SCC Greenhouse Gas Assessment

April 2015 – March 2016

Produced by CO2balance UK Ltd

March 2017

CO2balance UK Ltd, 1 Discovery House, Cook Way, Bindon Road, Taunton, Somerset, TA2 6BJ, UK
Tel: +44 (0) 1823 332233 Registered company number 4889958

Greenhouse Gas Assessment – 2015/2016

Produced by

CO2balance UK Limited

Produced during October and November 2016

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Owner:	SCC
Client Contact:	Claire Taylor
CO2balance Contact:	Paul Chiplen

Background & Methodology

This document provides the latest carbon emissions of SCC for the assessment year 2015/2016 and is based on data collated and provided by SCC.

The assessment methodology for the Greenhouse Gas Assessment follows the reporting principles and guidelines provided by the Greenhouse Gas Protocol published by the World Business Council for Sustainable Development and the World Resources Institute (WBCSD/WRI Protocol). In line with the WBCSD/WRI Protocol, CO2balance uses these procedures to undertake Greenhouse Gas Emissions Assessments.

Scoping the Greenhouse Gas Assessment

When accounting for Greenhouse Gas Assessment emissions it is important to draw clear organisational boundaries. The WBCSD/WRI Greenhouse Gas Protocol sets boundaries that are consistent with the organisational boundaries used for financial reporting purposes. For the purpose of this report CO2balance defined the scopes of direct and indirect emissions based on SCC's operational boundary.

Scopes

The Greenhouse Gas Protocol and the ISO 14064_1 standard define three protocols that must be used when determining emissions. These are divided into scopes.

- Scope 1 – Direct Emissions (fuel combustion, company owned vehicles)
- Scope 2 – Indirect Emissions (such as purchased electricity for own use)
- Scope 3 – Indirect Emissions (outsourced operations, business travel in vehicles not owned by the company, embodied energy in products purchased, waste disposal)

Reporting approach

CO2balance's Greenhouse Gas Emissions Assessment is based on the application of relevant conversion factors (i.e. amount of CO2 produced per unit of fuel consumed). The approach is considered the most pragmatic, since the quantity of key greenhouse gases produced in most combustion and manufacturing processes is well understood.

CO2balance is guided by the precautionary principle. Where there is any doubt over activities undertaken, or where there is a choice of published figures available for calculating greenhouse gas emissions, a conservative "worst case" scenario is assumed, unless otherwise specified.

Executive Summary

Annual Greenhouse Gas emissions assessments for SCC have been carried out by CO2balance since 2009 to monitor the scope and source of the company's emissions. The previous base line year from which to compare emissions was the financial year of 2009/2010; however, this has been replaced with the financial year of 2015/2016 due to a significant change in reporting practices which has made a major impact on the company's reported carbon footprint.

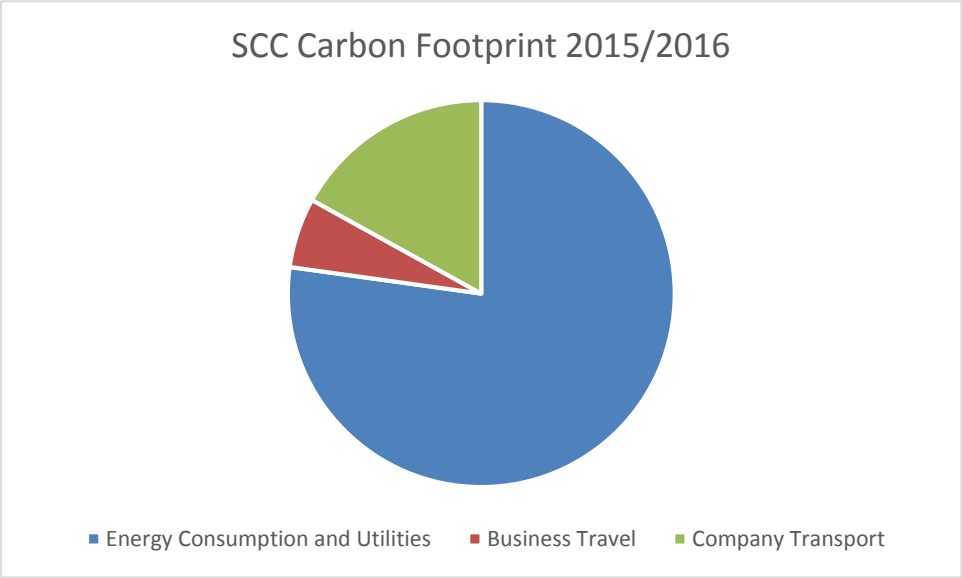
In previous years, emissions from electricity have been based on the UK grid emission factors; the Greenhouse Gas Protocol has issued new guidance for Scope 2 reporting (predominantly electricity consumption) which allows the use of market based reporting, to reflect the emissions from the electricity that the organisation purchased from, as opposed to the national grid average.

