

# MASSMART'S IMPROVEMENT IN CARBON FOOTPRINT DATA REPORTING 2008 - 2011

## Why are we measuring our carbon footprint?

Massmart understands that the climate is changing and that part of this change can be attributed to human activities. Our operations and the products we sell have the potential to contribute to climate change, so it is our responsibility to look for opportunities to minimise negative impact. **Creating an accurate and reliable carbon emissions baseline is our first step in effectively managing our greenhouse gas emissions. Since 2008, we have been improving the accuracy of our data.**



**MASSMART**

## What are we measuring?

Massmart measures scope 1, 2 and 3 emissions. These are measured in accordance with the GHG Protocol (WRI & WBCSD, 2004) and most scope 1 and 2 emissions are included in Massmart's carbon report. Although optional, significant and relevant scope 3 emissions are also included wherever possible.



**SCOPE 1:** Direct emissions from fuels burned by company-owned or -controlled stationary and mobile sources including company-owned or -controlled vehicles, on-site generators and from fugitive refrigerant gasses from refrigeration plants and air-conditioning units.



**SCOPE 2:** Indirect emissions from electricity used. Almost all electricity used by Massmart in South Africa is derived from Eskom-generated electricity from the national grid.



**SCOPE 3:** Massmart currently measures our scope 3, indirect emissions resulting from business air travel, car hire, supply-side freight transport, contractor-owned and -operated trucks, shared generator usage, waste sent to landfill and paper usage.

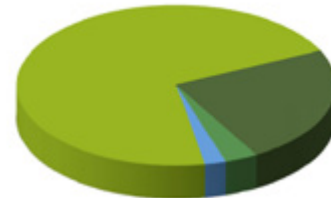
## How are we doing?

SCOPE 1: 2008	SCOPE 1: 2009	SCOPE 1: 2010	SCOPE 1: 2011
5 916.27	19 775.92	19 959.08	16 762.67
SCOPE 2: 2008	SCOPE 2: 2009	SCOPE 2: 2010	SCOPE 2: 2011
250 527.08	271 534.38	297 133.71	278 911.96
SCOPE 3: 2008	SCOPE 3: 2009	SCOPE 3: 2010	SCOPE 3: 2011
135 919.51	84 354.52	48 599.84	90 475.86

### TOTAL GROUP CARBON EMISSIONS:

Measured in tons of carbon dioxide equivalent (CO<sub>2</sub>e)

