

Greenhouse Gas Inventory Verification for:

Tiger Brands Limited

26 March 2021



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Glossary

AR5	Fifth Assessment Report
CDP	Carbon Disclosure Project
CFA	Carbon Footprint Assessment
CH ₄	Methane
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
DEFRA	Department of Environment, Food and Rural Affairs (UK)
DJSI	Dow Jones Sustainability Index
GHG	Greenhouse Gas
GJ	Gigajoule
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organization for Standardization
JSE	Johannesburg Stock Exchange
kL	Kilolitre
kW	Kilowatt
kWh	Kilowatt Hour
MWh	Megawatt Hour
N ₂ O	Nitrous Oxide
tCO ₂ e	Tonnes of Carbon Dioxide Equivalent
YTD	Year to Date

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I Introduction

I.1 GHG Inventory Verification Introduction

Organisations around the world are increasingly confronted with the topic of climate change and other social and environmental issues. These organisations are fast recognising that their response (or lack thereof) to environmental and social issues, poses both risks and opportunities.

Organisations are discovering that there is strategic business value by undertaking **Greenhouse Gas Inventory Verification** as part of their overall Carbon Management Plan.

These benefits include:

- **Reporting assurance:** Ensure your carbon emissions data is accurate, relevant, complete, and consistent over time for management decision making.
- **Differentiate from competition:** Show that your organisation takes its environmental impact seriously and is willing to go the extra step by undertaking external independent verification.
- **Enhance reputation:** Demonstrate your organisation's commitment to cut carbon emissions. Therefore, enhancing your reputation among shareholders, customers, and employees.
- **Attract investment:** Improve access to capital through ratings on the growing number of market indices promoting responsible investment, such as CDP, JSE / FTSE Russel and DJSI.
- **Increase CDP Score:** A company choosing to verify their footprint can achieve a better CDP score.

I.2 Project Background

Tiger Brands Limited (herewith Tiger Brands) commissioned Terra Firma Solutions to conduct an independent verification assessment of their Greenhouse Gas Inventory for the reporting period 1st January 2020 to 31st December 2020. The purpose of the verification is to verify Tiger Brand's carbon footprint for CDP reporting.

The verification has been conducted in accordance with ISO 14064 – 3: 2006 International Standard.

The verification process assesses:

- Consistency with the WBCSD/WRI GHG Protocol for Corporate Accounting Standard; and
- Material accuracy of the quantification of Tiger Brands GHG inventory.

1.3 Client Background

“Tiger Brands Limited, a Top 40 JSE Limited company whose footprint extends across the African continent and beyond, is one of the largest manufacturers and marketers of FMCG products in Southern Africa, and has been for several decades.

Tiger Brands has been built over many decades through the acquisition and clustering of businesses. Our strategy for success comes from the perpetual renovation and innovation of our brands, while our approach to expansion, acquisitions and joint ventures has given traction to a distribution network that now spans more than 22 African countries.

Our group focus is on the core business of FMCG categories that spread across the value chain. Our wide range of brands are underpinned by comprehensive research and meaningful insights into each of the markets in which Tiger Brands operates.

Tiger Brands is a world-class operation – and will continue to hold and grow its position through constant investment in every asset of the business, be it in people, brands, technology, efficiency, quality or sustainability.”

<http://www.tigerbrands.com/about-us-4/>

1.4 Verification Scope

Terra Firma Solutions conducted **limited-level assurance** of Tiger Brands Greenhouse Gas Inventory. The following verification activities were conducted:

- A desktop review of Tiger Brands’ Scope 1 and Scope 2 GHG inventory and activity data.
- A desktop review of Tiger Brands’ Scope 3 (water, waste and air travel) GHG inventory and activity data.
- The following business units were included in the verification:

Table 1: Business Units

Grains	Consumer	International
• Albany • Milling • Jungle • King Food • Tastic • Pasta	• Beverages • Culinary • Home, Personal Care & Baby • Value Added Meat Products • Snacks and Treats	• Chococam • Davita • Langeberg & Ashon Foods (S.A.)

