



2015

REPORT:
Qualified Greenhouse
Gas Inventory

SANLAM 2015 CARBON FOOTPRINT REPORT | 02 March 2016

Final Version

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29.02.16	1.2	FTE and % HO emissions	Nonkululeko Shabalala	Nici Palmer
02.03.16	Final	Final	Nonkululeko Shabalala	Nici Palmer

OVERVIEW OF SANLAM'S 2015 CARBON DIOXIDE EQUIVALENT (CO_{2e}) EMISSIONS

REPORTING PERIOD: Financial year 2015 (01 January 2015 – 31 December 2015)

CARBON FOOTPRINT CALCULATION CONDUCTED ON: Sanlam Head Office, Sanlam Sky (Houghton), SI, Sanlynn (Pretoria), Glacier & Alice Lane

METHODOLOGY: Greenhouse Gas Protocol – Corporate Accounting and Reporting Standard

Total full-time Sanlam employees:	7 510
Total full-time Sanlam employees covered by report:	5 661
Percentage Sanlam employees covered by report:	75%
Total square metreage of space reported:	122 599

Scope 1 Direct Emissions	Metric tonnes of CO _{2e}
Equipment owned or controlled (e.g. generators)	122.43
Air-conditioning and refrigeration gas refills	4.29
Vehicle fleet	8.67
TOTAL SCOPE 1 EMISSIONS	135.39

Scope 2 Indirect Emissions	Metric tonnes of CO _{2e}
Purchased electricity	36 998.87
TOTAL SCOPE 2 EMISSIONS	36 998.87

TOTAL SCOPE 1 & 2 EMISSIONS 37 134.26

Scope 3 Indirect Emissions	Metric tonnes of CO _{2e}
Business travel in rental cars	157.85
Business travel in commercial airlines	4 549.52
Business travel in accommodation	322.95
Third-party vehicle fleet	71.71
Employee commuting	6 671.95
Consumption of office paper	339.88
Consumption of policy paper	388.04
Courier services	337.10
Recycled and composted waste	4.71
Waste to landfill	454.48
Transmission and distribution losses	3 561.42
TOTAL SCOPE 3 EMISSIONS	16 859.61

TOTAL SCOPE 1, 2 AND 3 EMISSIONS 53 993.87

Outside of Scopes

Non-Kyoto Protocol GHG emissions	35.40
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TOTAL SANLAM 2015 EMISSIONS CO_{2e} (METRIC TONNES) 54 029.27

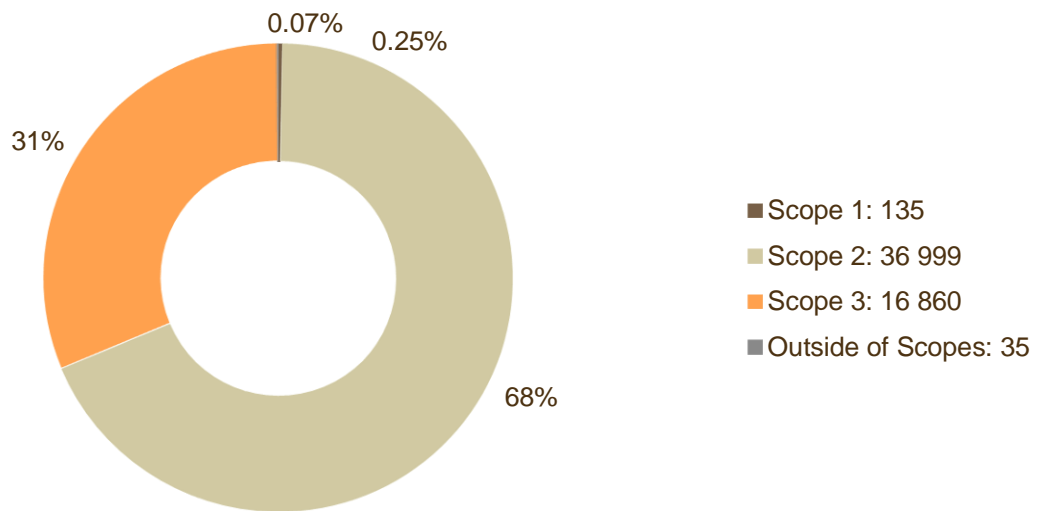
Total emissions per full-time employee (tCO _{2e} /FTE) as covered by the report	9.544
Total emissions per square metre (tCO _{2e} /m ²) as covered by the report	0.441

OVERVIEW OF SANLAM'S 2015 CARBON DIOXIDE EQUIVALENT (CO_{2e}) EMISSIONS – CORPORATE VALUE CHAIN

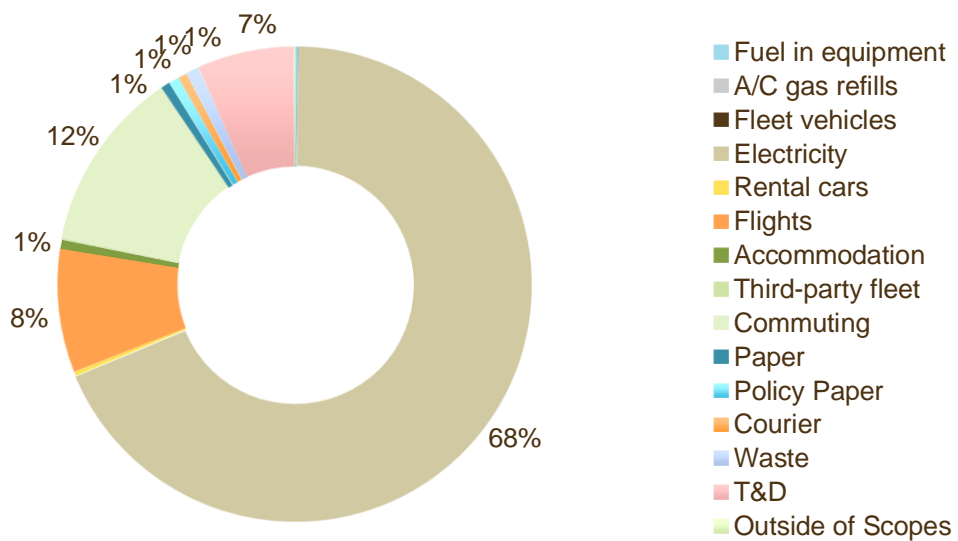
Scope 1 Direct Emissions	Metric tonnes of CO _{2e}
Equipment owned or controlled (e.g. generators)	122.43
Air-conditioning and refrigeration gas refills	4.29
Vehicle fleet	8.67
TOTAL SCOPE 1 EMISSIONS	135.39
<hr/>	
Scope 2 Indirect Emissions	
Purchased electricity	36 998.87
TOTAL SCOPE 1 & 2 EMISSIONS	37 134.26
<hr/>	
Scope 3 Indirect Emissions	
Purchased Goods and Services	727.92
Capital Goods	N/a
Fuel and Energy-related Activities (Not in Scope 1 and 2)	3 561.42
Upstream Transportation and Distribution	337.10
Waste Generated in Operations	459.19
Business Travel	5 102.03
Employee Commuting	6 671.95
Upstream Leased Assets	N/a
Processing of Sold Products	N/a
Downstream Transportation and Distribution	N/a
Use of Sold Products	N/a
End of Life Treatment of Sold Products	N/a
Downstream Leased Assets	N/a
Franchises	N/a
Investments	N/a
TOTAL SCOPE 3 EMISSIONS	16 859.61
TOTAL SCOPE 1, 2 AND 3 EMISSIONS	53 993.87
<hr/>	
Outside of Scopes	
Upstream Other	35.40
TOTAL SANLAM 2015 EMISSIONS CO_{2e} (METRIC TONNES)	54 029.27