GROUP TOTAL 2008	GROUP TOTAL 2009	GROUP TOTAL 2010	GROUP TOTAL 2011
392 362.86	375 664.82	365 692.62	394 391.38

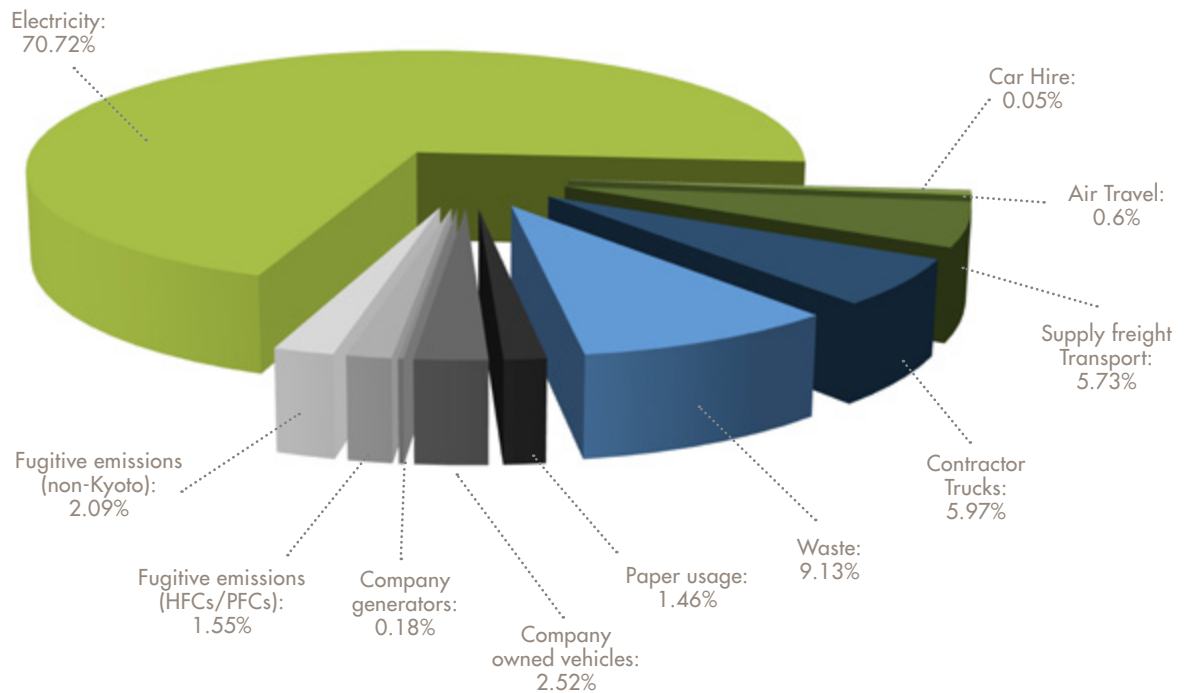


Other\* (2.09%)    Scope 2 (70.72%)  
 Scope 1 (4.25%)    Scope 3 (22.94%)

**Scope Breakdown:** 394 391.38 Tons CO<sub>2</sub>e

\*Other includes non-kyoto listed gases which are not included in scope 1, 2 or 3, but are included in the calculation of carbon emissions.

## Carbon Footprint Total: 394 391.38 Tons CO<sub>2</sub>e



### How have we improved?

**In 2008** we started measuring emissions linked to our operations. We reported on data which was relatively easy to access and which we considered to be of an acceptable level of accuracy, understanding at the time that due to the challenges encountered, for example the complications of accessing accurate data from stores based in other African countries, there would be room for improvement in the years to follow.

**In 2009** our focus was on increasing the scope of our reporting as well as taking steps to improve on the accuracy of the data. The large jump in scope 1 emissions when comparing our 2008 and 2009 data is attributable to the inclusion in 2009 of fugitive emissions attributable to our extensive refrigeration plants and air-conditioning units. The increase in our scope 2 CO<sub>2</sub>e emissions between 2008 and 2009 was attributable to more accurate data capturing and tracking, whilst the large decrease in scope 3 emissions was due to an overestimation of emissions resulting from waste to landfill, which in some cases included waste sent for recycling.

**For 2010** a decision was made to align carbon emissions reporting period with our financial data reporting period of July to June, rather than the calendar year period on which our 2008 and 2009 data was based. At this stage, we also began installing electricity consumption meters in our stores to improve the accuracy of our scope 2 data. Emissions due to electricity consumption in our stores in countries outside of South Africa still proved to be a challenge and due to concerns around the accuracy, were again excluded. Even though we have made strides towards improving the quality and integrity of our data, we still estimate a 20% margin of error in our 2010 carbon emissions.

**In 2011** our aim was to focus specifically on improving the integrity of the data reported. We have achieved a remarkably low margin of error (10% -15%) with scope 2 data reporting and this is due to the successful role-out of electricity meters to the majority of our stores. The overall increase in the group's carbon footprint can be attributed to an increase in scope 3 emissions, with supply-freight and contractor truck related emissions increasing significantly. It appears that the increase in scope 3 emissions is due to better reporting in this area.

**In 2012** we will be placing greater focus on obtaining more reliable waste disposal data and reducing the quantity of waste sent to landfills as a result of our operations. We had hoped in 2011 to get to grips with our actual water consumption figures. This was not achieved, so going forward this will be one of our priorities. In addition, a greater emphasis will be placed on obtaining more consistent contractor truck emission data as this increased significantly for the 2010/2011 financial year.

## Our intensity reporting

Intensity reporting makes it possible to accurately compare one year with the next comparing greenhouse gas (GHG) emissions based on, for example, turnover or floor-space. As there is a constant change in the number of stores we operate, intensity reporting more accurately tracks relative emissions in spite of these changes. It is also a useful tool for comparing annual emissions and in benchmarking against similar companies or between business divisions. Intensity reporting is generally limited to scope 1 and 2 emissions with scope 3 emissions usually being excluded because the boundaries are less defined and more likely to change over time.

