

# CARBON FOOTPRINT ASSESSMENT

Prepared for Reunert Limited  
December 2022

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Carbon footprint assumptions & methodology



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# EXECUTIVE SUMMARY

Terra Firma Solutions (Pty) Ltd were commissioned by Reunert Limited to assist and develop their carbon footprint for the reporting period 01/10/2021 to 30/09/2022.

The carbon footprint inventory includes 37 Reunert Limited entities, excluding entities for which emissions are deemed immaterial or entities for which non-financial data is reported as part of another entity. Reunert has 100% financial control over all entities included in the carbon footprint, with the exception of CBI Electric Telecom Cables (Pty) Ltd, which is a joint venture (50% financial control), but has been excluded from this year's analysis due to the entity currently being under business rescue.

Only franchises where Reunert holds majority of share have been included in the scope of this carbon footprint assessment.

The carbon footprint is based on the financial control approach.

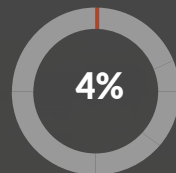
The operational boundaries include scope 1 direct emissions (mobile combustion and stationary combustion), scope 2 indirect emissions (electricity consumption in Reunert owned buildings) and scope 3 indirect emissions (electricity consumption in leased buildings, mobile combustion in leased vehicles, business travel, employee commute, waste, water and material use).

## CARBON FOOTPRINT 2021 - 2022

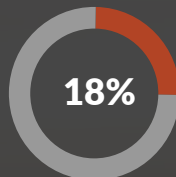
# 203 380

tCO<sub>2</sub>e

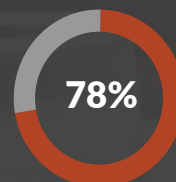
FOLLOWING THE GREENHOUSE GAS PROTOCOL



SCOPE 1: **8 071** tCO<sub>2</sub>e



SCOPE 2: **37 176** tCO<sub>2</sub>e



SCOPE 3: **158 133** tCO<sub>2</sub>e



# RECOMMENDATIONS



Reduce carbon footprint



Improve data quality



Set KPI's & targets



Annual reporting

## ENERGY EFFICIENCY

Energy efficiency assessments are a valuable exercise to obtain a detailed database of energy opportunities. The assessments investigate voltage and power, lighting, heating ventilation and air conditioning (HVAC) and IT equipment to ensure the building is efficient and is being billed the correct amount.



## RENEWABLE ENERGY

Reunert has installed a 297 kWpeak solar PV system in Reunert Park, a 429 kWpeak solar PV system at Fuchs Electronics and a 1086.75 kWpeak solar PV system at CBI Low Voltage: Johannesburg.

In 2021-2022, Reunert generated 2 543 MWh's of renewable energy, resulting in an electricity cost saving of R2 486 822 as well as saving 2 696 tonnes of CO<sub>2</sub>e from being released into the atmosphere.

**2 696 tCO<sub>2</sub>e saved in 2021 - 2022.**



# INTRODUCTION

## PROJECT BACKGROUND

Businesses around the world are increasingly confronted with the topic of climate change, social investment and environmental issues.

It has become apparent that more businesses are fast recognising that their response (or lack thereof) to these issues, poses both risks and opportunities to their triple bottom line.

People, planet and profits.

Reunert has decided to embark on this journey by engaging with Terra Firma Solutions to undertake a Carbon Footprint Assessment (CFA).

Embarking on the aforementioned assessments is an important step in determining the environmental impact of the company as it highlights key areas to focus on emission reductions and can ultimately lead to increased profits from lower energy and fossil fuel costs.

## THE KEY COMPANY DRIVERS FOR EMBARKING ON THE CARBON FOOTPRINT ASSESSMENT ARE:

- Set emission reduction goals against which the company can be measured
- Increase operational efficiency and reduce operating costs
- Implement carbon management plans
- Position Reunert Limited as a climate change leader in its sector
- Enhance the level of data accuracy throughout the company
- Differentiate and increase possible market share

## CLIENT BACKGROUND

The Reunert Group manages a portfolio of businesses in the fields of Electrical Engineering, Information Communication Technologies (ICT) and Applied Electronics.

The group was established in 1888 by Theodore Reunert and Otto Lenz, and has contributed to the South African economy in numerous ways over the past 130 years.

The group was listed on the JSE in 1948, and is included in the industrial goods and services (electronic and electrical equipment) sector of the JSE. The group primarily operates in South Africa with smaller operations in Australia, Lesotho, Mauritius, the USA, Zambia and Zimbabwe. Reunert's offices are located in Woodmead, Johannesburg, South Africa.