- The following documents were verified for correctness:
 - “Summary Carbon footprint 2020 Data Final (1).xlsx” received via email from Kavita Kalicharran on 24th March 2021
 - “Roodekop 2020”
 - “Culinary 2020”
 - “HPC and Baby 2020”
 - “Snacks and Treats 2020”
 - “Vamp 2020”
 - “Albany Bakeries 2020 Final”
 - “Jungle Oats 2020”

- “King Food 2020”
- “Milling 2020”
- “Pasta 2020”
- “Tastic Rice 2020”
- ‘Sustainability Chococam Data January 2020 to December 2020’
- “Davita Sustainability Report Jan 2020-Dec 2020”
- “Langeberg an Ashton Sustainability 2020”
- “Tiger Brands Jan-Dec20 CO2 Air Travel”
- All relevant emission factors were reviewed for accuracy.
- The following was not included in the verification:
 - Emission intensities
 - KPI's
 - Carbon Tax calculations
 - Exclusions
 - “Consumer Brands Summary Sheet 2020”
 - “Grains Summary Sheet 2020”
 - “International Summary Sheet”
- No base year was stated and was not verified.

1.5 Concept of Materiality

The determination of materiality involves qualitative as well as quantitative considerations. As a result of the interaction of these considerations, discrepancies of relatively small amounts can have a material effect on the carbon emissions assertion.

In order to ensure consistency some GHG programmes or internal reporting programmes assist this decision-making process by including materiality thresholds. This can be defined at the overall level, such as 5% of an organisation's, or GHG project's, GHG emissions.

A 5% materiality threshold was applied to Tiger Brands total organisational GHG inventory.

It can also include varying thresholds depending on the level of disaggregation, such as 5% at the gross organisational level, 7% at the facility level, and 10% at the GHG source level.

1.6 Assumptions and Limitations

All assumptions made during the verification process have been clearly explained in the relevant sections to which they pertain. Terra Firma Solutions are limited to the information and data provided by Tiger Brands.

I.7 Structure of the Report

The report has the following structure:

- Introduction
- Verification Process
- Verification Results
- Recommendations
- Verification Statement

I.8 Project Team

The table below shows the project team:

Table 2: Project Team

Name	Company	Responsibility
Julie Ntsekhe	Tiger Brands	Client Representative
Kavita Kalicharren	Tiger Brands	Client Representative
Caitlin Keam	Terra Firma Solutions	Heads of Analytics and Sustainability