OVERVIEW OF RESULTS OF EMISSIONS BY SCOPE FOR SANLAM 2015	
Description	Metric tonnes of CO ₂ e emissions
Scope 1	135.39
Scope 2	36 998.87
Scope 3	16 859.61
Outside of Scopes	35.40
Total GHG emissions	54 029.27

Sanlam 2015 emissions by scope in tonnes of CO₂e



Total emissions by activity of Sanlam in 2015



SECTION A: INTRODUCTION

This 2015 Carbon Footprint Report constitutes the eighth carbon footprint commissioned by Sanlam and should be compared against the previous carbon footprint calculations from 2007. All reports have been prepared using the Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard methodology. The 2009 Carbon Footprint Report is the baseline report for the carbon footprint calculation.

In accordance with the GHG Protocol, clear organisational and operational boundaries have been defined and agreed to by Sanlam and the relevant activity data supplied. This report covers emissions emanating from the business activities of Sanlam's six main office buildings, including: Sanlam Head Office, Sanlam Sky (Houghton), Sanlam Investments (SI), Sanlynn (Pretoria), Glacier and Alice Lane. These buildings cover a staff complement of some 5 661 full-time employees (FTEs), excluding contracted intermediaries, and 122 599 square metres (m²) of office space as at 31 December 2015.

The GHG-emitting activities covered by the report include **direct emissions** resulting from fuel used by Sanlam-owned or controlled equipment, fleet vehicles and air-conditioning and refrigeration gas refills; **indirect emissions** from purchased electricity (referred to as Scope 1 and 2 emissions respectively); and selected indirect Scope 3 emissions. Scope 3 emissions include Sanlam's business travel activities, third-party vehicle fleet, its employee commuting patterns, courier services and the consumption of office and policy paper; recycled waste, composted waste and waste to landfill and losses through transmission and distribution of electricity. Transmission and Distribution (T&D) emissions are the energy losses that occur in getting the electricity from the power plant to the organisation that purchases it and is regarded as best practice to report.

Carbon Calculated has gone to all reasonable lengths to ensure that the primary information provided by Sanlam is correct but Carbon Calculated takes no responsibility for any inaccuracies that this information might contain. This report, in its entirety, is both material and complete and is intended for Sanlam's internal use only. Information may, however, be extracted for reporting purposes, such as for submission into international and/or national greenhouse gas registries and sustainability reporting. It can also be presented for third-party verification purposes if desired.

The GHG Protocol

The GHG Protocol is a multiple-stakeholder partnership of business, NGOs and governments led by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). It is the best source of information about corporate GHG accounting and reporting, and draws on the expertise and contributions of individuals and organisations from around the world. The GHG Protocol is the most widely-used standard for mandatory and voluntary GHG Programmes and is compatible with other international GHG standards such as ISO 14064. It is also analogous to the generally-accepted financial accounting standards for the consistent accounting reporting purposes of companies.



SECTION B: **REQUIRED INFORMATION**

1. COMPANY DESCRIPTION

In 1918, the Sanlam Group was established as a traditional life insurance company. Over the years The Group has evolved into a diversified 'one-stop' financial services business, fitted to serve all market segments. Sanlam's core operations lie in the life and long-term insurance sector, as well as asset management. Through its subsidiary¹, Santam, Sanlam also holds an interest in the short-term insurance sector. Sanlam commands both a local and global presence, with business interests located throughout South Africa, Africa, India, Malaysia, Australia, Philippines, the UK /Ireland, the USA and Switzerland. The Group's head office is located in Bellville, Cape Town, South Africa.

Sanlam is listed on both the Johannesburg Stock Exchange and the Namibian Stock Exchange. In 2007, Sanlam was listed on the Socially Responsible Index (SRI) of the Johannesburg Securities Exchange. The company also participates in the Carbon Disclosure Project (CDP), achieving a highly regarded disclosure score of 98 and a B rating for Performance in 2015².

2. INVENTORY BOUNDARIES

2.1 ORGANISATIONAL BOUNDARY

Definition: Organisational Boundaries

Organisational boundaries determine which business units (core, subsidiaries, franchises, etc.), facilities, or physical places of operation, owned or controlled by the reporting company, are included in the carbon footprint. The more complex the company structure, the more important are the boundaries of an organisations for the clear definition and scope of the report.

Organisational boundaries are established on either the control approach or the equity share approach. Under the control approach, a company accounts for all emissions by entities and activities that are controlled by the organisation. Under the equity share approach, a company accounts for its GHG emissions from operations according to its share of equity in the operation.

Sanlam report on all emissions using the **Operational Control** approach. This includes six South African buildings managed and controlled by Sanlam for which Scope 1 (direct) and Scope 2 (indirect electricity) emissions can be accounted for. This equates to 75% of full-time South African Sanlam employees. The buildings included in the boundary are:

- Head Office
- Sanlam Sky (Houghton)
- SI
- Sanlynn (Pretoria)
- Glacier
- Alice Lane (Sandton)

Hyde Park closed on 30 November 2014 and Alice Lane opened on 1 December 2014.

¹ This Carbon Footprint Report does not include Sanlam Group subsidiaries.

² Details of the CDP 2015 Executive Summary can be found at http://www.nbi.org.za/assets/downloads/climate/CDP_South%20Africa_Executive_Summary_2015.pdf



All Scope 3 emissions, except waste, commuting, policy paper and T&D losses of electricity, are reported at a group-wide level for all South African operations, **but extrapolated in the final Carbon Footprint Overview (p. 4) according to the 75% coverage of employees located in the above buildings.** Head office building emissions are at 94% occupancy as this is the portion of the building that is occupied by Sanlam employees.

