

CARBON FOOTPRINT ASSESSMENT

Prepared for Reunert Limited
December 2021

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Carbon footprint summary



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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 01/10/2020 to 30/09/2021.

The carbon footprint inventory includes 43 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). 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.

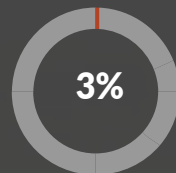
The operational boundaries include scope 1 direct emissions (mobile combustion and stationary combustion), scope 2 indirect emissions (electricity consumption in Reunert owned buildings) and scope 3 indirect emissions (electricity consumption in leased buildings and warehousing facilities, mobile combustion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

CARBON FOOTPRINT 2020 - 2021

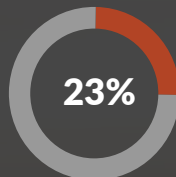
206 333

tCO₂e

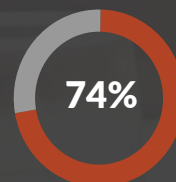
FOLLOWING THE GREENHOUSE GAS PROTOCOL



SCOPE 1: **6 090** tCO₂e



SCOPE 2: **48 501** tCO₂e



SCOPE 3: **151 742** tCO₂e



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 and a 429 kWpeak solar PV system at Fuchs Electronics facilities.

In 2020-2021, Reunert generated 1 105 MWh's of renewable energy, resulting in an electricity cost saving of R1 526 300.35 as well as saving 1 127 tonnes of CO₂e from being released into the atmosphere.

1 127 tCO₂e saved in 2020 - 2021.



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

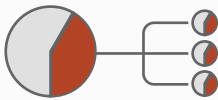
NAME	COMPANY	RESPONSIBILITY
Karen Smith	Reunert Limited	Project Sponsor
Grete Simanauskaite	Terra Firma Solutions	Head of Analytics and Sustainability
Kyle Petzer	Terra Firma Solutions	Carbon Analyst

PROJECT DESCRIPTION

PROJECT SCOPE

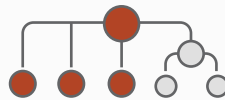
ORGANISATIONAL BOUNDARIES

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

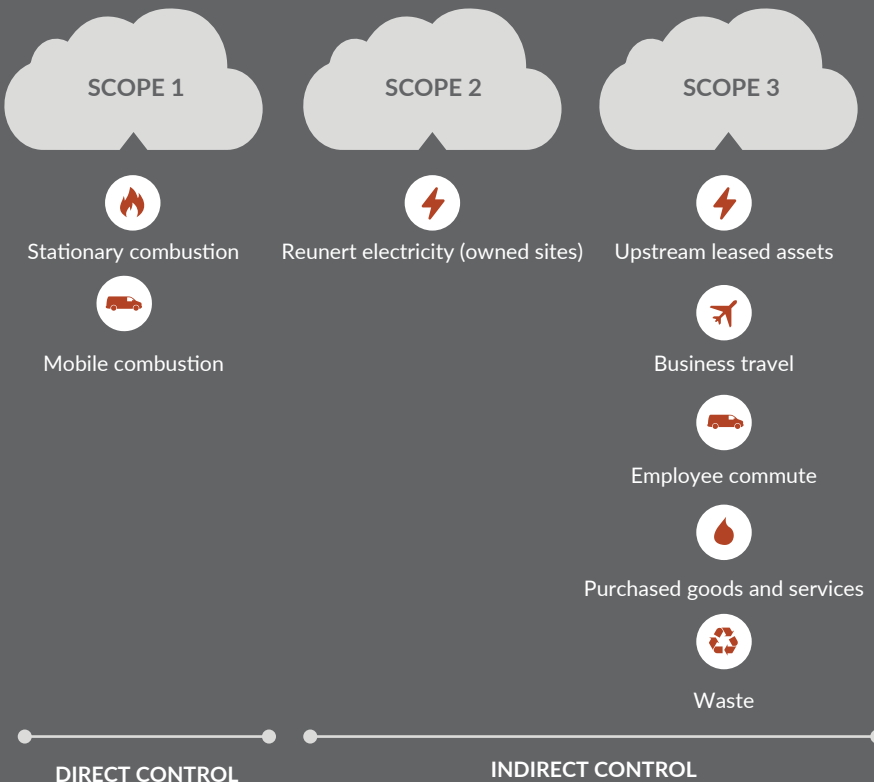
FINANCIAL AND OPERATIONAL

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
- Fuel usage
- Transport
- Waste
- Goods and Services