2 Verification Process

2.1 Verification Process

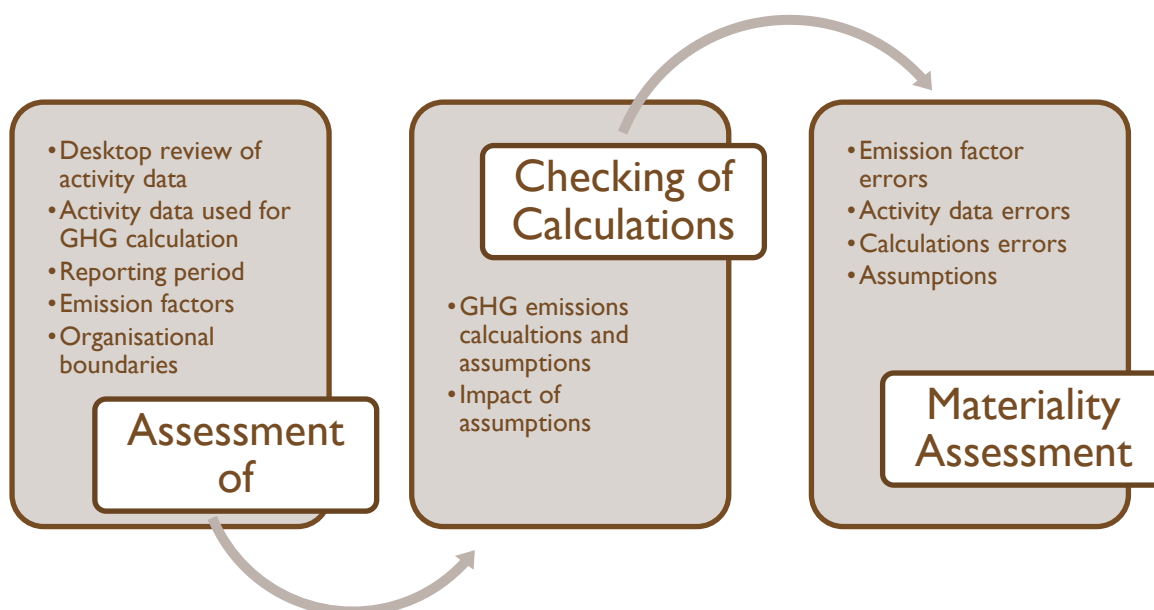


Figure 1: Greenhouse Gas Verification Process

2.2 Tiger Brands Activity Data

The GHG emissions were verified using the above process. All environmental indicator reports containing activity data were provided by Tiger Brands, for each business unit.

The following points describe the verification method used:

- Activity data was reviewed by calculating emissions using input sheet data and comparing emissions against the final consolidated GHG inventory. The following business units were included in the assessment:
 - Consumer Brands
 - Grains
 - Exports and International
- Scope 3 air travel emissions were included in the verification assessment.
- The reporting period assessed was for 1st January 2020 to 31st December 2020.
- The organisational boundaries were checked and confirmed to operational control. Therefore 100% of emissions are attributed to Tiger Brands.
- The calculations of GHG emissions were checked and assessed for material impact on the overall carbon footprint for Scopes 1 and Scope 2 emission sources. Scope 3 water, waste and air travel emissions were also assessed.
- The materiality of all discrepancies was assessed using the criteria stipulated in Section 1.5 Concept of Materiality.

3 Verification Results

The following findings relate to the scope of the verification as defined in Section 1.4.

3.1 Materiality

A 5% organisational level materiality threshold was set for the verification assessment. Based on the process and procedures conducted, there is no evidence that the GHG assertion

1. has significant material errors and is not a fair representation of GHG data and information; and
2. has not been prepared in accordance with the GHG Protocol Corporate Accounting and Reporting Standard.

3.2 Organisational Boundaries

Tiger Brands GHG inventory followed the operational control approach. The organisational boundaries were defined and utilised correctly in the calculation of the GHG Inventory.

3.3 Operational Boundaries

Tiger Brands calculated GHG emissions of the following activities:

Scope 1

- Stationary combustion (coal, natural gas, LPG, diesel, paraffin, polyfuel and HFO)
- Mobile combustion (petrol, diesel and LPG)

Scope 2

- Purchased electricity
- Purchased steam

Scope 3

- Water
- Waste to landfill
- Air travel

3.4 Reporting Period

The reporting period was correctly defined and utilised in the calculation of the GHG emissions inventory. Tiger Brands reporting period is the calendar year and not the organisations financial year.

3.5 Emission Factors

All Scope 1 and 2 emission factors used in Tiger Brands environmental indicator reports were reviewed; utilising the following sources:

- The Greenhouse Gas Protocol: Emission Factors from Cross Sector Tools (2015)
- The Greenhouse Gas Protocol: GHG Emissions from Purchased Electricity (2015)
- Eskom Integrated Annual Report (2020)
- IPCC Guidelines for National Greenhouse Gas Inventories (2006)

Scope 3 emission factors were checked for correctness; utilising the following sources:

- Guidelines to DEFRA/DEC's GHG Conversion Factors for Company Reporting (2020)

4 Corrective Action Requests

4.1 Round 1

The following clarifications and corrective action requests were sent to Tiger Brands to improve the accuracy of the carbon footprint assessment.