During the reporting period of 2015/16 SCC, purchased from a green tariff for 7 months, switching to a brown tariff for the remaining 5 months. The electricity usage consumed during this reporting period increased significantly, with kWh usage rising from 20 million to 36 million. The primary cause of this growth is the addition a new data centre during the reporting period. The move to market based reporting for Scope 2 emissions shows an overall decreased in emissions despite this growth in electricity consumption. The addition of a new data centre, and change in the reporting procedure (in line with approved guidance), has resulted in SCC realigning its baseline for the year of 2015/16.

Headline Figures

Carbon Footprint for April 2015 to March 2016	**11,101.21 tCO_2e**
Emissions per FTE Employee[1]	6.27
Percentage change from previous Audit (2014/15)	N/A – new baseline

CARBON ACTIVITY	TCO_2E	PERCENTAGE
COMPANY TRANSPORT	1,883.39	17
BUSINESS TRAVEL	647.92	6
ENERGY & UTILITIES	8,569.90	77
TOTALS	11,101.21	100



[1] **FTE** figure given was 1,771.

Carbon Emissions by General Activity

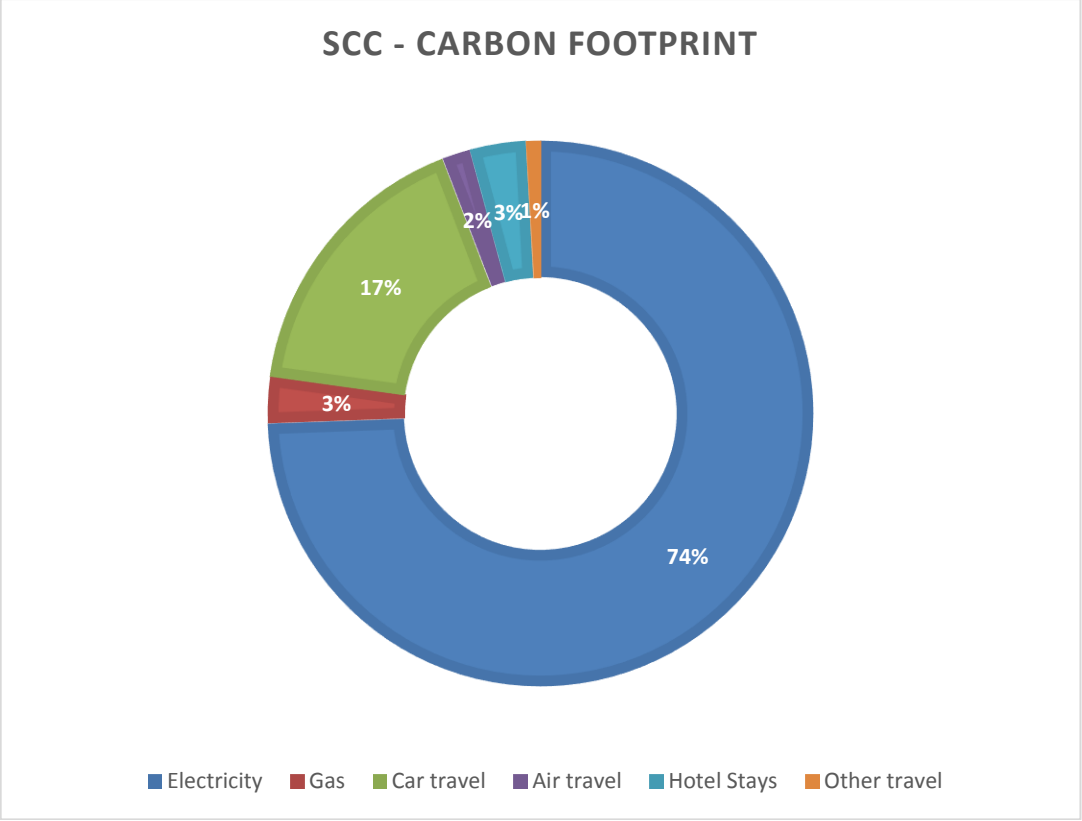
CARBON ACTIVITY	EMISSIONS	PERCENT EMISSIONS
SMALL DIESEL CARS – COMPANY	75.86	0.7
MEDIUM DIESEL CARS – COMPANY	660.39	5.9
LARGE DIESEL CARS – COMPANY	70.36	0.6
SMALL PETROL CARS – COMPANY	8.37	0.1
MEDIUM PETROL CARS – COMPANY	29.96	0.3
LARGE PETROL CARS – COMPANY	0.00	0.0
GAS CONSUMPTION	308.89	2.8
ELECTRICITY CONSUMPTION[2] - GREEN TARIFF	0.00	0.0
ELECTRICITY CONSUMPTION - BROWN TARIFF	7,523.15	67.8
ELECTRICITY CONSUMPTION - TRANSMISSION & DISTRIBUTION – GREEN TARIFF[3]	0.00	0.0
ELECTRICITY CONSUMPTION - TRANSMISSION & DISTRIBUTION – BROWN TARIFF	737.86	6.6
AIR TRAVEL DOMESTIC	64.76	0.6
AIR TRAVEL SHORT HAUL	98.40	0.9
AIR TRAVEL LONG HAUL	21.93	0.2
TAXI	10.54	0.1
TRAIN	82.98	0.7
TUBE	0.00	0.0
BUS	0.00	0.0
FERRY	0.00	0.0
SMALL DIESEL CARS - ALLOWANCE	69.25	0.6
MEDIUM DIESEL CARS - ALLOWANCE	256.95	2.3
LARGE DIESEL CARS - ALLOWANCE	376.65	3.4