	Estimated group carbon emissions intensity. Tons CO <sub>2</sub> e per 1000m <sup>2</sup> GLA*	Estimated group carbon emissions intensity. Tons CO <sub>2</sub> e per Rm sales per year**
<b>2008</b>	<b>282.72</b>	<b>6.68</b>
<b>2009</b>	<b>259.62</b>	<b>6.75</b>
<b>2010</b>	<b>313.00</b>	<b>6.83</b>
<b>2011</b>	<b>258.65</b>	<b>7.45</b>

\* Gross lettable area (GLA) has been used to calculate carbon emission data from 2011 forward as it is more accurate and consistent. Data between 2008 and 2010 was calculated according to trading area (Trading area is defined as gross lettable area less office space, parking, warehouse, yard and receiving bay). This has resulted in a reduction in per m<sup>2</sup> energy intensity.

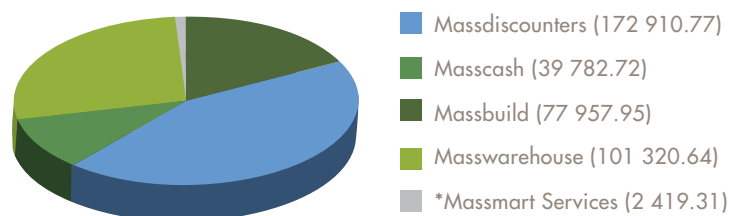
\*\* Annual turnover for Massmart's South African and non-South African operations.

## What methodology do we use?

Standardised spreadsheets are sent to each of Massmart's divisions. Individual sections of the spreadsheets are sent to various department heads to oversee data collection and capture. Data is collected from all facilities including stores, distribution centres, warehouses, head offices and regional offices, and is collated, checked, tallied up by division and then submitted in individual divisional spreadsheets. Divisional spreadsheets are sent to Massmart Holdings, where they undergo a further check for accuracy and are compared to the previous year's submission. Here, Massmart looks for significant changes and all queries are investigated and resolved after which all data is submitted to an external organisation, where Massmart's carbon footprint is calculated.

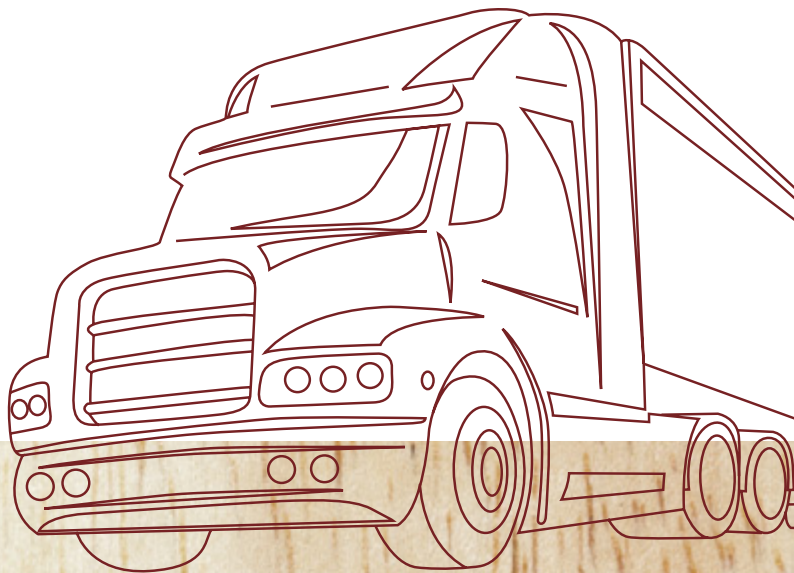
## How does Massmart measure emissions across its divisions?

The Massmart group comprises nine wholesale and retail chains, and one buying group operating in 13 countries in sub-Saharan Africa through the group's four operating divisions – Massdiscounters, Masswarehouse, Massbuild and Masscash.



**Total Group Emissions Breakdown - 2011**

\* The smallest contributor to Massmart's total group carbon emission is Massmart Services. Although not a trading division, for the purposes of this assessment Massmart Services is included to represent the facilities based in Sunninghill where the head office operations for Massmart Holdings Limited, Builder's Warehouse and Makro are situated.



# MASSBUILD

Massbuild operates three complementary brands: Builder's Warehouse, which operates large DIY and home improvement stores in major urban areas; Builder's Express, a chain of smaller neighbourhood home and garden improvement stores and Builder's Trade Depot, a chain of building contractor outlets located in industrial sites in peri-urban and urban areas.