4.1.1 Emission Factors

- ✓ Please complete the table below for all emission factors used in the 2020 carbon footprint.
 - Please enter the database reference, e.g. GHG Protocol, IPCC
 - Please enter the emission factor unit, e.g. kgCO₂e / tonne

Emission Source	Emission Factor Database	Emission Factor Unit
Coal	GHG Protocol Stationary 2017/ DEFRA 2020	kgCO ₂ e/Tonne
Natural Gas (SASOL)	GHG Protocol Stationary 2017	kgCO ₂ e/Tj
LPG	GHG Protocol Stationary 2017/ DEFRA 2020	kgCO ₂ e/Tonne
Diesel - Heating	GHG Protocol Stationary 2017/ DEFRA 2020	kgCO ₂ e/Tonne
Paraffin	GHG Protocol Stationary 2017	kgCO ₂ e/Tonne
Poly Fuel	GHG Protocol Stationary 2017	kgCO ₂ e/Tonne
HFO	GHG Protocol Stationary 2017	kgCO ₂ e/Tonne
Biomass (peach pits)	GHG Protocol Stationary 2017	kgCO ₂ e/Tonne
Petrol -Transport	IPCC 2006 (AR5: CH ₄ and N ₂ O)	kgCO ₂ e/Litre
Diesel -Transport	IPCC 2006 (AR5: CH ₄ and N ₂ O)	kgCO ₂ e/Litre
LPG - Transport	IPCC 2006 (AR5: CH ₄ and N ₂ O)	kgCO ₂ e/Litre
Electricity	Eskom 2020	kgCO ₂ e/kWh
Cococam Electricity	GHG Protocol Electricity 2017	kgCO ₂ e/kWh
Water Usage	DEFRA 2020	kgCO ₂ e/Kl
Waste (Send to Landfill)	DEFRA 2020	kgCO ₂ e/Tonne
Grains Waste (Send to Landfill)	DEFRA 2020	kgCO ₂ e/Tonne
Steam		Ton CO ₂ e

4.1.2 Emissions Factor Updates

- ✓ Please use the latest DEFRA 2020 emission factors for **Waste**. The emission factors currently used in the spreadsheets refer to DEFRA 2018

4.1.3 Converting Units

- ✓ To ensure all units have been correctly captured and converted across the spreadsheets, please complete the below table.

a	b	c	d	E
Emission Source	Emission Factor Unit (from first table)	Unit the Activity data was provided in	Density used	Formula for converting data provided to emission factor unit
Example:	kgCO ₂ e / kg	Litre	0.8 kg / litre	Litre x kg / litre = kg
Coal	kgCO ₂ e/Tonne	Tonne		Tonne x emission factor/1000= Tonne CO ₂ e
Natural Gas (SASOL)	kgCO ₂ e/Tj	GJ		(GJ/1000) x emission factor/1000=Tj
LPG (Heating)	kgCO ₂ e/Tonne	KG		(kg/1000) x Emission factor/1000= Tonne CO ₂ e
Diesel - Heating	kgCO ₂ e/Tonne	Litre	0.85	Emission factor x (Litre/1000x density)/1000= Tonne CO ₂ e
Paraffin	kgCO ₂ e/Tonne	Litre	0.79	Emission factor x (Litre/1000x density)/1000= Tonne CO ₂ e
Poly Fuel	kgCO ₂ e/Tonne	Litre	0.8	Emission factor x (Litre/1000x density)/1000= Tonne CO ₂ e
HFO	kgCO ₂ e/Tonne	Litre	0.96	Emission factor x (Litre/1000x density)/1000= Tonne CO ₂ e
Biomass (peach pits)	kgCO ₂ e/Tonne	Tonne		Tonne x emission factor/1000 = Tonne CO ₂ e
Petrol -Transport	kgCO ₂ e/Litre	Litre		Emission factor x Litre /1000= Tonne CO ₂ e
Diesel -Transport	kgCO ₂ e/Litre	Litre		Emission factor x Litre /1000= Tonne CO ₂ e
LPG - Transport	kgCO ₂ e/Litre	KG	1.96	Emission factor x kg x (1,98 (conversion))/1000= Tonne CO ₂ e
Electricity	kgCO ₂ e/kWh	Kilowatt per hour (KWH)		KWH x emission factor/1000=Tonne CO ₂ e
Cococam Electricity	kgCO ₂ e/kWh	Kilowatt per hour (KWH)		KWH x emission factor/1000=Tonne CO ₂ e
Water Usage	kgCO ₂ e/Kl	Kilo Litre		KL x emission factor/1000= Tonne CO ₂ e
Waste (Send to Landfill)	kgCO ₂ e/Tonne	Tonne		Tonne x emission factor/1000= Tonne CO ₂ e
Grains Waste (Send to Landfill)	kgCO ₂ e/Tonne	Tonne		Tonne x emission factor/1000= Tonne CO ₂ e
Steam	Ton CO ₂ e	Tonne		Tonne x steam factor= CO ₂ e

NB: Prior to applying emission factors, all activity data must be in the same unit as the emission factor denominator.