**Electrical Engineering** manufactures and sells a comprehensive range of power and telecommunications cables and low-voltage circuit breakers.

**ICT** offers a range of office automation, business communication, connectivity and asset backed finance products and services.

**Applied Electronics** develops, supplies and maintains high-precision electronic products for defence, commercial applications and renewable energy solutions.

<https://www.reunert.co.za/group-overview.php>

## PROJECT TEAM

NAME	COMPANY	RESPONSIBILITY
Karen Smith	Reunert Limited	Project Sponsor
Mohammed Hadjee	Reunert Limited	Data Collection and Support
Grete Simanauskaite	Terra Firma Solutions	Head of Analytics and Sustainability
Kyle Petzer	Terra Firma Solutions	Carbon Analyst

# PROJECT DESCRIPTION

## PROJECT SCOPE

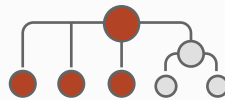
### ORGANISATIONAL BOUNDARIES

Organisational boundaries determine whether Greenhouse Gas reporting is done according to one of these approaches:



#### EQUITY SHARE APPROACH

A company accounts for the emissions from operations according to its share in equity of the operation, where equity share reflects economic interest.



#### CONTROL APPROACH

Emissions are accounted for from operations which are under the direct control of the parent company; this can be based on either financial control or operational control.

#### CONTROL APPROACH

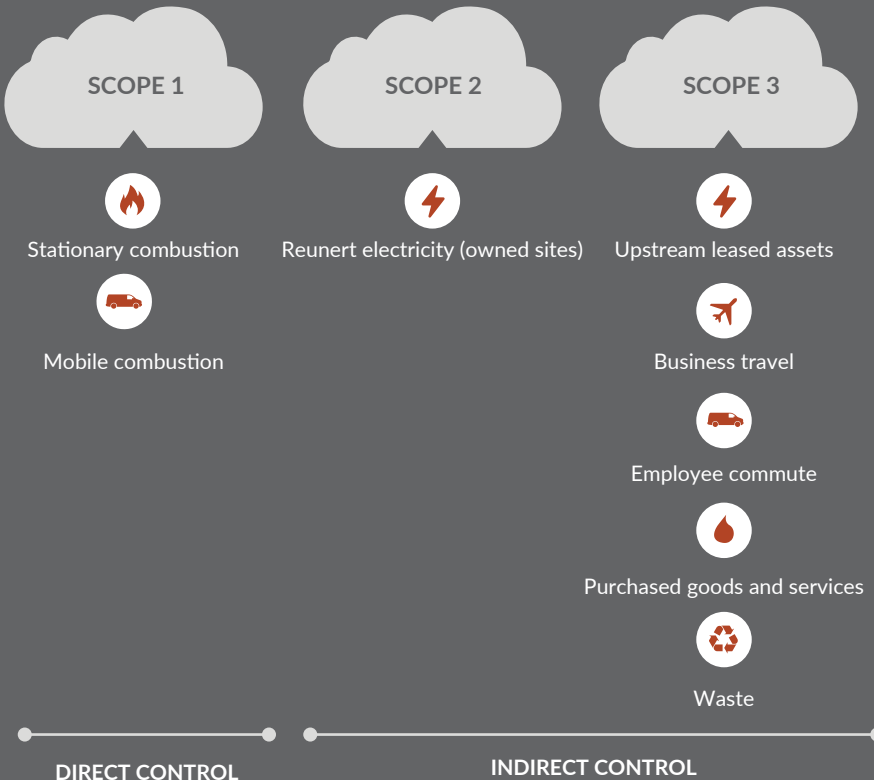
##### FINANCIAL AND OPERATIONAL

Financial: Can direct the financial policies with the view to gaining economic benefit.

Operational: Can direct operational policies at the operation.

REUNERT HAS CHOSEN THE FINANCIAL CONTROL APPROACH TO MEASURE THE ORGANISATIONS CARBON FOOTPRINT

### OPERATIONAL BOUNDARIES



### DATA SOURCES

#### ACTIVITY DATA

- Electricity usage (lightning bolt icon)
- Fuel usage (fuel pump icon)
- Transport (truck icon)
- Waste (recycling icon)
- Goods and Services (water drop icon)