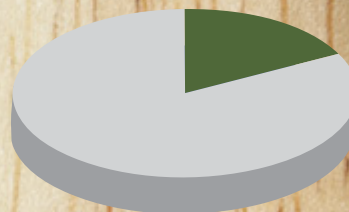
## TOTAL MASSBUILD ELECTRICITY CONSUMPTION

Measured in kilowatt hours (kWh)

2008 kWh	2009 kWh	2010 kWh	2011 kWh
32 185 988	37 031 901	45 288 158	41 496 903

## Massbuild Emissions Relative to Group

■ 77 957.95 Massbuild



## TOTAL SCOPE 2 EMISSIONS

Measured in tons of carbon dioxide equivalent (CO<sub>2</sub>e)

2008	2009	2010	2011
33 151	38 142	46 647	42 742

## INTENSITY REPORTING

Scopes 1, 2 and other		Electricity consumption only
Tons CO <sub>2</sub> e per Rm Sales Revenue per year	Tons CO <sub>2</sub> e per 1000m <sup>2</sup> GLA per year	Tons CO <sub>2</sub> e per 1000m <sup>2</sup> GLA per year
6.65	81.9	72.4



# MASSDISCOUNTERS

Massdiscounters operates two retail formats: Game and DionWired. Game is a discount retailer of food, groceries, general merchandise and FMCG for home, leisure and business use, operating throughout South Africa and in major cities in sub-Saharan Africa. DionWired is a South African electronics and appliances specialty store.

## TOTAL MASSDISCOUNTERS ELECTRICITY CONSUMPTION

Measured in kilowatt hours (kWh)

2008 kWh	2009 kWh	2010 kWh	2011 kWh
126 677 050	129 613 120	132 924 502	128 945 605

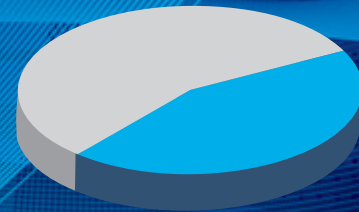
## Massdiscounters Emissions Relative to Group

■ 172 910.77 Massdiscounters

## TOTAL SCOPE 2 EMISSIONS

Measured in tons of carbon dioxide equivalent (CO<sub>2</sub>e)

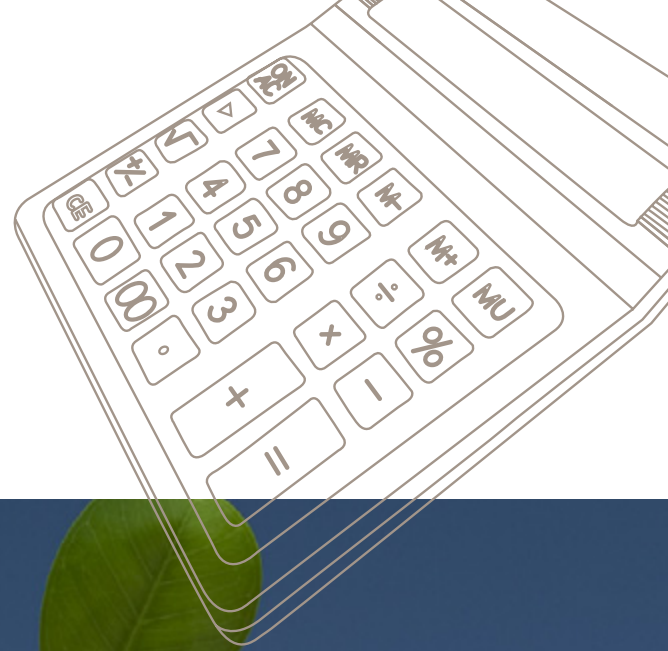
2008	2009	2010	2011
130 477	133 591	136 912	132 814



## INTENSITY REPORTING

Scopes 1, 2 and other		Electricity consumption only
Tons CO <sub>2</sub> e per Rm Sales Revenue per year	Tons CO <sub>2</sub> e per 1000m <sup>2</sup> GLA per year	Tons CO <sub>2</sub> e per 1000m <sup>2</sup> GLA per year
10.24	271.23	263.8





# MASSCASH

Masscash consists of wholesale food and cosmetics business interests as well as retail outlets. The wholesale division consists of CBW, Jumbo Cash and Carry, Shield and Cambridge Food as well as a number of independent wholesalers operating under their own brands.