HYBRID CARS - ALLOWANCE	0.00	0.0
LPG CARS - ALLOWANCE	0.20	0.0
SMALL PETROL CARS - ALLOWANCE	49.52	0.4
MEDIUM PETROL CARS - ALLOWANCE	134.77	1.2
LARGE PETROL CARS - ALLOWANCE	151.29	1.4
HOTEL STAYS	366.95	3.3
TOTALS	**11,101.21**	**100**

[2] Electricity used during this reporting period was a green tariff; under the revised GHG Scope 2 reporting this is classed as zero emissions.

[3] Electricity Consumption Transmission & Distribution is the energy lost (and therefore carbon emissions emitted) during the transmission & distribution of electricity from the power plant to end location.

Carbon Emissions by General Activity – Summary

Activity	*tCO_2e*	*Percentage*
Electricity	8,261.01	74
Gas	308.90	3
Car travel	1,883.39	17
Air travel	185.08	2
Hotels	366.90	3
Other travel	95.89	1
	11,101.21	100



Carbon Emissions by Scope

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- Scope 2 – Indirect Emissions (such as purchased electricity for own use)
- Scope 3 – Indirect Emissions (outsourced operations, business travel in vehicles not owned by the company, embodied energy in products purchased, waste disposal)

Scope	Carbon Activity 2015/2016	tCO_2
1	**Gas**	308.89
1	**Oil**	0.00
1	**Diesel Cars**	806.61
1	**Petrol Cars**	38.33
2	**Electricity**[4]	7,523.15
3	**Electric – transmission & distribution**	737.86
3	**Water**	0.00
3	**Diesel Allowance**	702.86
3	**Petrol Allowance**	335.58
3	**LPG Fuel Card Purchase**	0.2
3	**Hybrid Cars**	0.0
3	**LPG Cars**	0.0
3	**Flights**	185.08
3	**Trains**	82.98
3	**Hotels**	366.95
3	**Tube**	2.37
3	**Taxis**	10.54
3	**Bus**	0.00
3	**Ferry**	0.00
		11,101.21

SCC Carbon Footprint by Scopes	April 2015 – March 2016
Scope 1	1,153.83
Scope 2	7,523.15
Scope 3	2,424.23
	11,101.21

[4] Electricity used during this reporting period was a mix of green and brown tariff; under the revised GHG Scope 2 market based reporting the emissions from the green tariff have been classed as zero emissions, emissions stated here are for the brown tariff only.