#### EMISSIONS FACTORS

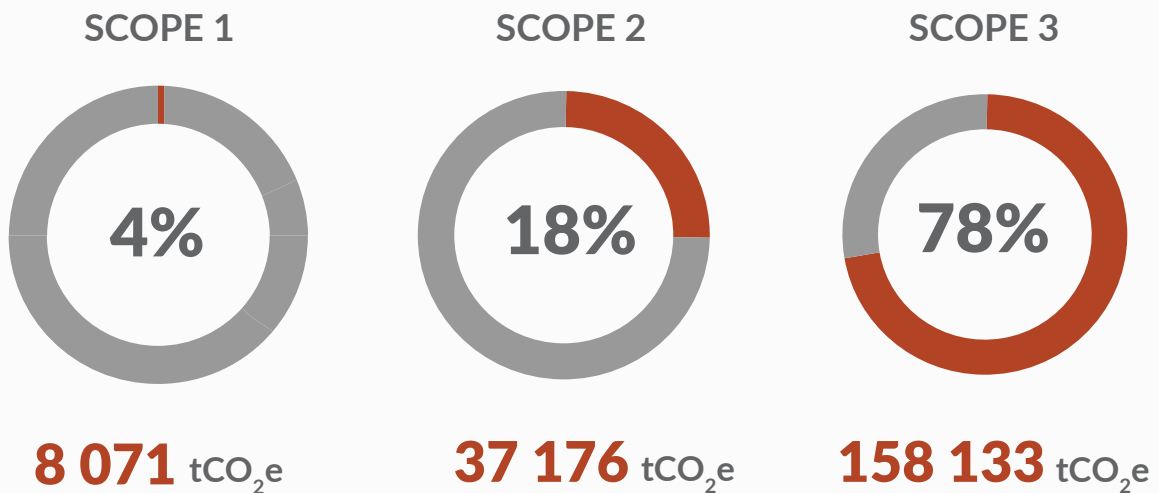
- defra DEFRA 2022
- Eskom Eskom Annual Report 2021
- ipcc IPCC 2006

Friedrich, Pillay & Buckley, (2007). Water SA, Vol. 33, No. 4

# CARBON FOOTPRINT RESULTS

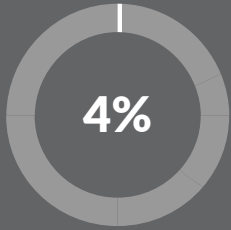
The total greenhouse gas emissions for Reunert Limited have been calculated at **203 380** tonnes of CO<sub>2</sub>e, following the Greenhouse Gas Protocol.

**203 380** tCO<sub>2</sub>e  
 FOR THE PERIOD 2021-2022  
 FOLLOWING THE  
 GREENHOUSE GAS PROTOCOL





Emissions associated with material use were the highest contributor to Reunert's carbon footprint at 139 512 tCO<sub>2</sub>e (69% of emissions). Electricity consumed by electricity consumption in Reunert owned sites followed at 37 176 tCO<sub>2</sub>e (18% of emissions).

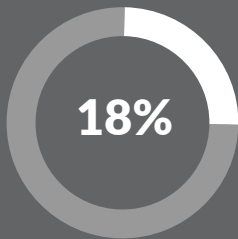
SCOPE 1 % OF TOTAL EMISSIONS



SCOPE 1 EMISSIONS

- 55%  Reunert stationary consumption [4 477 tCO<sub>2</sub>e]
- 45%  Reunert mobile consumption [3 595 tCO<sub>2</sub>e]

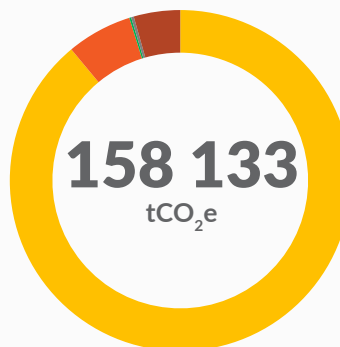
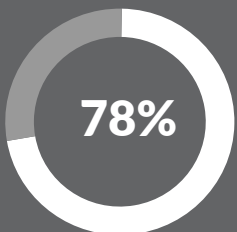
SCOPE 2 % OF TOTAL EMISSIONS








SCOPE 2 EMISSIONS

- 100%  Reunert Electricity (Owned sites) [37 176 tCO<sub>2</sub>e]

SCOPE 3 % OF TOTAL EMISSIONS



SCOPE 3 EMISSIONS

- 88%  Purchased goods, services [139 708 tCO<sub>2</sub>e]
- 6%  Employee Commute [9 703 tCO<sub>2</sub>e]
- 0.2%  Waste [277 tCO<sub>2</sub>e]
- 1%  Business Travel [1 530 tCO<sub>2</sub>e]
- 4%  Upstream Leased Assets [6 915 tCO<sub>2</sub>e]

