory.

Your greenhouse gas assessment follows international and UK standards

The project was conducted through the following steps:

- **Definition of organisational boundary:** Operational control approach taken
- **Calculation of data:** To calculate your carbon footprint we have applied the most recent DEFRA conversion factors.
- **Collection and aggregation of data:** The data collection focused on central sources of data and, where necessary, missing data points were extrapolated in line with best practice.
- **Verification of the data:** No site visit was conducted and no primary data supplied for verification.
- **Carbon footprint calculation:** Undertaken in line with the World Resources Institute (WRI) Greenhouse Gases Accounting and Reporting Protocol (revised edition) and DEFRA's 2013 Guidance to measuring and reporting GHG emissions (June 2013), and DEFRA's 2013 GHG emissions factors (May 2013).
- **Accuracy** – the confidence you have in your data i.e. are these figures 100% accurate, estimates, or unknown? Carbon Smart rates each individual piece of information you provide to us for the calculation of your carbon footprint following the three tier traffic light system.



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