- ✓ Please provide an explanation for the following unit conversions:
 - **LPG Transportation:** Activity data is multiplied by 1.98, please explain.
- ✓ **Polyfuel:** Please review the use of the bracket highlighted in the screenshot and correct the calculation
 - Activity data is provided in litres
 - Emission factor is kgCO₂e / tonne
 - Therefore a litres to tonnes conversion is required using the density of polyfuel

4.1.4 Units explanation

- ✓ In the “Carbon Footprint Analysis” tab the units for Travel have been converted to GJ. Please provide an explanation for this conversion. The emission factors for travel do not require a conversion to GJ. The YTD usage values don’t affect carbon footprint calculation as they are calculated on a monthly basis, however it is important to have consistent units to avoid confusion and ensure accurate reporting.

4.1.5 Data Review

- ✓ In the relevant spreadsheet, please update the data discrepancies below, or provide an explanation for the discrepancy:
 - Marble Hall > Diesel Transport > Sept 2020
 - Culinary > Petrol Transport > No activity data reported but emissions reported due to incorrect excel formula for the cell reference to Jam Input Sheet P35, should be P36. Please review all formulas for this error
 - Albany PTA > Diesel Transport > Aug and Sept 2020
 - Albany PTA > Petrol Transport > Sept 2020
 - Albany Bellville > Electricity > June 2020
 - Albany Secunda > Polyfuel > Jan 2020
 - Albany Secunda > Diesel Transport > Feb 2020
 - Albany PMB > Petrol Transport > Nov 2020
 - Albany Virginia > Diesel Transport > June 2020
 - Tastic > Water > Jan 2020- Please note that this number is correct.
 - King Food > Diesel Heating > Feb and Mar 2020
- ✓ Please review:
 - Albany Bakery Usage Summary Tab for Diesel and Petrol Transportation. The usage summary does not include all consumption across all the sites.
 - Albany Usage Summary and Carbon Footprint Analysis for LPG Consumed Heating, there is no data for LPG (kg), but emissions have been reported 3 tonnes CO₂e.
 - King Food usage summary for Coal Consumed, the Rand values are pulling through instead of the consumption values.

4.1.6 Boundaries

- ✓ The following feedback has been noted:
 - VAMP was sold end September 2020 therefore no data from October to December.
 - Albany Maitland and Margate were not running for the year.
 - Sites that have zero, they were not running during that period. Please confirm if this statement also applied to blank cells? (confirmed yes)

4.1.7 Comparison to Previous Year

A comparison to 2019 was not possible due to the 2019 carbon footprint not being calculated by Tiger Brands.

A comparison to 2018 does not provide like-for-like results due to:

- The 2018 carbon footprint being affected by a listeriosis outbreak.
- The 2020 carbon footprint being impacted by the COVID-19 pandemic.

4.1.8 Spreadsheet Consistency

Please review:

- All spreadsheets for consistency, e.g., ensure all data pulls through correctly across all tabs. Only the data and carbon footprint tabs have been verified due to inconsistencies.
- The emission factors across all spreadsheets.
- All unit conversions.

Please update all summary spreadsheets.

4.1.9 Exclusions

Please note that the following spreadsheets were not reviewed due to inconsistencies:

- Grains summary sheet
- Consumer summary sheet
- International summary sheet

Only Activity Data, Emission Factors and Carbon Footprint calculations were review, Rand values and other data included in the spreadsheets were not included in the verification.

The spreadsheet 'Summary Carbon Footprint 2020 Data' was reviewed after all corrective actions had been attended to.

4.2 Round 2

4.2.1 LPG Transportation

- ✓ Please update the below across the spreadsheets, as per the corrective actions Round 1 explanation. The activity data for LPG Transportation is in kg.