# BENCHMARKING

## YEAR-ON-YEAR EMISSIONS

Scope	Emissions Source	Total tCO <sub>2</sub> e						2021 vs 2022 % Change
		2017	2018	2019	2020	2021	2022	
Scope 1	Diesel	426	404	336	301	342	552	62%
	Natural Gas	3 761	3 690	3 466	3 130	3 777	3 695	-2%
	LPG	130	210	139	109	117	144	23%
	Stationary Combustion	4 317	4 305	3 941	3 540	4 235	4 391	4%
	Stationary Combustion JV		2	17	13	3	-	-100%
	Oil	7	240	22	42	27	86	221%
	Lubricants	2	9	1	1	2	0.40	-79%
	Stationary Fuel Non-Energy	21	250	23	43	29	86	201%
	Stationary Fuel Non-Energy JV		3	3	1	3	-	-100%
	Diesel (mobile)	1 156	1 172	1 178	944	949	2 180	130%
	Petrol (mobile)	1 147	1 050	1 069	747	755	1 415	87%
	LPG (mobile)	22	-	-	12	12	-	-100%
	Mobile Combustion	2 325	2 223	2 247	1 703	1 716	3 595	109%
	Mobile Combustion JV	169	131	131	103	104	-	-100%
<b>Total Scope 1 Reunert</b>		<b>6 493</b>	<b>6 777</b>	<b>6 211</b>	<b>5 287</b>	<b>5 979</b>	<b>8 071</b>	<b>35%</b>
<b>Total Scope 1 JV</b>		<b>169</b>	<b>136</b>	<b>150</b>	<b>118</b>	<b>111</b>	<b>-</b>	<b>-100%</b>
<b>Total Scope 1</b>		<b>6 662</b>	<b>6 913</b>	<b>6 362</b>	<b>5 404</b>	<b>6 090</b>	<b>8 071</b>	<b>33%</b>
Scope 2	Electricity	51 778	43 641	48 816	44 025	43 803	37 176	-15%
	Electricity JV	4 509	2 928	3 594	3 305	3 270	-	-100%
<b>Total Scope 2 Reunert</b>		<b>51 788</b>	<b>43 641</b>	<b>48 816</b>	<b>44 025</b>	<b>43 803</b>	<b>37 176</b>	<b>-15%</b>
<b>Total Scope 2 JV</b>		<b>4 509</b>	<b>2 928</b>	<b>3 594</b>	<b>3 305</b>	<b>3 270</b>	<b>-</b>	<b>-100%</b>
<b>Total Scope 2</b>		<b>56 297</b>	<b>46 570</b>	<b>52 410</b>	<b>47 329</b>	<b>47 072</b>	<b>37 176</b>	<b>-21%</b>
<b>Total (Scope 1 &amp; 2) Reunert</b>		<b>58 281</b>	<b>50 419</b>	<b>55 027</b>	<b>49 312</b>	<b>49 782</b>	<b>45 247</b>	<b>-9%</b>
<b>Total (Scope 1 &amp; 2) JV</b>		<b>4 679</b>	<b>3 064</b>	<b>3 745</b>	<b>3 422</b>	<b>3 380</b>	<b>-</b>	<b>-100%</b>
<b>Total (Scope 1 &amp; 2)</b>		<b>62 960</b>	<b>53 483</b>	<b>58 772</b>	<b>52 734</b>	<b>53 162</b>	<b>45 247</b>	<b>-15%</b>
Scope 3	Material use	181 778	187 012	127 368	96 524	133 250	139 512	5%
	Outsourced warehousing	129	231	185	146	257	-	-100%
	Water supply	100	107	70	56	75	197	164%
	Purchased goods, services	182 007	187 350	127 623	96 726	133 582	139 708	5%
	Employee Commute	-	15 099	18 801	13 925	11 300	9 703	-14%
	Transport and distribution	319 542	-	-	-	-	-	-
	Water treatment	290	476	155	116	105	71	-33%
	Waste disposal	336	231	19	67	83	207	148%
	Waste	626	703	174	183	188	277	47%
	Business Travel	2 654	2 986	2 192	1 146	1 010	1 530	51%
	Mobile Fuel	68	208	196	382	167	1 115	568%
	Purchased electricity	6 226	6 145	6 090	7 069	5 281	5 800	10%
Upstream leased assets	6 294	6 353	6 286	7 451	5 448	6 915	27%	
<b>Total Scope 3</b>		<b>191 580</b>	<b>212 490</b>	<b>155 076</b>	<b>119 431</b>	<b>151 528</b>	<b>158 133</b>	<b>4%</b>
<b>Total tCO<sub>2</sub>e emissions</b>		<b>254 531</b>	<b>265 973</b>	<b>213 848</b>	<b>172 165</b>	<b>204 690</b>	<b>203 380</b>	<b>-1%</b>