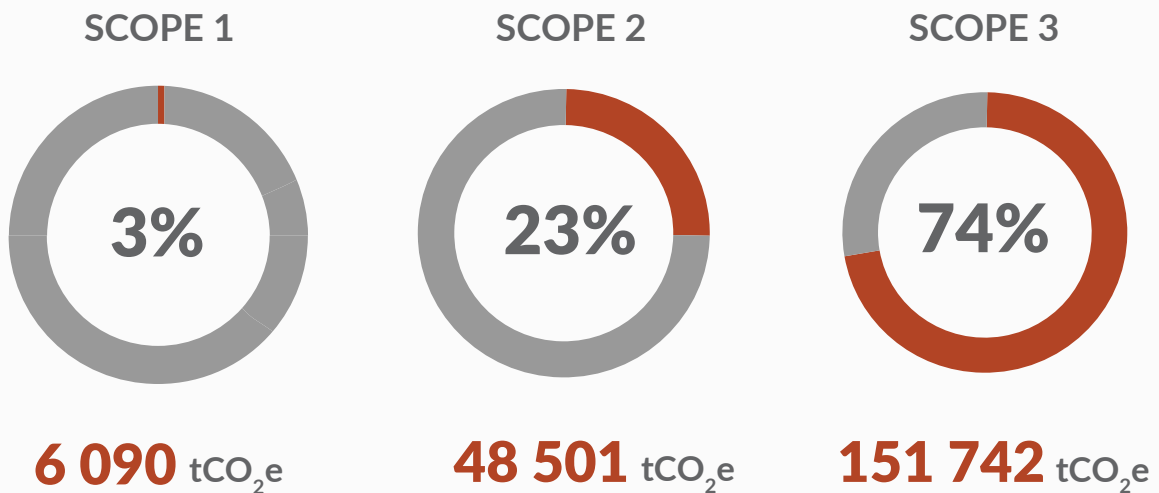
EMISSIONS FACTORS

- DEFRA 2021
- Eskom Annual Report 2021
- IPCC 2006

CARBON FOOTPRINT RESULTS

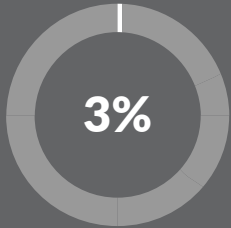
The total greenhouse gas emissions for Reunert Limited have been calculated at **206 333** tonnes of CO₂e, following the Greenhouse Gas Protocol.

206 333 tCO₂e
 FOR THE PERIOD 2020-2021
 FOLLOWING THE
 GREENHOUSE GAS PROTOCOL





Emissions associated with material use were the highest contributor to Reunert's carbon footprint at 133 250 tCO₂e (65% of emissions). Electricity consumed by electricity consumption in Reunert owned sites followed at 48 501 tCO₂e (24% of emissions).

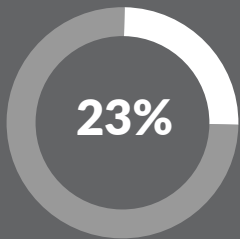
SCOPE 1 % OF TOTAL EMISSIONS



SCOPE 1 EMISSIONS

- 70%  Reunert stationary consumption [4 270 tCO₂e]
- 30%  Reunert mobile consumption [1 819 tCO₂e]

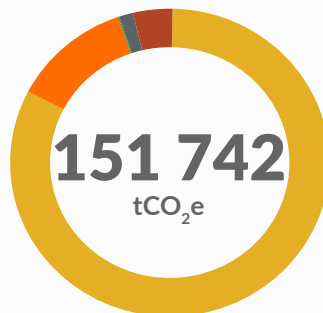
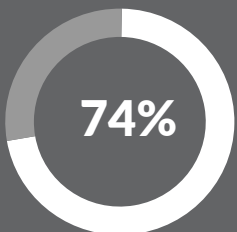
SCOPE 2 % OF TOTAL EMISSIONS