2.2 OPERATIONAL BOUNDARY

Definition: Operational Boundaries

Operational boundaries determine the actual business activities of the reporting company that generate emissions, which of these activities should be included in the calculation, and how these activities should be classified (i.e. direct or indirect emissions).

Greenhouse Gas (GHG) emissions resulting from the following activities have been calculated:

- Equipment owned or controlled by Sanlam (e.g. generators)
- Operation of air-conditioning (A/C) units and refrigerators
- Operation of Sanlam-owned fleet vehicles
- Consumption of purchased electricity
- Business travel in rental cars
- Business travel in commercial airlines
- Business travel in overnight accommodation
- Operation of third-party vehicle fleet (shuttles, chauffeur)
- Commuting of staff
- Consumption of office and policy paper
- Courier services
- Waste to landfill, recycling and compost
- Losses through transmission and distribution of electricity

To account for electricity emissions fully, organisations should account for the T&D loss associated with their purchased power. If an organisation generated their own renewable electricity on site they would not need to account for this loss, therefore reporting T&D helps demonstrate the full impact of an organisation's activities and operations. Emissions from T&D losses of electricity and composted waste are reported for the first time by Sanlam in 2015 as this is regarded as best practice.

2.3 REPORTING PERIOD

The reporting period of this report is for the 2015 financial year (01 January 2015 – 31 December 2015).

3. INFORMATION ON SANLAM'S EMISSIONS

3.1 TOTAL SCOPE 1 & 2 EMISSIONS

The GHG Protocol requires carbon footprint calculations to include all direct emissions under Scope 1, and indirect emissions from purchased electricity under Scope 2, as compulsory reporting. Other activities under indirect emissions, Scope 3, are voluntarily reported. Refer to Appendix B for a diagram to illustrate direct and indirect emissions and the different scopes of reporting.

3.2 EMISSIONS OF EACH GHG

All emissions are calculated using emission factors and reported as carbon dioxide equivalent gases (CO₂e), as required by the GHG Protocol. The greenhouse gases covered by this calculation are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (NO₂), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃). All emissions are reported as carbon dioxide equivalent gases (CO₂e).

Emission Factors

Emission factors convert activity data (e.g. amount of fuel used, kilometres driven, and kilowatt hours of purchased electricity) into a value indicating carbon dioxide equivalent (CO₂e) emissions generated by that particular activity.

Default values are used by the GHG Protocol to assist businesses that are unable to develop accurate customised values. These default values are representative averages based on the most extensive data sets available and are largely identical to those used by the Intergovernmental Panel on Climate Change (IPCC), the premier authority on greenhouse gas accounting practices at the global level.

The GHG Protocol recommends, however, that businesses should use customised values whenever possible, as industrial processes or the composition of fuels used by businesses may differ with time and by region. This report largely uses the latest emission factors provided by the UK government's Department of Environment, Food and Rural Activities (Defra), June 2015. These have been adopted by the GHG Protocol as *de facto* emission factors and are updated on a regular basis.

In reporting emissions generated by the consumption of electricity purchased from Eskom, the emissions factor provided by the utility's integrated report (2015) has been used to give local context accuracy.

Carbon Dioxide Equivalent (CO₂e)

Due to the varying ability of greenhouse gases to trap heat in the atmosphere, some are more harmful to the climate than others. Each greenhouse gas has a "global warming potential" (GWP), which refers to its heat trapping potential relative to that of CO₂. Therefore, to provide a comparable final figure, all emissions are reported as a relative figure to CO₂, i.e. as CO₂e values.

DIRECT SCOPE 1 EMISSIONS FROM SANLAM IN 2015

Scope	Description	Units	Emissions Factors kg CO ₂ e/unit ³	Total Consumption	Metric tonnes of CO ₂ e emissions
1	Fuel used in equipment owned or controlled	Litres of diesel	2.67614	43 280	115.82
		Kilograms of Liquid Petroleum Gas (LPG)	2.94264	2 246	6.61
Total emissions from fuel in equipment					122.43
	Emissions from A/C and refrigerant gas refills	Kilograms of R507	3 300 ⁴	1.30	4.29
Total Air-conditioning gas refill emissions					4.29
	Fleet cars	Litres of petrol	2.29968	2 363	5.43
		Litres of diesel	2.67614	1 209	3.24
Total emissions from fleet					8.67

³ Unless otherwise stated, all emission factors are provided by UK Government Department of Environment, Food and Rural Affairs (Defra), *Guideline to Defra's GHG Conversion Factors for Company Reporting; Annexes Updated July 2015*.

⁴ The GWP for air-conditioning and refrigeration gas refills is sourced from the IPCC Second Assessment Report. It is recommended that Sanlam re-baseline their footprint and use the updated GWP from the Fourth Assessment Report.



INDIRECT SCOPE 2 EMISSIONS FROM PURCHASED ELECTRICITY FOR SANLAM IN 2015

Scope	Purchased electricity - SA	Units	Emissions Factors kg CO ₂ e/kWh	Total Consumption	Metric tonnes of CO ₂ e emissions
2	Sanlam Head Office	Kilowatt hours	1.01 ⁵	25 711 267	25 968.38
	Sanlam Sky			2 206 148	2 228.21
	SI			2 708 588	2 735.67
	Sanlynn			2 940 307	2 969.71
	Glacier			832 474	840.80
	Alice Lane			2 233 757	2 256.09
	Total electricity				

3.3 METHODOLOGIES USED

This calculation was conducted in alignment with the GHG Protocol, using the following calculation tools.

- CO₂ emissions from business travel (GHG Protocol)
- CO₂ emissions from fuel-use combustion (GHG Protocol)
- CO₂ emissions from transport or mobile services (GHG Protocol)
- Individual CO₂ emissions from purchased electricity (GHG Protocol)
- CO₂ emissions from employee commuting (customised survey by Carbon Calculated. Calculations finalised using GHG Protocol's CO₂ emissions from business travel)
- CO₂ emissions resulting from the purchasing of office paper (customised by Carbon Calculated using paper manufacturers' environmental profiles and GHG Protocol's individual CO₂ emissions from purchased electricity, heat and steam)

3.4 SPECIFIC EXCLUSIONS

The following exclusions of emission sources (and their explanations) are described below:

Scope 1 - direct emissions:

- Business travel in corporate jets – no aircraft owned by Sanlam.