### NOTES

- Stationary combustion emissions associated with diesel generators increased by 62% due to the significant increase in loadshedding days compared to FY21. Mobile fuel emissions also increased significantly as business operations increased as the South African economy opened up post Covid-19 lockdown.
- Fugitive emissions were present but not reported due to immateriality and lack of data.
- Scope 2 emissions have decreased by 21%. This can be attributed to CBI Telecom Cables Brits being excluded from this year's analysis due to the entity being under business rescue. CBI Telecom Cables Brits contributed 3 270 tCO<sub>2</sub>e to Scope 2 emissions last year. In addition, the ownership structure of Reunert College: Boksburg changed from owned to leased, meaning that electricity emissions shift from scope 2 to scope 3.
- Electricity consumption data was extrapolated for missing months. For sites with no electricity data, electricity consumption was extrapolated using kWh/m<sup>2</sup> values for the same type of building within the Group.
- Water data was extrapolated for sites with no water data. Water consumption data was extrapolated using kl/m<sup>2</sup> values for the same type of building within the group.
- Water emissions have increased due to higher production levels as well as due to properties' with no data being extrapolated for the first time, this year.
- For improved accuracy, the Friedrich, Pillay and Buckley (2007) emission factor for water was used for South African properties. This emission factor more accurately reflects emissions associated with water withdrawal and processing in South Africa. For properties outside of South Africa, the DEFRA 2022 emission factor for water was used.
- Material use emissions increased from last year due to increased production levels at African Cables: Vereeniging, RCC Manufacturing: Parow and Zamefa Zambia.
- Employee commute data was compiled through an employee commute survey for which the response rate was 15%. Based on the responses received, the average emissions per employee were calculated and extrapolated to account for those employees who did not respond to the employee commute survey.
- Transport and distribution emissions were not accounted for in 2022 carbon footprint assessment.



# BENCHMARKING

## KEY PERFORMANCE INDICATORS

Emissions per square meter, 'mill revenue and per full time employee.

	2017	2018	2019	2020	2021	2022	% change
 <b>SCOPE 1 &amp; 2 tCO<sub>2</sub>e PER METER SQUARED</b>	0.28	0.19	0.21	0.20	0.22	0.22	-2%
 <b>SCOPE 1 &amp; 2 tCO<sub>2</sub>e PER FULL-TIME EMPLOYEE</b>	11.25	9.72	9.54	8.92	11.38	9.85	-13%
 <b>SCOPE 1 &amp; 2 tCO<sub>2</sub>e PER 'MILL REVENUE</b>	6.12	4.95	5.32	6.42	5.51	4.03	-28%

## BENCHMARKING PER DIVISION

### SCOPE 1 EMISSIONS



- 90% ● Electrical Engineering [7 225 tCO<sub>2</sub>e]
- 1% ● Applied Electronics [113 tCO<sub>2</sub>e]
- 7% ● ICT [600 tCO<sub>2</sub>e]
- 2% ● Group Services ('Other') [132 tCO<sub>2</sub>e]

### SCOPE 2 EMISSIONS



- 87% ● Electrical Engineering [32 245 tCO<sub>2</sub>e]
- 11% ● Applied Electronics [4 209 tCO<sub>2</sub>e]
- 2% ● ICT [694 tCO<sub>2</sub>e]
- 0.1% ● Group Services ('Other') [29 tCO<sub>2</sub>e]