Comparison of Previous Emissions

CARBON ACTIVITY	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	REVISED BASELINE YEAR ⇩ 2015/2016
ELECTRIC[5]	3,947.78	7,815.91	7,828.04	8,581	7,836.14	10,384.99	8,261.01
GAS	332.45	843.05	577.06	280.95	504.94	394.19	308.89
OIL	0	0	0	0	0	0	0
WATER	382.778	3.04	3.04	0	0	0	0
DIESEL CARS (FUEL CARD)	1,148.47	1,193.66	1,821.76	1,669.71	1,690.26	1,833.71	806.61
PETROL CARS (FUEL CARD)	89.67	116.75	767.79	519.70	136.98	85.27	38.33
DIESEL ALLOWANCE	865.18	1,091.28	1,526.63	1,541.38	1,768.74	721.08	702.86
PETROL ALLOWANCE	856.81	818.67	208.66	199	550.52	377.33	335.58
LPG FUEL CARD PURCHASE	0	0	0.76	1.84	0	0.65	0.02
HYBRID CARS	0	0	10.31	0.00	0	12.27	0
LPG CARS	0	0	11.78	5.50	5.83	0.65	0
FLIGHTS	291.675	239.28	353.95	353.95	353.95	248.34	185.08
TRAINS	152.212	168.21	272.5	19.05	20.31	27.93	82.98
HOTELS	98.98	138.32	285.26	280.95	341.29	343.93	366.95
TUBE	10.143	15.2	2.05	2.30	3.01	0.76	2.37
TAXIS	2.958	2.7	4.99	4.30	5.61	1.75	10.54
BUS	0	0	0.03	0.05	0	0	0
FERRY	0	0	0.01	0.01	0	0	0
TOTAL EMISSIONS	**8,179.11**	**12,446.07**	**13,675.24**	**13,795.14**	**13,217.59**	**14,432.85**	**11,101.21**

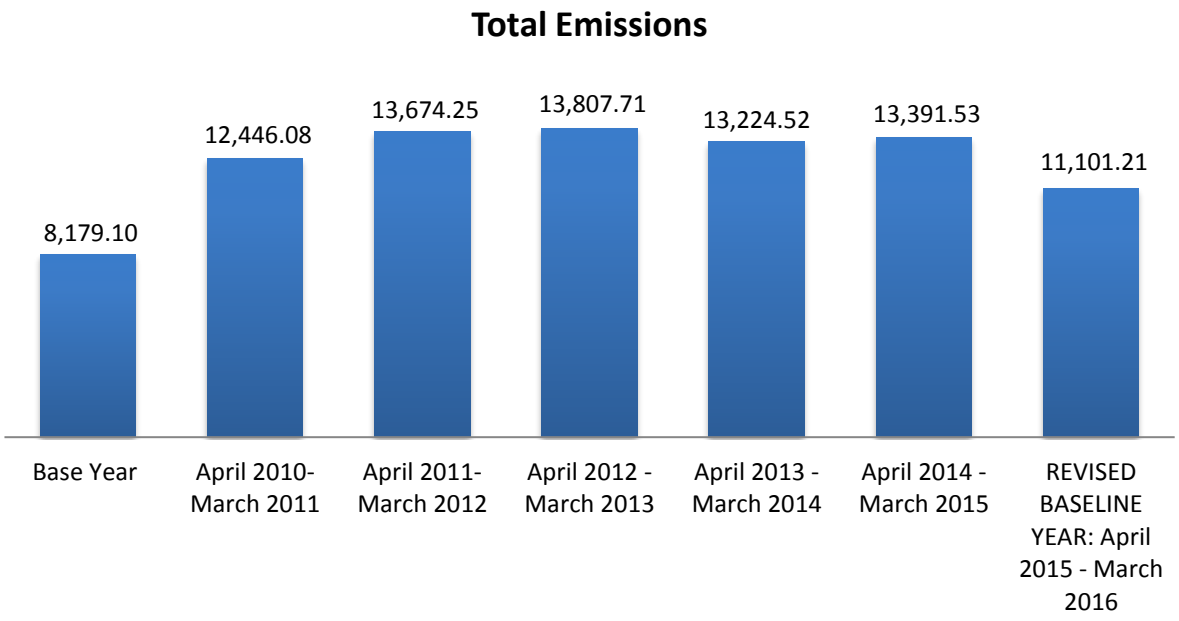
Comparison of Previous Emissions by Scope