Source Description	Description	YTD (Usage)	Unit
Fuels Used In Facility (Scope 1)			
Fossil	Coal	9784	Ton
	Natural Gas (SASOL)	0	TJ
	LPG	0	Ton
	Diesel - Heating	0	Ton
	Paraffin	0	Ton
	PolyFuel	0	Ton
	HFO	0	Ton
	Biomass (peach pits)	0	Ton
Travel	Petrol - Transport	592	L
	Diesel - Transport	6147	L
	LPG - Transport	7900	L

- ✓ Some input sheets state LPG Transportation is in litres, please update to kg (e.g. Davita).
- ✓ In the converting units table in section 1.3, please update the Density Used column to show **1.98 litre / kg**.
- ✓ Please review the LPG Transportation calculation:
 - **Activity Data** provided in kg
 - Kg x 1.98 litre / kg = litres
 - Emission factor: kgCO₂e / litre
 - Litres x kgCO₂e / litre = kgCO₂e
 - Divided by 1000 = tonnes CO₂e

Please either:

- Provide an explanation why a division by 1000 occurred twice, or
- Update all spreadsheets and the converting unit's table in section 1.3

4.2.2 L&A Waste

- ✓ Please review waste data is pulling the correct cells

4.3 Round 3

4.3.1 LPG Transportation

Converting LPG Transportation density:

1. **Activity Data** provided in kg
2. Emission factor: kgCO₂e / litre

Reviewing the formula:

$$\frac{(\frac{\text{Kg Co2e}}{\text{L}} \times \text{Kg/lpg})}{1000} \times \frac{\text{Kg}}{\text{L}} = \text{Ton Co2e}$$

Emission factor cannot be x by activity data before the activity data is converted to the correct units

Comparing conversion calculations:

Ref:	Type	Tiger Brands	TFS: Density Option 1	TFS 2: Density Option 2
a	Activity Data	227 720 kg	227 720 kg	227 720 kg
b	Density	1.98 kg/ m ³	0.539 kg / litre	1.98 litre / kg
c	Emission Factor	1.7325363 kgCO ₂ e / litre	1.7325363 kgCO ₂ e / litre	1.7325363 kgCO ₂ e / litre
	Formula	= c x a x (b / 1000) / 1000	= a / b x c / 1000	= a x b x c / 1000
	Emissions	0.78 tCO ₂ e	732	781

kg cannot be multiplied by kg / m³
 $\frac{\text{kg}}{1} \times \frac{\text{kg}}{\text{m}^3}$
 kg must be divided by density for units to cancel out:
 $\frac{\text{kg}}{1} / \frac{\text{kg}}{\text{m}^3}$
 = m³

Density used by TFS (IEA Global)

LPG		Density (kg/L)
IEA	(Europe) (America) (Pacific)	[2]
IEA (global)*	[1] [8]	0.539
U.S. Energy Information Administration (USA)	[11]	11.60 barrels/tonne = 0.542
DUKES (UK)*	[10]	1849 L/tonne = 0.541
DEFRA (UK)	[12]	1968 L/tonne = 0.508
IPCC stationary (global)	[6]	
IPCC mobile (global)	[7]	
JEC (EU)	[14, 15]	0.550
REET 1.8 (USA)	[16]	1.923 g/gal _{US} = 0.508
NEF (Japan)	[20, 21]	
Transportation Energy Data Book (USA)	[17]	

Conclusion:

- ✓ Please review the LPG Transportation density calculations. Emissions are being calculated as < 1 tCO₂e which is much lower than the circa 700 tCO₂e for Culinary used as an example.

4.4 Verification Results Summary

The table below summarises the results of Tiger Brands 2020 carbon footprint verification. The gross organisational emissions are below the 5% materiality threshold.