# BENCHMARKING

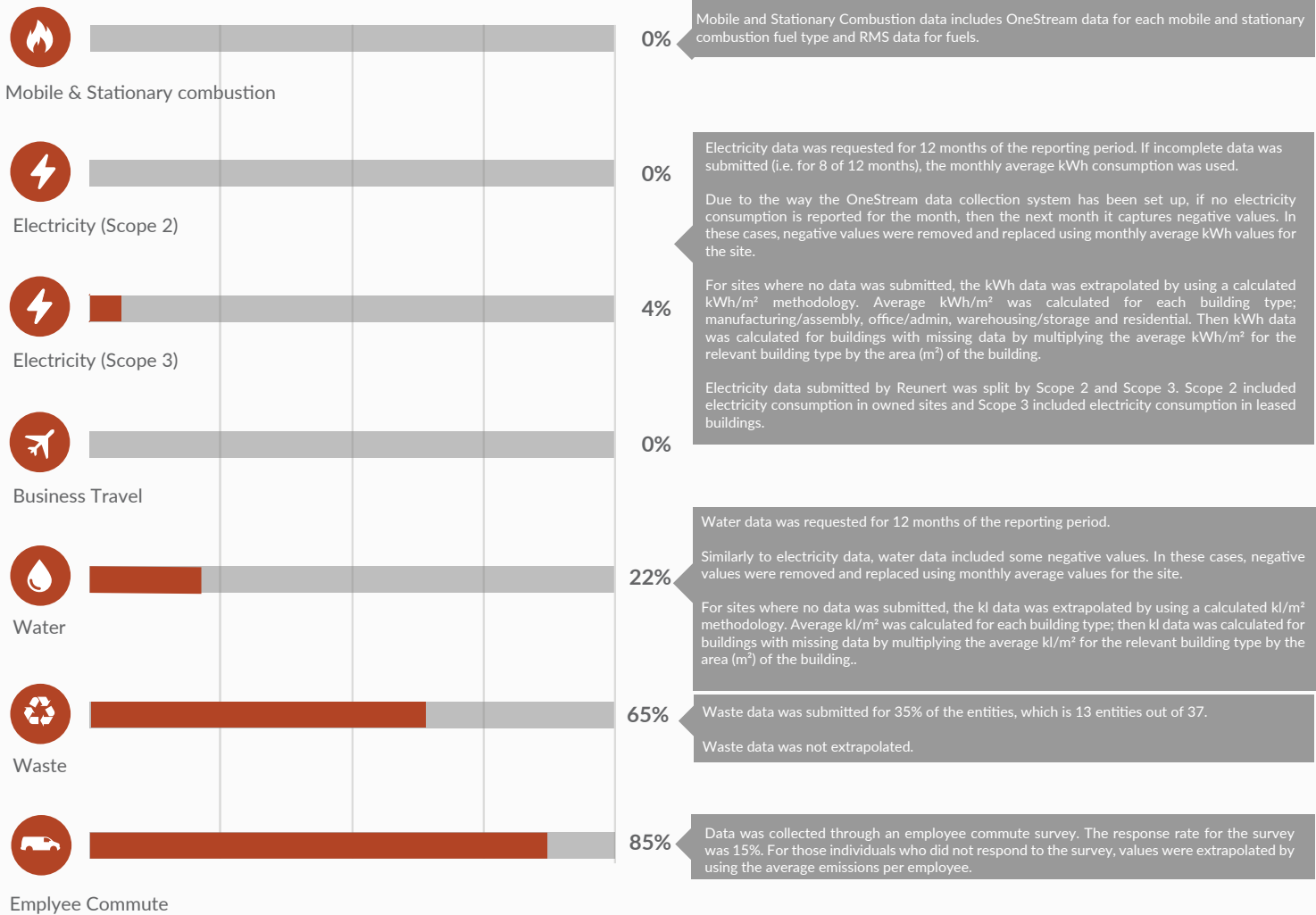
## ENTITIES BENCHMARKING

Reunert's entities were benchmarked using Scope 1 and Scope 2 emissions and compared to last year's emissions. Only entities where electricity data was available (not extrapolated) were benchmarked. Also, only entities where data was available last year are compared below.

Building Name	2021 Scope 1 & 2	2022 Scope 1 & 2	% change
	tCO <sub>2</sub> e	tCO <sub>2</sub> e	
African Cables: Vereeniging	24 415	20 744	-18%
Zamefa Zambia	10 850	10 041	-8%
Reutech Communications: New Germany (9 Valley) - Old building	2 105	2 108	0%
Reutech Solutions: Midrand	1 032	676	-53%
ECN Midrand + Pops	546	583	6%
Reutech Communications; New Germany (19 Valley) - New building	472	406	-16%
SkyWire: Roodepoort	203	258	21%
Reunert Park: Midrand	32	132	76%
Nashua Central: Ferndale	122	109	-13%
Nashua West Rand: Weltevreden Park	15	54	73%
Nashua HO: Woodmead	13	52	75%
SkyWire: Cape Town	15	40	61%
RCC Manufacturing: Parow	-	13	100%
Omnigo: Waltloo	5	9	46%
Nashua Cape Town	5	3	-55%
Nanoteq: Centurion	3	3	4%
CBI - Australia (Perth Building)	-	2	100%
Nashua Eastern Cape: Port Elizabeth	1 699	2	-95   57%
Nashua Tygerberg: Tygervally	1	-	
Reunert College: Boksburg	236	-	
Terra Firma Solutions - Woodlands - JHB	-	-	
Terra Firma Solutions - Silverwood - CPT	-	-	
	<b>41 770</b>	<b>35 235</b>	<b>-19%</b>

# DATA GAP ANALYSIS

The image below shows gaps in the data collection process. It is recommended that non-financial data is collected and reviewed on a monthly, or at least quarterly, basis to avoid missing data or appearance of negative values. Monthly data capture and review will enhance data quality and completeness.