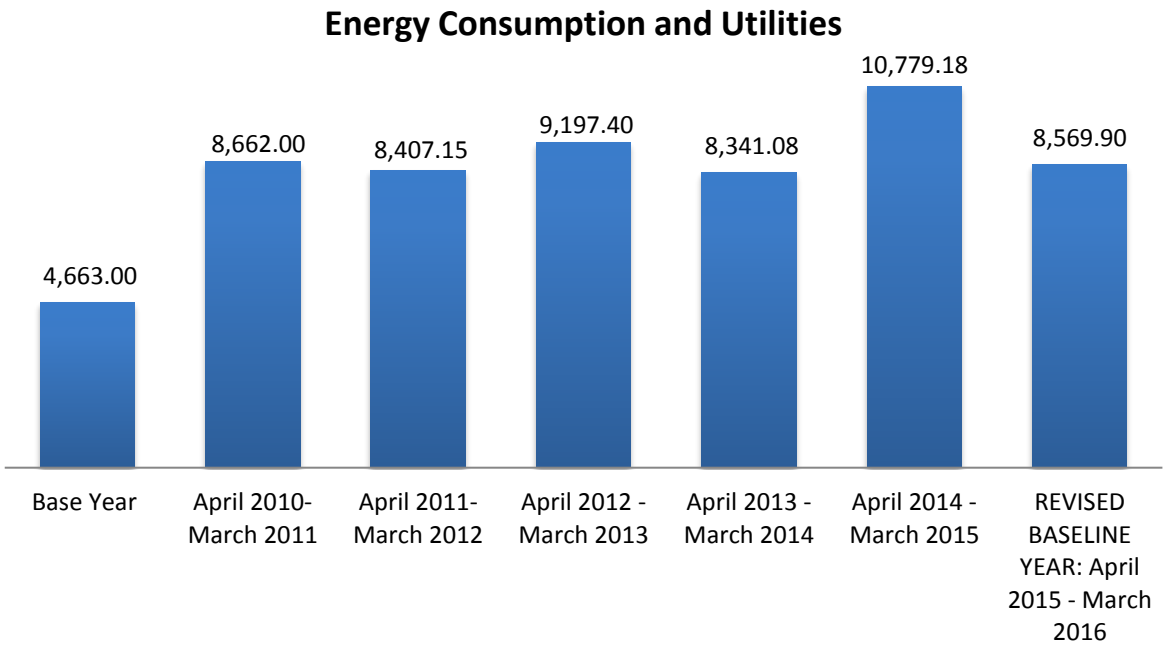
SCOPE	PREVIOUS BASELINE YEAR 2009/10	APRIL 2010-MARCH 2011	APRIL 2011-MARCH 2012	APRIL 2012 – MARCH 2013	APRIL 2013 – MARCH 2014	APRIL 2014 – MARCH 2015	REVISED BASELINE YEAR 2015/16
SCOPE 1	3,176.44	3,975.50	2,313.12	2,358.63	2,332.18	2,313.18	1,153.83
SCOPE 2	3,947.78	7,815.91	7,828.04	8,581.00	7,218.90	9,594.30	7,523.15
SCOPE 3	1,054.89	654.66	3,534.09	2,855.51	3,666.50	2,525.37	2,424.23
GROSS EMISSIONS	**8,179.11**	**12,446.07**	**13,675.24**	**13,795.14**	**13,217.59**	**14,432.85**	**11,101.21**