Scope 3 - indirect emissions:

- Travel claims by employees using private vehicles for business purposes – information not available.
- The following Scope 3 categories are not deemed relevant to the organisation:
 - Upstream activities:
 - Capital goods (Not Relevant)
 - Upstream Leased assets – (Relevant but not yet calculated as information not available)
 - Downstream activities:
 - Processing of sold products (Not Relevant)
 - Downstream Transportation and Distribution (Not Relevant)
 - Use of sold products (Not Relevant)
 - End-of-life treatment of sold products (Not Relevant)
 - Downstream Leased assets – (Relevant but not yet calculated as information not available)
 - Franchises – (Relevant but not yet calculated as information not available)
 - Investments – (Relevant but not yet calculated as information not available)

⁵ Eskom emission factor per kilowatt hours of electricity generated in South Africa from Eskom was sourced from the Eskom 2015 Integrated Report.



SECTION C: OPTIONAL INFORMATION UNDER THE GHG PROTOCOL

4. RELEVANT SCOPE 3 EMISSIONS

The following table outlines Scope 3 emissions generated during Sanlam's 2015 financial year. Please refer to the footnotes below the table for further details.

INDIRECT SCOPE 3 EMISSIONS FROM SANLAM 2015 ⁶						
Scope	Description	Units	Emissions factor kg CO ₂ e/unit ⁷	Total consumption	Metric tonnes of CO ₂ e	
3	Business travel - rental cars	Total kilometres travelled	Diesel <1.7 litre	0.14367	37 634	5.41
			Petrol <1.4 litre	0.15859	243 560	38.63
			Diesel 1.7-2.0 litre	0.17561	28	0.00
			Petrol 1.4-2.0 litre	0.19931	763 410	152.16
			Diesel over 2.0 litre	0.2252	35 308	7.95
			Petrol over 2.0 litre	0.29074	18 097	5.26
			Total rental cars			
	Business travel - commercial airlines ⁹	Domestic		0.29795	890 466	265.31
		Short-Haul Economy		0.16634	19 700 981	3 277.06
		Short-Haul Business		0.24954	2 768 907	690.95
		Long-Haul Economy		0.15175	2 543 462	385.97
		Long-Haul Business		0.4401	2 914 993	1 282.89
		Long-Haul Prem Economy		0.24283	548 954	133.30
	Total flights				29 367 763	6 035.49
	Overnight accommodation	Bed nights		19 ¹⁰	22 549	428.43
	Third-party vehicle fleet – EZ Shuttle	Kilometres		0.18635	63 510	11.84
	Chauffeur	Kilometres		0.19931	417 955 ¹¹	83.30
Total Third-party vehicle fleet				481 465	95.14	

⁶ All Scope 3 emissions, except waste, commuting, policy paper and T&D losses of electricity, are reported at a group-wide level for all South African operations, but extrapolated in the final Carbon Footprint Overview (p. 3) according to the 75% coverage of employees located in the buildings reported.

⁷ Emission factors provided by UK Government Department of Environment, Food and Rural Affairs (Defra), [Guideline to Defra's GHG Conversion Factors for Company Reporting; Annexes. Updated July 2015.](#)

⁸ Travel by Europcar was 447 703km (85.29tCO₂e) and Avis P2P and RAC 650 334km (124.12 tCO₂e).

⁹ An 8% uplift factor is included to take into account non-direct routes and delays/circling. The impact of radiative forcing has been included.

¹⁰ Emission factors provided by [Unep World Meteorological Organisation Climate Change And Tourism Report; A2.2.3 Accommodation; 9-Jul-08.](#)

¹¹ Kwathlano chauffeur drove 97 196 km (19 tCO₂e) and OnTime drove 320 759km (64tCO₂e).



Employee commuting	Tonnes/survey	Various according to transportation mode	1.18¹²	6 671.95
Third party production of office paper (Mondi Rotatrim)	Emissions to air at production – per tonne paper	1220 kg/t ¹³	204.58 ¹⁴	249.59
	Indirect emissions from purchased electricity by paper producer – per tonne of paper	1.01 kg/kWh ¹⁵ x 437 kWh/t		90.30
Total paper				339.88
Third party production of office paper (Mondi Rotatrim)	Emissions to air at production – per tonne paper	1220 kg/t ¹⁶	82.71 ¹⁷	100.91
	Indirect emissions from purchased electricity by paper producer – per tonne of paper	1.01 kg/kWh ¹⁸ x 437 kWh/t		36.51
Third party production of office paper (Sappi Typek)	Emissions to air at production – per tonne paper	1 970 kg/t ¹⁹	82.71 ²⁰	162.92
	Indirect emissions from purchased electricity by paper producer – per tonne of paper	1.01 kg/kWh ²¹ x 1 050 kWh/t		87.70
Total policy paper			165.43	388.04
Courier	Tonne.km Average van up to 3.5t	0.53807	307 259	165.33
	Tonne.km by air - Domestic	5.45119	1 564	8.53
	Tonne.km by air - Short-haul	2.31277	115 841	267.91
	Tonne.km by air - Long-haul	1.27944	4 251	5.44
Total Courier			428 915	447.21

¹² An online commuting survey was completed for Sanlam. Total surveys received 229; total useable surveys 227, representing 4% of Sanlam's FTEs covered by this report. Total emissions from the survey was 267 tonnes CO₂e. There were 5 661 full-time employees resulting in a total of 6 672 tCO₂e emissions for Sanlam from commuting. Appendix E contains details of the commuting survey. Note values have been "upscaled" on the Overview on page 3.

¹³ Emission factors provided by Environmental Profiles for Mondi Rotatrim Business Paper, released July 2014.

¹⁴ Total paper purchases were 81 288 reams of A4 and 272 reams of A3 Mondi Rotatrim office paper, totalling 205 tonnes of paper (400 reams = 1 tonne of paper).

¹⁵ Eskom emission factors per kWh of electricity generated from the Eskom 2015 Integrated Report.

¹⁶ Emission factors provided by Environmental Profiles for Mondi Rotatrim Business Paper, released July 2014.

¹⁷ Total paper for policy was 165 tonnes of paper (400 reams = 1 tonne of paper). Paper is purchased according to price so a split of 50:50 between Sappi and Mondi was assumed.

¹⁸ Eskom emission factors per kWh of electricity generated from the Eskom 2015 Integrated Report.

¹⁹ Emission factors provided by Sappi and released in February 2015.

²⁰ Total paper for policy was 165 tonnes of paper (400 reams = 1 tonne of paper). Paper is purchased according to price so a split of 50:50 between Sappi and Mondi was assumed.