## DATA IMPROVEMENT RECOMMENDATIONS

### DATA COLLECTION

- Include transport and distribution data in the next year's carbon footprint.
- Improve electricity and water data by ensuring that data is captured by all entities.
- Waste reporting should be obligatory for all facilities. Waste reporting should also capture a method of waste disposal (e.g. landfill, recycled, etc.).
- Include explanations fields in OneStream system so that those inputting data can provide explanations behind the data.
- Ensure that data is correctly captured from bills or invoices into OneStream.
- Please accurately capture and/or provide data for additional water sources such boreholes and rainwater harvesting.

### DATA REPORTING

- CONTINUOUS MONITORING AND REPORTING

It is recommended that data is reviewed and captured regularly, for example each quarter. Furthermore, quarterly or half-annual data validation would allow identification and correction of any data discrepancies or insufficiencies.

This would also allow year-on-year activity data comparison for the same month and timeous identification of variances.

# RECOMMENDATIONS

## REDUCE AND VERIFY CARBON FOOTPRINT



### ENERGY EFFICIENCY AND RENEWABLE ENERGY

Energy efficiency assessments are a valuable exercise to obtain a detailed database of energy opportunities. The assessments investigate voltage and power, lighting, heating ventilation and air conditioning (HVAC) and IT equipment to ensure the building is efficient and is being billed the correct amount.

Another great energy reduction opportunity is renewable energy. Reunert Park and Fuchs Electronics already have solar PV systems installed. Further owned sites should be considered, especially, for facilities with highest electricity consumption.

### CARBON FOOTPRINT VERIFICATION

It is recommended that Reunert undertakes a carbon footprint verification. It is an independent third party Greenhouse Gas Inventory Verification which ensures that carbon emissions data is accurate and consistent over time for management decision making. It ensures transparent and credible reporting to external stakeholders and allows organisations to increase CDP Climate Change Programme score.

## IMPROVE DATA QUALITY



### NON-FINANCIAL DATA REPORTING

Reunert has implemented OneStream's non-financial data system. It is recommended that improvements to the system (see section on Data Gap Analysis) are implemented.

### ENERGY AND WATER MONITORING AND MANAGEMENT

An automated energy and water monitoring and management system rolled out across the Reunert portfolio of businesses will enhance the accuracy of electricity and water data. In addition, monitoring consumption may highlight energy and water reduction opportunities and ensure your sites are being billed correctly by council.

## SET TARGETS



### tCO<sub>2</sub>e PER SQUARE METRE, REVENUE, EMPLOYEE

Reunert already annually reports its emissions per revenue, employee and per square meter. Setting emissions reduction targets using these metrics is a representative way to monitor progress on performance over time.

### SCIENCE-BASED TARGETS

Companies aiming to achieve the highest scoring in CDP submissions should be considering setting science-based targets for their emissions management.

## ANNUAL REPORTING



### CDP CLIMATE CHANGE AND CDP WATER DISCLOSURE

Reunert already responds to CDP Climate Change and CDP Water Programmes annually. This reporting platform houses over 765 investors holding \$92 trillion in assets to help reveal risk in their investment portfolio.

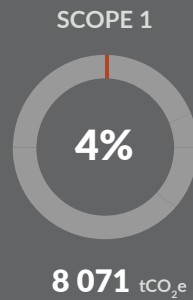
Reunert's continuous efforts around improving activity data quality for carbon footprint will enable more accurate reporting to CDP Climate Change and CDP Water Programmes.

### INTEGRATED REPORTING

Integrated Reporting demonstrates the linkages between an organisation's strategy, governance and financial performance and the social, environmental and economic context within which it operates. By reinforcing these connections, Integrated Reporting can help businesses to make more sustainable decisions and enable investors and other stakeholders to understand how an organisation is really performing. Reunert already includes its carbon footprint figures annually in the organisation's Integrated Annual Report.

# CONCLUSION

CARBON FOOTPRINT  
 2021 - 2022 FOLLOWING THE GREENHOUSE GAS PROTOCOL.  
**203 380** tCO<sub>2</sub>e



## ENERGY EFFICIENCY

Energy efficiency assessments are a valuable exercise to obtain a detailed database of energy opportunities. The assessments investigate voltage and power, lighting, heating ventilation and air conditioning (HVAC) and IT equipment to ensure the building is efficient and is being billed the correct amount.