Table 3: Tiger Brands GHG Inventory Verification Summary

	Tiger Brands (tCO ₂ e)			Terra Firma Solutions (tCO ₂ e)			Variance (%)		
	Scope 1	Scope 2	Scope 3	Scope 1	Scope 2	Scope 3	Scope 1	Scope 2	Scope 3
Consumer									
Beverages	2 039	7 951	199	2 043	7 951	182	0%	0%	-9%
Culinary	86 195	25 601	1 281	86 119	25 601	1 392	0%	0%	9%
HPCB	809	22 199	285	811	22 200	284	0%	0%	0%
S&T	15 203	42 506	1 176	15 213	42 506	1 175	0%	0%	0%
VAMP	23 469	19 323	933	23 494	19 323	932	0%	0%	0%
Total	127 715	117 581	3 874	127 680	117 581	3 965	0%	0%	2%
	Scope 1			Scope 2			Scope 3		
	Scope 1	Scope 2	Scope 3	Scope 1	Scope 2	Scope 3	Scope 1	Scope 2	Scope 3
Grains									
Albany	52 376	58 843	1 052	52 443	58 843	1 050	0%	0%	0%
Jungle	3 200	6 386	66	3 192	6 386	66	0%	0%	0%
King Food	17 147	13 103	168	17 146	13 103	167	0%	0%	0%
Mills	946	71 602	238	917	71 602	238	-3%	0%	0%
Pasta	2 670	8 751	165	2 672	8 751	164	0%	0%	0%
Tastic	360	4 335	112	341	4 335	112	-5%	0%	0%
Total	76 699	163 020	1 800	76 712	163 020	1 798	0%	0%	0%
	Scope 1			Scope 2			Scope 3		
	Scope 1	Scope 2	Scope 3	Scope 1	Scope 2	Scope 3	Scope 1	Scope 2	Scope 3
Port & Internati									
Chococam	2 854	1 291	191	2 809	1 228	190	-2%	-5%	0%
Davita	-	1 598	340	-	1 598	357		0%	5%
L&AF	25 151	15 162	232	25 122	15 162	230	0%	0%	-1%
Total	28 005	18 051	763	27 931	17 989	777	0%	0%	2%
	Scope 1			Scope 2			Scope 3		
	Scope 1	Scope 2	Scope 3	Scope 1	Scope 2	Scope 3	Scope 1	Scope 2	Scope 3
Air Travel			1 092			1 092			0%
Total	232 419	298 651	6 437	232 323	298 589	6 539	0%	0%	2%
	538 600 *			538 543			-0.01%		

* minor difference to final figures due to rounding

5 Recommendations

The following recommendations indicate ways in which Tiger Brands can improve their carbon management system:

- **Improve data quality:** it is recommended that Tiger Brands continue to collect non-financial data by business unit. This should be accompanied by a non-financial data collection guideline which aims to reduce errors. **It is recommended that each business unit take actions to:**
 - **Reduce data gaps**
 - **Ensure all cells in the excel spreadsheet are aligned correctly**
 - **Eliminate spreadsheet errors**
 - **Ensure the correct data cells are referred to across different spreadsheets**
 - **Ensure no static values are inputted into the spreadsheet where a formula should be used**
- **Review process:** it is recommended that each business unit review the non-financial data before submitting to head office. This review should ensure that there are not material exclusions or errors in the data. Head office should review the data further, again highlighting any significant discrepancies in the data. All calculations should be reviewed by a Tiger Brands employee who did not calculate the footprint, this review should ensure all activity data is pulled correctly throughout the workbooks as indicated in the bullet point above.
- **Emission factors:** Tiger Brands should **update all relevant emission factors annually**. Eskom's integrated, or supplementary and divisional report, publishes the grid emission factor annually. International electricity emission factors are found in the Greenhouse Gas protocol guidelines, where the latest emission factor should be used. DEFRA releases an updated database of emission factors annually; the latest DEFRA emission facts should be used for scope 3 emissions.
- **Carbon footprint calculations:** it is recommended that the carbon footprint calculator is reviewed for calculation errors. This involves ensuring calculations are correct and ensuring all densities have been applied correctly.
- **Carbon inventory development:** Tiger Brand has a large scope 1 footprint, comprised of fossil fuels. It is recommended that Tiger Brand's carbon inventory identifies the largest emitters, allowing for the identification of possible carbon projects as well as investigating, at a high level, if these projects would be feasible to investigate further.
- **Detailed carbon emission reduction strategy:** There are a number of opportunities for Tiger Brands to reduce emissions. The company should look to develop a detailed emission reduction strategy in order to provide the best way forward to reduce the group emissions. The carbon strategy should look at specific opportunities at selected facilities and highlight which opportunities should be investigated more closely.