²¹ Eskom emission factors per kWh of electricity generated from the Eskom 2015 Integrated Report.



Waste to Landfill	Tonnes	1 291.95 ²²	352	454.48
Waste to Recycling	Tonnes	21	217	4.55
Waste to Compost	Tonnes	6	27	0.16
Total Waste			596	459.19
Losses from T&D	Kilowatt Hours-SA	0.09722	36 632 541	3 561.42

5. OUTSIDE OF SCOPES: EMISSIONS FROM GHGS NOT COVERED BY THE KYOTO PROTOCOL

'Out of Scopes' emissions include those emissions that are not included under the Kyoto Protocol as they are presumed to be phased out under the international Montreal Protocol on Ozone Depleting Gases. In South Africa, greenhouse gases like HCFC22 (Freon or R22) continues to be used as gas refills in air-conditioning and refrigerant equipment. While the GHG Protocol's Scope 1, 2 and 3 emissions are strictly for GHGs that fall under the Kyoto Protocol, provision is made for separate reporting on other GHGs that might be under consideration by international treaties such as the Montreal Protocol. This includes air-conditioning and refrigeration gas refills such as Freon.

Sanlam recorded usage of 24 kg of Freon (R22) gas refills during the 2015 financial year. This totalled 35 tonnes of CO₂e.

DIRECT EMISSIONS FROM OUTSIDE OF SCOPE GHG'S FOR SANLAM IN 2015					
Scope	Description	Units	Emissions Factor ²³	Total Consumption	Metric tonnes of CO ₂ e emissions
1	Emissions from A/C refrigerants (Non-Kyoto Protocol)	Kilograms HCFC22/ R22 (Freon)	1 500 GWP	23.60	35.40

6. 'BASE-YEAR' INFORMATION

Base-year Calculations

A base year is the historical year against which a reporting company's emissions are tracked and compared over time. It is typically the earliest relevant point in time for which a company has reliable data. The base year should be recalculated as additional or new and relevant data becomes available that would affect the baseline year figure and its comparability with future emission activities.

Sanlam has set 2009 as their base-year for the carbon footprint calculations. The base-year was chosen as it was the first year where reliable data was available. The base-year has not been recalculated and there have been no significant structural changes to the organisation during the reporting period. The table below compares Sanlam's carbon footprint over all years of reporting.

²² Emission factor for waste was sourced from Friedrich and Trois (2013). The specific factor used is for "landfill sites without gas collection". This factor is inclusive of carbon storage. Waste to recycling and compost is sourced from Defra.

²³ The GWP for R22 is 1500, provided by the IPCC Second Assessment Report. It is recommended that Sanlam re-baseline their footprint and use the updated GWP from the Fourth Assessment Report



COMPARISON OF EMISSIONS AND INTENSITY 2010-2015

	2010	2011	2012	2013	2014	2015 ²⁴
Full-time employees (FTE)	7 293	7 072	6 895	7 068	7 252	7 510
FTEs covered by report	4 942	4 934	4 986	5 523	5 468	5 661
% of SA Sanlam FTE's covered	68	70	72	78	75	75
Square metreage (m ²)	120 872	107 170	121 417	126 072	123 160 ²⁵	122 599
ACTIVITY						
Equipment owned or controlled	41	60	39	60	67	122
A/C and refrigeration gas refills	0	43	3	0	40	4
Vehicle fleet	Not recorded	Not recorded	Not recorded	8	8	9
TOTAL SCOPE 1	41	103	42	68	115	135
TOTAL SCOPE 2 - Purchased electricity	44 535	42 294	41 540	38 988	39 584	36 999
TOTAL SCOPE 1 & 2	44 576	42 397	41 581	39 056	39 699	37 134
Business travel – rental cars	207	208	192	212	168	158
Business travel – commercial airlines	3 442	2 850	3 258	6 714 ²⁶	5 103	4 550
Business travel – accommodation	173	191	257	207	326	323
Third-party vehicle fleet	57	63	66	60	64	72
Employee commuting	6 900	6 888	6 178	6 843	6 775	6 672
Office paper	698	394	291	286	276	340
Policy paper	Included above	Included above	165	182	151	388
Courier services	188	198	169	208	298	337
Recycled waste	N/R	N/R	N/R	N/R	5	5
Waste to landfill	N/R	N/R	N/R	N/R	145	454
Composted waste	N/R	N/R	N/R	N/R	N/R	0.16
T&D losses	N/R	N/R	N/R	N/R	N/R	3 561
TOTAL SCOPE 3	11 677	10 792	10 576	14 712	13 311	16 860
Non-Kyoto gas	1 926	510	519	187	82	35
GRAND TOTAL	58 179	53 699	52 676	53 955	53 092	54 029
Scope 1&2 intensity: t CO ₂ e/FTE covered	9.02	8.59	8.34	7.07	7.26	6.56
Scope 1&2 intensity: t CO ₂ e/m ²	0.369	0.396	0.342	0.310	0.322	0.303
Intensity: % t CO ₂ e from electricity	77	79	79	69	75	68
Kilowatt Hours consumed	46 142 042	45 555 034	41 959 255	39 783 450	38 430 895	36 632 541
Electricity intensity: kWh/FTE	9 337	9 232	8 415	7 203	7 028	6 471

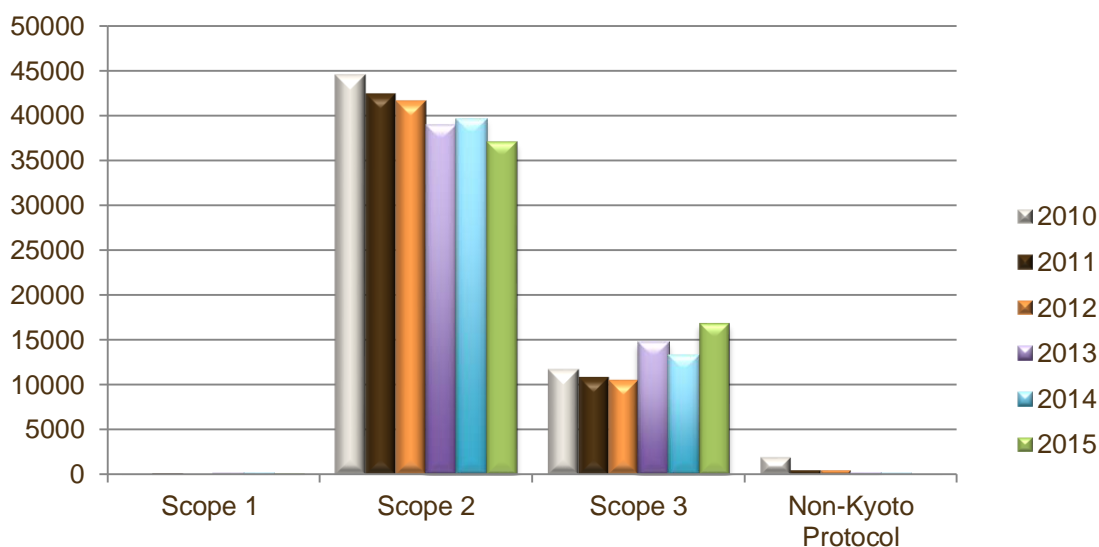
²⁴ Emissions in 2015 are a representative of 75% of Sanlam employees. Data for Head Office is 94.14%.