SCOPE 2 EMISSIONS

- 100%  Reunert Electricity (Owned sites) [48 501 tCO₂e]

SCOPE 3 % OF TOTAL EMISSIONS



SCOPE 3 EMISSIONS

- 88%  Purchased goods, services [133 592 tCO₂e]
- 7%  Employee Commute [11 300 tCO₂e]
- 0.2%  Waste [188 tCO₂e]
- 1%  Business Travel [1 010 tCO₂e]
- 4%  Upstream Leased Assets [5 652 tCO₂e]

BENCHMARKING

YEAR-ON-YEAR EMISSIONS

		Total tCO ₂ e					2020 vs 2021 % Change
Scope	Emissions Source	2017	2018	2019	2020	2021	
Scope 1	Diesel	426	404	336	301	342	13%
	Natural Gas	3 761	3 690	3 466	3 130	3 777	21%
	LPG	130	210	139	109	117	7%
	Stationary Combustion	4 317	4 305	3 941	3 540	4 235	20%
	Stationary Combustion JV		2	17	13	3	-73%
	Oil	7	240	22	42	27	-37%
	Lubricants	2	9	1	1	2	76%
	Stationary Fuel Non-Energy	21	250	23	43	29	-34%
	Stationary Fuel Non-Energy JV		3	3	1	3	131%
	Diesel (mobile)	1 156	1 172	1 178	944	949	0%
	Petrol (mobile)	1 147	1 050	1 069	747	755	1%
	LPG (mobile)	22	-	-	12	12	0%
	Mobile Combustion	2 325	2 223	2 247	1 703	1 716	1%
	Mobile Combustion JV	169	131	131	103	104	1%
Total Scope 1 Reunert		6 493	6 777	6 211	5 287	5 979	13%
Total Scope 1 JV		169	136	150	118	111	-6%
Total Scope 1		6 662	6 913	6 362	5 404	6 090	13%
Scope 2	Electricity	51 778	43 641	48 816	44 025	45 103	2%
	Electricity JV	4 509	2 928	3 594	3 305	3 398	3%
Total Scope 2 Reunert		51 788	43 641	48 816	44 025	45 103	2%
Total Scope 2 JV		4 509	2 928	3 594	3 305	3 398	3%
Total Scope 2		56 297	46 570	52 410	47 329	48 501	2%
Total (Scope 1 & 2) Reunert		58 281	50 419	55 027	49 312	51 083	4%
Total (Scope 1 & 2) JV		4 679	3 064	3 745	3 422	3 508	3%
Total (Scope 1 & 2)		62 960	53 483	58 772	52 734	54 591	4%
Scope 3	Material use	181 778	187 012	127 368	96 524	133 250	38%
	Outsourced warehousing	129	231	185	146	267	83%
	Water supply	100	107	70	56	75	34%
	Purchased goods, services	182 007	187 350	127 623	96 726	133 592	38%
	Employee Commute	-	15 099	18 801	13 925	11 300	-19%
	Transport and distribution	319 542	-	-	-	-	
	Water treatment	290	476	155	116	105	-9%
	Waste disposal	336	231	19	67	83	24%
	Waste	626	703	174	183	188	3%
	Business Travel	2 654	2 986	2 192	1 146	1 010	-12%
	Mobile Fuel	68	208	196	382	167	-56%
	Purchased electricity	6 226	6 145	6 090	7 069	5 485	-22%
	Upstream leased assets	6 294	6 353	6 286	7 451	5 652	-24%
Total Scope 3		191 580	212 490	155 076	119 431	151 742	27%
Total tCO₂e emissions		254 531	265 973	213 848	172 165	206 333	20%