## RENEWABLE ENERGY

Renewable energy is a key initiative to reduce Scope 2 emissions.

Reunert has installed a 297 kWpeak solar PV system in Reunert Park, a 429 kWpeak solar PV system at Fuchs Electronics facilities as well as a 1086.75 kWpeak system at CBI Low Voltage Johannesburg.

In 2021 - 2022, Reunert generated 2 543 MWh's of renewable energy,

**2 696tCO<sub>2</sub>e saved in 2021 - 2022.**



Additional information may be provided upon the clients request.

### DISCLAIMER

*This report has been based on the information supplied to Terra Firma Solutions (Pty) Ltd (TFS) by the client. TFS has exercised all due care in reviewing the supplied information.*

*This applies to the site conditions and features as they existed at the time of TFS's investigations, and those reasonably foreseeable. This report does not necessarily apply to conditions and features that may arise after the date of this report, about which TFS had no prior knowledge nor had the opportunity to evaluate.*

*TFS does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting from them.*

*This report is meant to be read as a whole, and sections or parts thereof should thus not be read or relied upon out of context.*

*TFS disclaims any liability to the Client and to third parties in respect of the publication, reference, quoting, or distribution of the report or any of its contents and reliance thereon by any third party.*

*A 5% threshold has been used to determine the concept of materiality.*

*This report is for the sole and exclusive benefit of the Client.*

*The carbon footprint assessment is based on data provided by the Client.*

# CARBON FOOTPRINT ASSUMPTIONS AND DETAILED METHODOLOGY

## PROPERTIES INCLUDED IN CARBON FOOTPRINT

- For the purposes of this CFA, Reunert Limited only included entities which were deemed material.
- GLA: GLA was based on data provided in the building information section on OneStream.
- Data for 8 entities were included with other entities. These 8 entities did not provide consumption data as it was included or grouped with another entity.
- Only franchises where Reunert Limited hold a majority share has been included in the carbon footprint assessment.
- CBI Telecom Cables Brits which was previously a joint-venture has been excluded from this year's analysis due the entity currently being under business rescue.

## ASSUMPTIONS AND METHODOLOGICAL APPROACH

- **Properties with negative monthly values:** If negative monthly activity data was received (due to how municipal utilities information is reported), average monthly data for other months during FY2022 was used for the month with reported negative values.
- **Properties with electricity and water data gaps:** If there was a data gap in monthly electricity or water data, average monthly data for other months during FY2022 was used for the month(s) with data gaps.
- **kWh/m<sup>2</sup> or kl/m<sup>2</sup> extrapolation:** For properties where no electricity or water data was submitted, data was extrapolated using a kWh/m<sup>2</sup> or kl/m<sup>2</sup> proxy methodology. Average kWh/m<sup>2</sup> or kl/m<sup>2</sup> proxy was calculated for each division, specifically, for Electrical Engineering, Applied Electronics, ICT, and Group Services. Electricity/water data was calculated for properties with missing data by multiplying the kWh/m<sup>2</sup> or kl/m<sup>2</sup> proxy for the relevant sector by the GLA (m<sup>2</sup>) of a property.
  - Please note: This was the first year for which water data has been extrapolated. Water data has been extrapolated to provide a more accurate reflection of Reunert's water consumption patterns. 13 of 37 entities did not submit municipal water consumption data to OneStream.
  - The emission factor utilised for entities in South Africa has been updated. In prior years, the emission factor from DEFRA was used. However, for this year, the South African specific water consumption emission factor from Friedrich, Pillay & Buckley (2007) was used to better reflect water consumption emissions in South Africa.
  - The grid emission factor for Eskom was obtained from the Eskom 2021 IAR, upon the finalisation of this report, their 2022 IAR had not been published yet.
  - The emission factor associated with aluminium use has increased significantly from 3 683 (DEFRA 2021) to 9 129 (DEFRA 2022). This significantly increases emissions associated with the use of aluminium.
- **Entities or properties with no stationary combustion, mobile combustion, material use, municipal effluents, and waste data:** If a entity property did not have activity data for these categories, no data was extrapolated.
- **African Cables: Vereeniging:** Municipal effluent figures have been reworked for this property. Figures as included in bills did not correspond to water consumption figures. Therefore, municipal effluents for this entity were re-calculated based on the assumption that municipal effluents comprise 60% of a site's total water consumption.