²⁵ As at December 31 2014. Prior to December 01 2014, total square meterage equalled 124 570m².

²⁶ Increase in aviation CO₂e due to new emission factors being used that, for the first time, take into consideration radiative forcing greenhouse gas effects of aircraft flights.



Comparative emissions of Sanlam between years by Scope



7. WATER CONSUMPTION

The GHG Protocol does not require water usage to be recorded in a carbon inventory. The incorporation of water usage as a record is recommended, as it can be used as an awareness-raising tool. Total water consumed by Sanlam in 2015 was 65 322 kilolitres.

WATER CONSUMPTION BY BUILDING PER YEAR				
Region	2012	2013	2014	2015
Sanlam Head office	83 593	47 348 ²⁷	33 020 ²⁸	32 251 ²⁹
Sanlam Sky Houghton	20 940	14 749	12 378	9 408
Hyde Park	6 771	9 962	10 303	-
SI	9 155 ³⁰	9 120	5 580	5 174
Sanlynn	1 914	5 616	5 218	4 918
Glacier	4 639	6 817	9 985	5 411
Alice Lane	-	-	837	8 159
TOTAL	127 011	93 612	77 320	65 322

Carbon associated with water consumption could be calculated relative to the electricity used to pump water to the organisation. The most reasonable emissions factor is one supplied by eThekweni Municipality. It is not included in this footprint as it is too specific and localised. Should the carbon have been calculated, Sanlam would have emitted an additional 60 tonnes of CO₂e.

²⁷ 94% of Sanlam Head Office as ascribed to Sanlam occupancy of building.

²⁸ 94.14% of Sanlam Head Office, as ascribed to Sanlam occupancy of building.

²⁹ 94.14% of Sanlam Head Office, as ascribed to Sanlam occupancy of building.

³⁰ No figure available for 2012, hence using 2011 figure for indicative purposes.

8. NATIONAL AND INTERNATIONAL BENCHMARKS

For comparative purposes, the following South African companies in the financial services sector are indicated below according to their declarations made to the Carbon Disclosure Project (CDP) Questionnaire in 2015³¹. All emissions are reported in metric tonnes.

BENCHMARKING SANLAM AGAINST OTHER FINANCIAL SERVICES COMPANIES IN 2015					
Company	Scope 1 emissions – SA	Scope 2 emissions – SA	Scope 1&2 emissions SA	Scope 3 emissions – Global	No. Scope 3 emissions reported
Sanlam	135	36 999	37 134	16 860	7
Santam	23	6 533	6 566	9 510	5
Old Mutual	7 895	515 592	523 487	25 344 894	5
Nedbank	380	147 474	147 853	57 246	3
MMI	761	57 245	58 006	17 911	3

Differences between organisational and operational boundaries of companies need to be taken into account when comparing performance. This is especially relevant in Scope 3 emissions, which are voluntary and global; hence organisations are likely to be reporting different emitting activities.

9. INFORMATION ON OFFSETS

Sanlam has not offset any of its GHG emissions through either the purchasing of renewable energy or any other appropriate offsetting mechanism.

10. TARGET SETTING

Sanlam have set three intensity targets. The target year is 2015 and consideration should be given to set new targets. The base year is 2010.

SANLAM TARGETS					
Scope	% of emissions in scope	% reduction from base year	Metric	Normalised base year	Comments
1, 2 and 3	100%	15%	t/FTE	11.77	Measures for energy efficiency, travelling and paper, will bring down levels of carbon emissions.
2	100%	20%	t/m2	0.37	Electricity consumption to be reduced through energy efficiency initiatives.
Scope 3 – business travel	100%	15%	t/FTE	0.77	Air and road travel as well as overnight accommodation will be reduced by using video- and tele-conferencing where appropriate instead of travelling.

³¹ The Carbon Disclosure Project (CDP) is an independent, not-for-profit organisation with the aim of seeking information on the risks and opportunities of the business presented by climate change and greenhouse gas emissions data from the world's largest companies. CDP has become the leading standard for carbon disclosure methodology and process. The CDP website is the largest repository of corporate greenhouse gas emissions data in the world.

11. CARBON TAX

South Africa has made international commitments to reduce greenhouse gas emissions. A carbon tax will be one of the economic instruments used to achieve this reduction. The National Treasury has therefore published the Draft Carbon Tax Bill with the aim to incentivise the use of more environmentally friendly methods and technologies to reduce or eliminate the source of the pollution. Carbon tax will be calculated at a rate of R120/tCO₂e of the Scope 1 GHG emissions of a taxpayer and there will be a number of transitional tax-free allowances to reduce a tax payer's carbon tax liability. The emissions calculations will be based on Scope 1 emissions over a calendar year.

12. RECOMMENDATIONS FOR FUTURE REPORTING

The following are some high level suggestions to improve data capture and reporting:

- The commuting survey completed in 2015 only had a response rate of 4% of full-time employees covered by this report. It is suggested that another survey be completed in the next reporting year to capture a larger percentage of employees' commuting patterns.
- Travel data should be provided in one report per year to ensure there are no gaps in reporting. In 2015, at least four reports per travel type were received and many were in differing formats.
- EZ Shuttle should include the vehicle type and fuel used.
- The type of paper purchased for policy paper should be recorded as it was assumed a 50:50 split between Sappi and Mondi in 2015. Sappi has higher emissions than Mondi, which increases the overall carbon associated with paper purchasing.
- Sanlam data is currently verified for Scope 1 and 2 and waste to landfill data has been audited. It is recommended that all Scope 3 data be verified as this will increase points linked to CDP.
- All air-conditioning and refrigeration gas refills should be recorded per building. Any fire extinguishers replacements can also be collected.
- Fleet vehicle data should be captured separately per vehicle to ensure it is captured as 'on-road' or 'off-road' vehicle type.
- Consideration should be given to re-baseline and an updated GWP for air-conditioning gas refills would then be incorporated.