Disclaimer

Every attempt has been made by Terra Firma Solutions to ensure the accuracy of this Greenhouse Gas Inventory Verification; however, the accuracy is dependent on information provided by Tiger Brands Limited including, but not limited to:

- Activity data provided by Tiger Brands;
- Carbon emission calculations by source and business unit; and
- Assumptions used to calculate carbon emissions.

The carbon footprint verification is conducted for CDP purposes. The assessment does not include a review of Tiger Brands environmental scorecards, KPI's, carbon tax calculations etc.

6 Verification Statement

Tiger Brands Limited
Tiger 1, 3010 William Nicol Drive,
Bryanston,
Republic of South Africa

Independent Verification Statement

Introduction

Tiger Brands Limited (Herewith Tiger Brands) commissioned Terra Firma Solutions to perform limited-level assurance of its Greenhouse Gas (GHG) inventory for the reporting period 1 January 2020 – 31 December 2020 (Herewith 2020). The preparation for the GHG calculation has been the responsibility of Tiger Brands. The verifier has been given the responsibility to express an opinion on the GHG calculation.

The verification has been conducted in accordance with ISO 14064 – 3.

Objectives

The GHG assertions verified were the following:

- That the calculation of the 2020 GHG inventory for Tiger Brands has been developed in accordance with the GHG Protocol Corporate Accounting and Reporting Standard; and
- That the final reported figure of GHG emissions were calculated according to the operational control approach at **538 603 tonnes CO₂e** for Scope 1, Scope 2 and Scope 3 (water, waste to landfill and air travel).

Scope

The following verification activities were conducted:

- A desktop review of Tiger Brands Scope 1, Scope 2 and Scope 3 (water, waste to landfill and air travel) GHG inventory and activity data, where the following reviews were conducted:
 - Reliability and correctness of emission factors;
 - Assessing completeness and accuracy of activity data;
 - Assuring a consistent methodology was used for assumptions and extrapolation; and
 - Reviewing the accuracy of final GHG calculations, as per the following materiality thresholds:
 - 5% gross organisational threshold.
- The following business operations were included in the verification:

Grains	Consumer	International
• Albany • Milling • Jungle • King Food • Tastic • Pasta	• Beverages • Culinary • Home, Personal Care & Baby • Value Added Meat Products • Snacks and Treats	• Chococam • Davita • Langeberg & Ashon Foods (S.A.)

- All relevant emission factors were reviewed for accuracy.
- Emission intensities were not verified.
- Documentation of verification findings, and recommendations for improvement, are highlighted in the verification report.
- Issuance of clarifications and corrective action requests to Tiger Brands for consideration and review.
- Issuance of verification statement and completion of verification.

Conclusion

The limited level of assurance was conducted so as to comply with the requirements of the Greenhouse Gas Protocol.

Scope 1:

Total Scope 1 emissions reported for 2020: **232 421 tonnes CO₂e**

For CDP purposes more than 90% but less than or equal to 100% of the reported global emissions were verified.

Scope 2:

Total Scope 2 emissions reported for 2020: **298 652 tonnes CO₂e**

For CDP purposes more than 90% but less than or equal to 100% of the reported global emissions were verified.

Scope 3:

Total Scope 3 emissions reported for 2020: **7 530 tonnes CO₂e**

For CDP purposes more than 90% but less than or equal to 100% of the reported global emissions were verified.

Verification Opinion

Based on the process and procedures conducted, there is no evidence that the GHG assertion

1. has significant material errors and is not a fair representation of GHG data and information; and
2. has not been prepared in accordance with the GHG Protocol Corporate Accounting and Reporting Standard.

Date of Verification

The preparation for the verification opinion for the GHG calculation was performed between 12th February 2021 and 26th March 2021.

The verification statement is dated 26th March 2020.



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