## TOTAL MASSCASH ELECTRICITY CONSUMPTION

Measured in kilowatt hours (kWh)

2008 kWh	2009 kWh	2010 kWh	2011 kWh
27 373 439	29 306 330	41 010 165	24 998 221

## Masscash Emissions Relative to Group

■ 39 782.72 Masscash



## TOTAL SCOPE 2 EMISSIONS

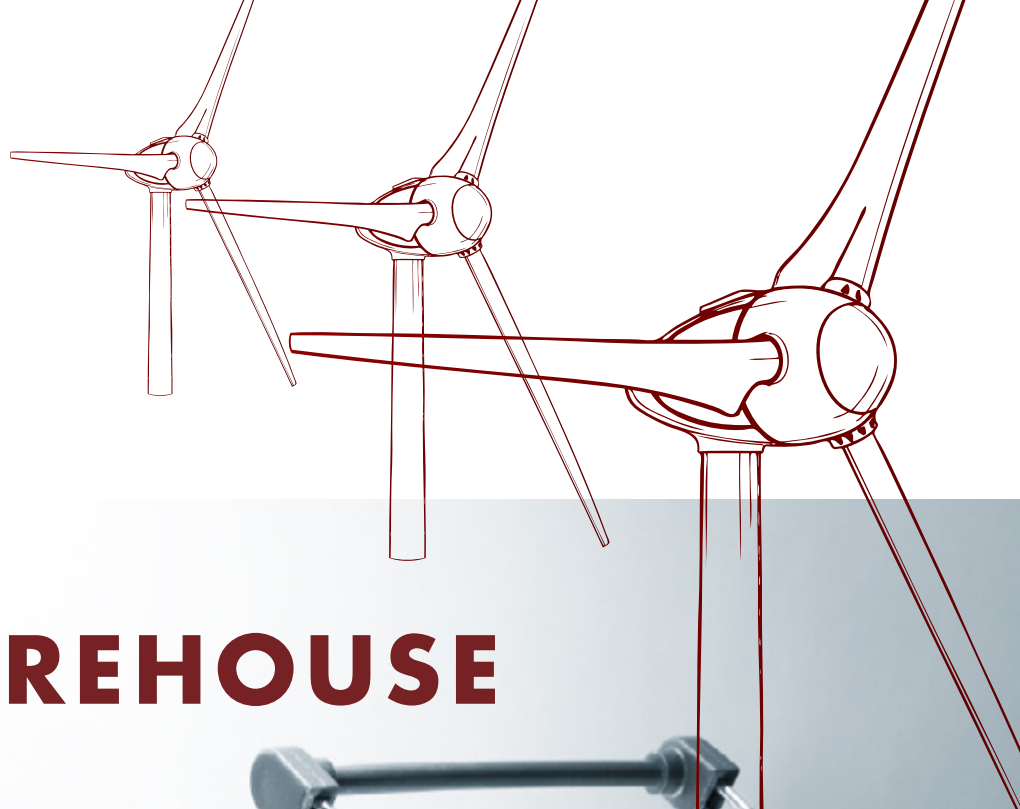
Measured in tons of carbon dioxide equivalent (CO<sub>2</sub>e)

2008	2009	2010	2011
28 194	30 185	42 240	25 748

## INTENSITY REPORTING

Scopes 1, 2 and other		Electricity consumption only
Tons CO <sub>2</sub> e per Rm Sales Revenue per year	Tons CO <sub>2</sub> e per 1000m <sup>2</sup> GLA per year	Tons CO <sub>2</sub> e per 1000m <sup>2</sup> GLA per year
1.58	141.42	117.1





# MASSWAREHOUSE

Our Masswarehouse division comprises the Makro retail model selling general merchandise to retail customers, while most of its food and liquor is sold to wholesale customers.

## TOTAL MASSWAREHOUSE ELECTRICITY CONSUMPTION

Measured in kilowatt hours (kWh)

2008 kWh	2009 kWh	2010 kWh	2011 kWh
69 315 296	67 146 991	68 796 445	73 834 970

## TOTAL SCOPE 2 EMISSIONS

Measured in tons of carbon dioxide equivalent (CO<sub>2</sub>e)

2008	2009	2010	2011
71 395	69 161	70 860	76 050



**Masswarehouse Emissions Relative to Group**

101 320.64 Masswarehouse

## INTENSITY REPORTING

Scopes 1, 2 and other		Electricity consumption only
Tons CO <sub>2</sub> e per Rm Sales Revenue per year	Tons CO <sub>2</sub> e per 1000m <sup>2</sup> GLA per year	Tons CO <sub>2</sub> e per 1000m <sup>2</sup> GLA per year
6.77	428.72	378.5