13. VERIFICATION OF GHG INVENTORY

All Scope 1 and 2 data has been audited and waste to landfill data has been externally verified. An independent verification party has not verified this report. It is recommended that this carbon footprint report be verified.

14. FACILITIES COVERED BY GHG INVENTORY

The following facilities were covered by this 2015 Carbon Footprint Report:

- Sanlam Head Office, Bellville
- Sanlam Sky, Houghton
- Sanlam Investments (SI), Bellville
- Sanlynn, Pretoria
- Glacier, Bellville
- Alice Lane, Sandton

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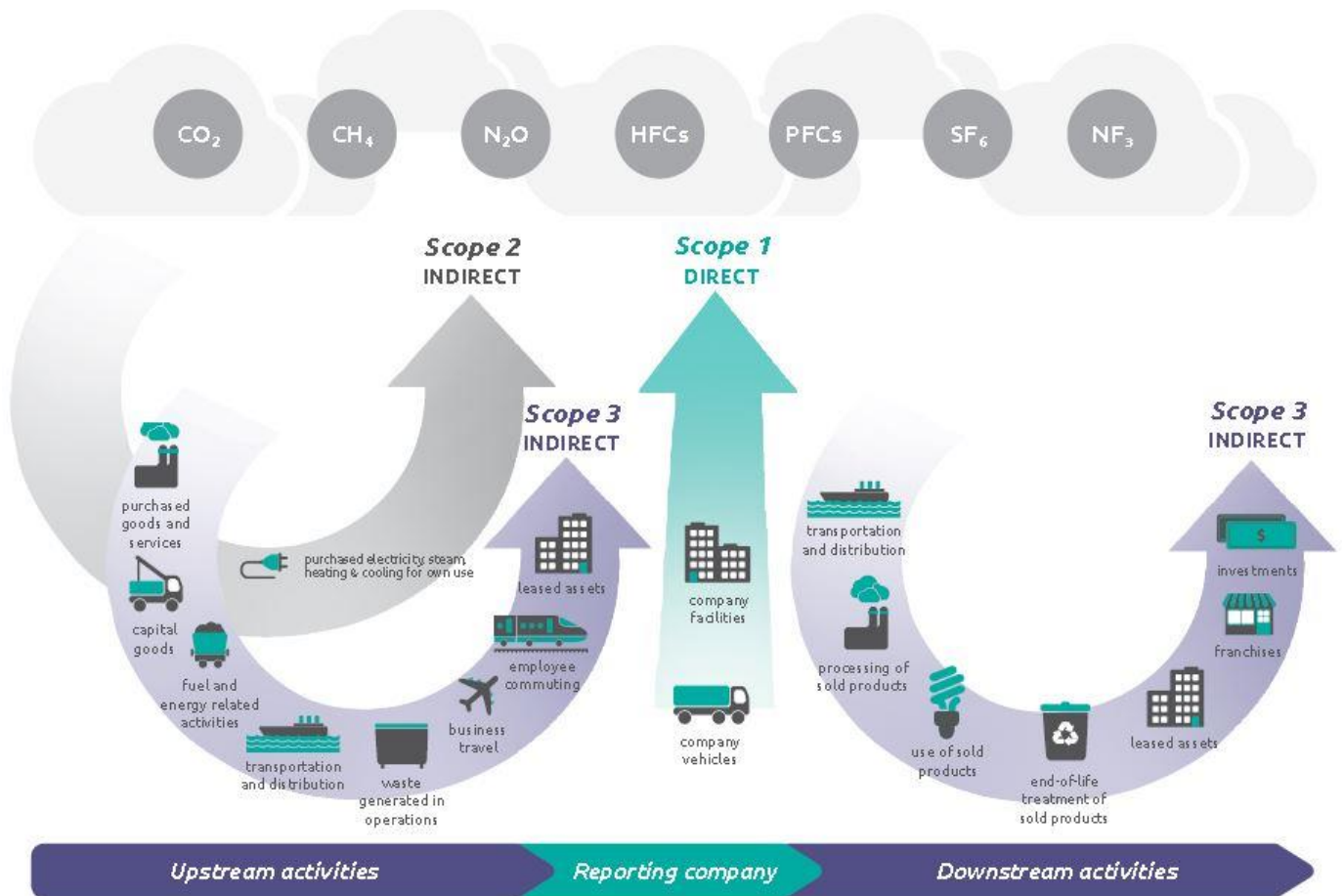
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APPENDIX A: ABBREVIATIONS AND GLOSSARY OF TERMS

A/C	Air-conditioning
Baseline year	An historical year used to compare preceding year's emissions.
CO₂	Carbon dioxide
CO₂e	Carbon dioxide equivalent – standardisation of all greenhouse gases to reflect the global warming potential relative to carbon dioxide.
CDP	Carbon Disclosure Project
Defra	United Kingdom Department of Environment, Food and Rural Affairs.
Direct emissions	Greenhouse gas emissions from facilities/sources owned or controlled by a reporting company, e.g. generators, blowers, vehicle fleets.
Emission factors	Specific value used to convert activity data into greenhouse gas emission values. Presented in specific units, e.g. kgCO ₂ /km travelled.
FTEs	Full- time employees
GHG	Greenhouse gases
GHG Protocol	Greenhouse Gas Protocol – uniform methodology used to calculate the carbon footprint of an organisation.
GWP	Global Warming Potential – an indication of the global warming effect of a greenhouse gas in comparison to the same weight of carbon dioxide.
HCFC	Hydrochlorofluorocarbon
IPCC	Intergovernmental Panel on Climate Change
Indirect emissions	Greenhouse gas emissions from facilities/sources that are not owned or controlled by the reporting company, but for which the activities of the reporting company are responsible, e.g. purchasing of electricity.
Operational boundary	Determination of which facilities or sources of emissions will be included in a carbon footprint calculation.
Organisational boundary	Determination of which business units of an organisation will be included in a carbon footprint calculation.
Optional information	Information relating to emissions that are recommended but not compulsory under the GHG Protocol, e.g. emissions from air travel.
Relevant emissions	Emissions generated as a result of the business activities of the reporting company.
Required information	Information relating to emissions that are compulsory under the GHG Protocol, namely direct emissions and indirect emissions from purchased electricity.
Scope 1 emissions	Emissions resulting from equipment owned or controlled by a reporting company.
Scope 2 emissions	Emissions resulting from consumption of electricity purchased by a reporting company.
Scope 3 emissions	Emissions resulting from other activities of a reporting company, such as commuting travel, business air travel, paper consumption.
UNEP	United Nations Environment Programme
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute

APPENDIX B: DIAGRAM ILLUSTRATING DIRECT VS. INDIRECT EMISSIONS

Emissions Assessment³²: The diagram and text box explain the difference between Scope 1 (emissions from fuel used by company-owned or controlled equipment), Scope 2 (indirect emissions from purchased electricity) and Scope 3 (indirect emissions from other activities linked to the business but where equipment is not owned or controlled by the company).