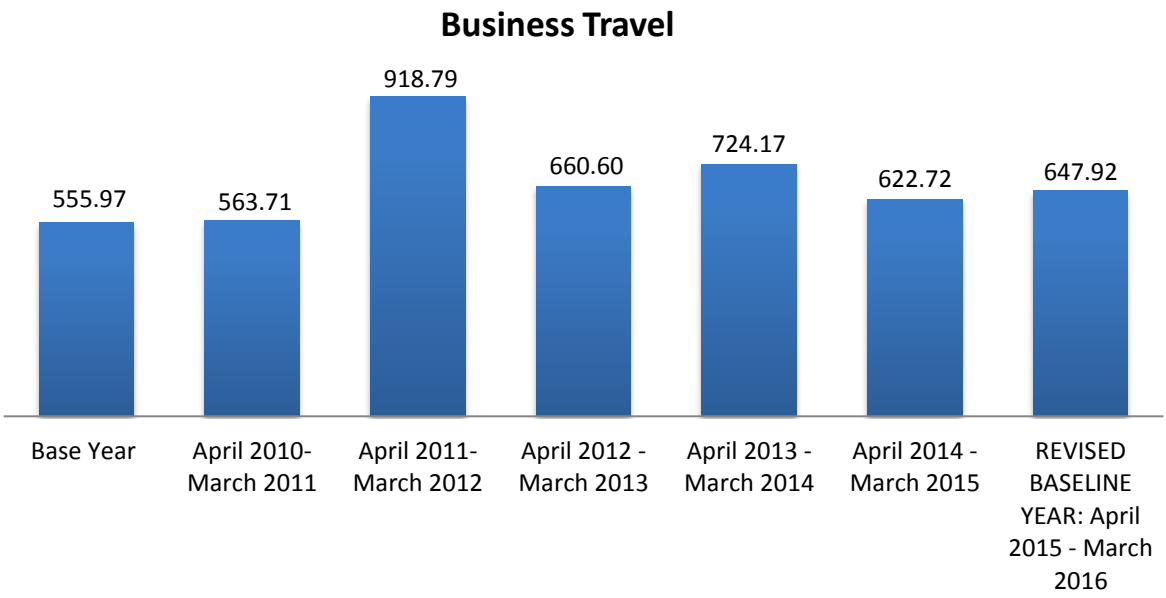
[5] Include emissions associated with the transmission and distribution of electricity

Comparison of Previous Emissions by Grouped Activities

	Previous Base Year (2009/10)	April 2010-March 2011	April 2011-March 2012	April 2012-March 2013	April 2013-March 2014	April 2014-March 2015	Revised BASELINE YEAR 2015/16
Energy Consumption & Utilities	4,663.00	8,662.00	8,407.15	9,197.40	8,341.08	10,779.18	8,569.90
Business Travel	555.97	563.71	918.79	660.60	724.17	622.72	647.92
Company Transport	2,960.13	3,220.37	4,348.31	3,937.14	4,152.34	3,030.96	1,883.39
Total	8,179.10	12,446.08	13,674.25	13,795.14	13,217.59	14,432.85	11,101.21




Energy Consumption and Utilities
4,663.00
8,662.00
8,407.15
9,197.40
8,341.08
10,779.18
8,569.90
Base Year
April 2010-March 2011
April 2011-March 2012
April 2012 - March 2013
April 2013 - March 2014
April 2014 - March 2015
REVISED BASELINE YEAR: April 2015 - March 2016