NOTES

- Mobile fuels and stationary fuels show an increase, mainly due to increased diesel and natural gas usage at African Cables: Vereeniging.
- Fugitive emissions were present but not reported due to immateriality and lack of data.
- Scope 2 emissions have increased slightly compared to last year, this can be attributed to the increase in Eskom's emission factor.
- Eskom's grid emission factor in 2021 has increased from 1.02 tCO₂e/MWh to 1.06 tCO₂e/MWh.
- Electricity consumption data was extrapolated for missing months. For sites with no electricity data, electricity consumption was extrapolated using kWh/m² values for the same type of building within the Group.
- Water data was not extrapolated for sites with no water data.
- Water emissions have increased due to higher production levels. The biggest increases have been observed at African Cables: Vereeniging, Nashua Tshwane: Centurion and Reutech Radar Systems: Stellenbosch entities. This is attributed to reduced consumption of borehole water and harvested rainwater.
- The 2020 DEFRA emission factor for water was used for consistency and accuracy. The DEFRA emission factors are UK based therefore the 2020 factor better reflects emissions associated with water in South Africa.
- Material use emissions increased from last year due to increased production levels at African Cables: Vereeniging.
- Employee commute data was extrapolated using the average emissions per employee from last year's employee commute survey.
- Transport and distribution emissions were not accounted for in 2021 carbon footprint assessment.

BENCHMARKING

KEY PERFORMANCE INDICATORS

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

	2017	2018	2019	2020	2021	% change
 SCOPE 1 & 2 tCO₂e PER METER SQUARED	0.28	0.19	0.21	0.20	0.22	7%
 SCOPE 1 & 2 tCO₂e PER FULL-TIME EMPLOYEE	11.25	9.72	9.54	8.92	11.38	28%
 SCOPE 1 & 2 tCO₂e PER 'MILL REVENUE	6.12	4.95	5.32	6.42	5.51	-14%

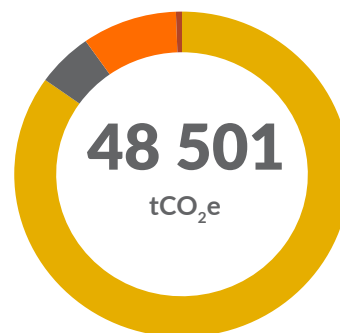
BENCHMARKING PER DIVISION

SCOPE 1 EMISSIONS



- 85% ● Electrical Engineering [5 151 tCO₂e]
- 6% ● Applied Electronics [376 tCO₂e]
- 9% ● ICT [530 tCO₂e]
- 1% ● Group Services ('Other') [32 tCO₂e]

SCOPE 2 EMISSIONS



- 85% ● Electrical Engineering [41 147 tCO₂e]
- 9% ● Applied Electronics [4 440 tCO₂e]
- 5% ● ICT [2 632 tCO₂e]
- 1% ● Group Services ('Other') [282 tCO₂e]