³² Source of diagram: GHG Protocol website (<http://www.ghgprotocol.org/files/ghgp/public/overview-of-scopes.jpg>).

APPENDIX C: **INFORMATION ON CARBON FOOTPRINTING**

Definition: Direct and Indirect Emissions

Under the GHG Protocol, emissions are categorised as 'direct' when they are generated from activities or sources within the reporting company's organisational boundary and which the company owns or controls. 'Indirect' sources are those emissions related to the company's activities that are emitted from sources owned or controlled by another company, e.g. purchased electricity, rental cars, commercial airlines or paper.

Definition: Scope 1 Emissions

Emissions from sources owned or controlled by the reporting company, e.g. generators, refrigeration, air-conditioning units.

Definition: Scope 2 Emissions

Emissions associated with the consumption of purchased electricity, heat or steam from a source that is not owned or controlled by the reporting company, e.g. an electricity utility such as Eskom.

Definition: Scope 3 Emissions

Scope 3 emissions are indirect emissions, other than purchased electricity, which can be described as relevant to the activities of the reporting company. Under the GHG Protocol it is not compulsory to report them. Certain GHG reporting registries, however, require that some Scope 3 emissions be reported under different circumstances.

APPENDIX D: **SCOPE 3 EMISSIONS - GHG PROTOCOL CORPORATE VALUE CHAIN**

Total Scope 3 Emissions according to the GHG Protocol Corporate Value Chain Accounting and Reporting Standard:

1. Purchased Goods and Services	727.92
3. Fuel and Energy-related Activities (not in Scope 1 & 2)	3 561.42
4. Upstream Transportation and Distribution	337.10
5. Waste Generated in Operations	459.19
6. Business travel	5 102.03
7. Employee Commuting	6 671.95

TOTAL SCOPE 3 EMISSIONS **16 859.61**

16. Upstream Other (Non-Kyoto Protocol Gases – R22) 35.40

TOTAL SCOPE 3 and OUTSIDE OF SCOPES **16 897.51**

Purchased Goods and Services includes:

Consumption of office paper	339.88
Consumption of policy paper	388.04
Total Purchased Goods and Services	727.92

Business travel includes:

Car Rental	157.85
Commercial airlines	4 549.52
Accommodation	322.95
Third party vehicle fleet	71.71
Total Business Travel	5 102.03

Categories not included in the boundary:

2. Capital Goods	Not Relevant
8. Upstream Leased Assets	Relevant, not yet calculated
9. Downstream Transportation and Distribution	Not Relevant
10. Processing of Sold Products	Not Relevant
11. Use of Sold Products	Not Relevant
12. End-of-Life Treatment of Sold Products	Not Relevant
13. Downstream Leased Assets	Relevant, not yet calculated
14. Franchises	Relevant, not yet calculated
15. Investments	Relevant, not yet calculated

APPENDIX E: DETAILED RESULTS OF EMPLOYEE COMMUTING SURVEY

The commuting survey was sent to Sanlam employees. The total number of respondents to the questionnaire was 229, of which 227 surveys were used, equating to 4% of Sanlam's employees. Ten public holidays during the working week were used in the calculation for 2015.

EMPLOYEE COMMUTING EMISSIONS SURVEY 2015					
Scope	Description	Engine size / Variable	Emissions factor kg CO ₂ e/km ³³	Total consumption (km)	Metric tonnes of CO ₂ e emissions
3	Private vehicles	Less than 1.4 l petrol	0.15859	144 707	22.95
		1.4 – 2.0 l petrol	0.19931	914 216	182.21
		Greater than 2.0 l petrol	0.29074	64 921	18.88
		Less than 1.7 l diesel	0.14367	10 550	1.52
		1.7 – 2.0 l diesel	0.17561	50 888	8.94
		Greater than 2.0 l diesel	0.22520	50 926	11.47
		Average (if not known)	0.18635	31 905	5.95
	Other transport modes	Walking / cycling	0	30 548	0
		Train	0.04506	142 560	6.42
		Bus	0.10883	66 499	7.24
		Mini-bus / taxi	0.01661	41 992	0.70
		Motorbike (average)	0.11966	7 607	0.91
		Motorbike 125-500cc	0.10644	3 450	0.37
TOTAL				1 560 768	267.54
Total Surveys					227
Carbon per Survey					1.17858
Total FTEs at reported buildings					5 661
TOTAL Carbon for Sanlam employee commuting					6 671.95

COMPARATIVE SUMMARY OF COMMUTING SURVEY	2012	2015
Total employees	5 468	5 661
Average emissions per employee	1.239	1.179
Carbon from commuting by total employees covered by the report	6 775	6 672
Percentage of total full-time employees surveyed	23%	4%

³³ Emission factors from Defra July 2015.



APPENDIX F: CONSUMPTION DATA PER BUILDING IN 2015

CONSUMPTION AND TOTAL SCOPE 1 AND 2 EMISSIONS DATA BY BUILDING IN 2015								
	Unit	Sanlam Head Office	Sanlam Sky	SI	Sanlynn	Glacier	Alice Lane	TOTAL
LPG	Kg	1 161	-	-	-	-	1 085	2 246
Diesel (Stationary)	Litres	30 961	1 000	3 200	-	493	7 626	43 280
A/C R507	Kg	-	-	1.30	-	-	-	1.30
Diesel (Mobile)	Litres	-	-	1 209	-	-	-	1 209
Petrol	Litres	1 261	-	1 101	-	-	-	2 363
Electricity	kWh	25 711 267	2 206 148	2 708 588	2 940 307	832 474	2 233 757	36 632 541
Waste to Landfill	Kg	157 057	32 428	31 968	87 648	19 740	22 934	351 775
Waste to Recycling	Kg	174 278	23 028	6 011	-	10 164	3 225	216 706
Waste to Compost	Kg	26 419	-	-	-	-	596	27 015
A/C R22	Kg	-	22	1.60	-	-	-	23.60
Water	Kilolitres	32 251	9 408	5 174	4 918	5 411	8 159	65 322
Total Scope 1	tCO ₂ e	89	2.68	19	-	1.32	24	135
Total Scope 2	tCO ₂ e	25 968	2 228	2 736	2 970	841	2 256	36 999