Business Travel
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918.79
660.60
724.17
622.72
647.92
Base Year
April 2010-March 2011
April 2011-March 2012
April 2012 - March 2013
April 2013 - March 2014
April 2014 - March 2015
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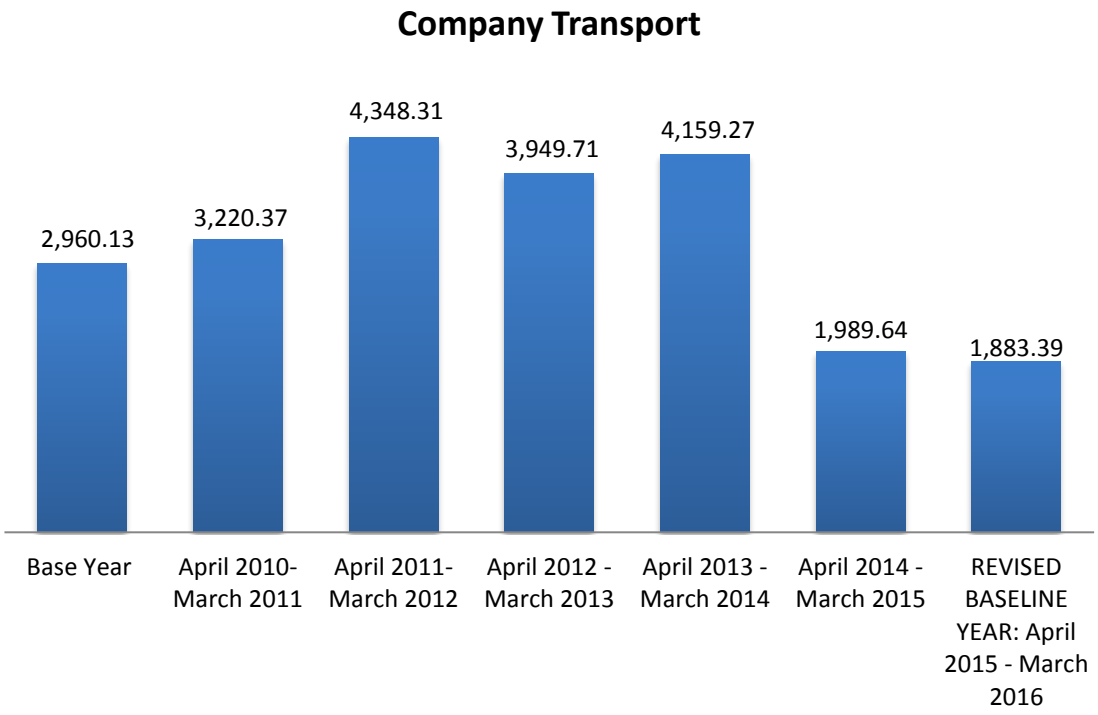
Company Transport
2,960.13
3,220.37
4,348.31
3,949.71
4,159.27
1,989.64
1,883.39
Base Year
April 2010- March 2011
April 2011- March 2012
April 2012 - March 2013
April 2013 - March 2014
April 2014 - March 2015
REVISED BASELINE YEAR: April 2015 - March 2016

Net Emissions

Gross Carbon Emissions for reporting period	11,101.21 tCO_2e
Carbon Offset Credits	**0**
Total Net Emissions	11,101.21 tCO_2e

Assumptions

- All data used to calculate emissions was provided by the client and was accurate. Information that was for only a 6-month period 01/04/15 to 30/09/16 was extrapolated to create dataset for one year (other than electricity and gas data which was a full 12-month period).
- Scope Two emissions for electricity were based on the Greenhouse Gas Protocol's revised market based approach for Scope Two emissions. As such emissions were calculated based on the actual emissions from SCC's sourced electricity, as opposed the UK Grid Average. The emissions from the "brown tariff" partly used during the reporting period, which was purchased from energy company "SSE" had a reported emissions factor of 0.38 kg of CO2 per kWh[6].
- Emissions for Taxis, Train, Tube, Bus and Ferry journeys were calculated based on the number of journeys and an average distance:

    - Taxis – 10 km
    - Tube – 14.8 km
    - Bus – 7.3 km
    - Ferry 33.9 km
      (Transport Statistics Great Britain 2012)
    - Train – 179 km

[6] Source: http://electricityinfo.org/supplier-fuel-mix/?supplier_code=scot21&y=2016

Contact Details

Paul Chiplen

CO2balance UK Ltd

✉ 1 Discovery House, Cook Way, Bindon Road, Taunton, Somerset, TA2 6BJ

☎ +44 (0)1823 332233

paul.chiplen@co2balance.com