BENCHMARKING

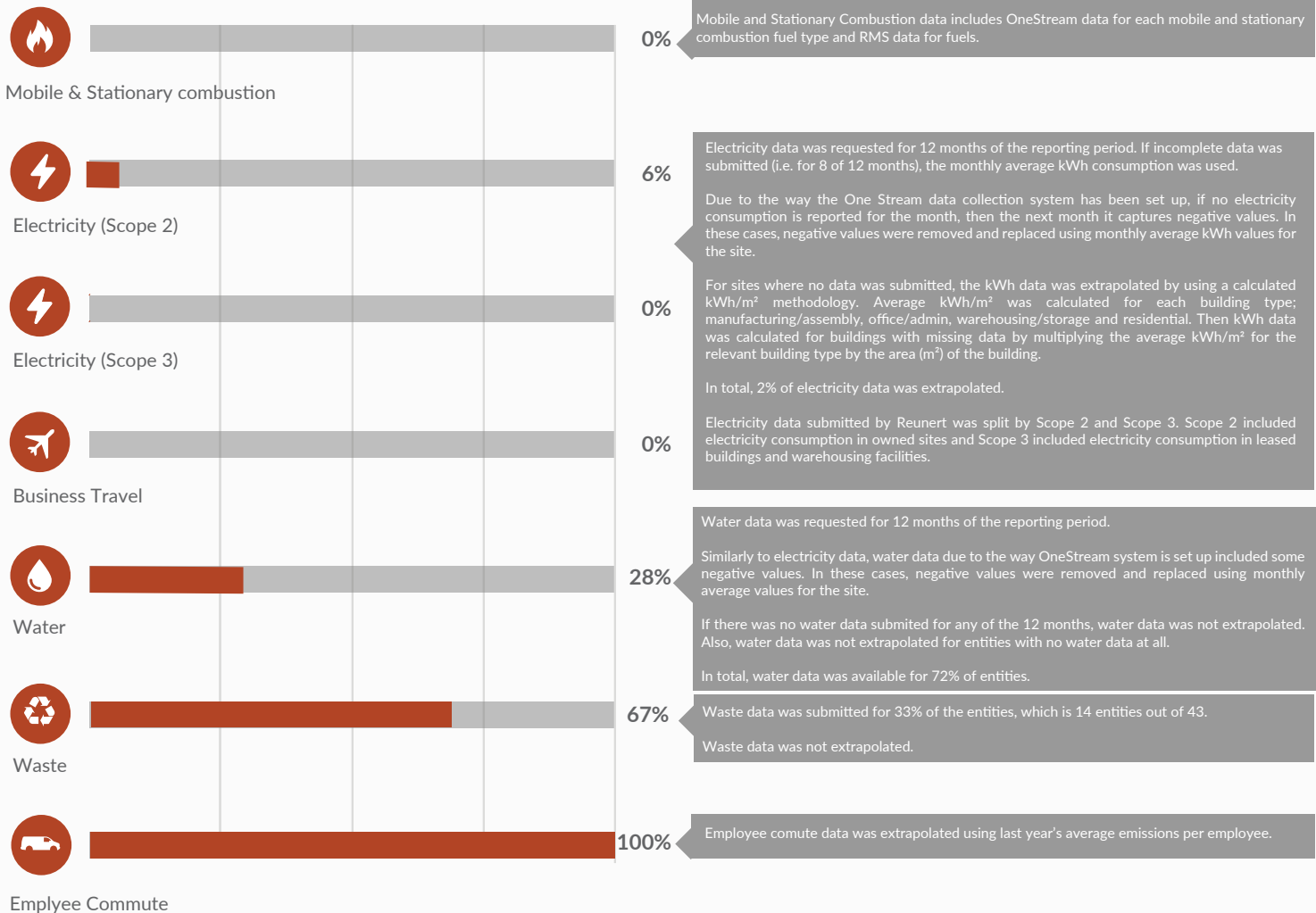
ENTITIES BENCHMARKING

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	2020 Scope 1 & 2		2021 Scope 1 & 2	
	tCO ₂ e		tCO ₂ e	% change
African Cables: Vereeniging	20 244		25 198	20%
Zamefa Zambia	8 429		10 850	22%
CBI Low Voltage: Johannesburg (Head Office)	6 170		6 738	8%
CBI Telecom Cables Brits	3 422		3 508	2%
Reutech Communications: New Germany (9 Valley) - Old building	2 018		2 187	8%
Nashua Eastern Cape: Port Elizabeth	2 009		1 765	-14%
ECN Midrand + Pops	1 151		567	-103%
Reutech Solutions: Midrand	1 010		1 060	5%
Reunert Park: Midrand	787		32	-2330%
Reutech Radar Systems: Stellenbosch	573		655	12%
Reutech Communications; New Germany (19 Valley) - New building	435		490	11%
Dynatech	374		22	-1594%
Fuchs: Alrode	371		396	6%
Nashua Communications: Midrand	302		295	-2%
Reunert College: Boksburg	270		245	-10%
SkyWire: Roodepoort	198		203	2%
Nashua Central: Ferndale	128		122	-5%
Nashua Paarl and West Coast: Paarl	55		56	1%
Nashua Durban Warehouse 25 Imvubupark Place, Riverhorse Valley, Durban	39		39	1%
Dopptech: Alrode	19		20	5%
Sterkspruit Farm	15		18	15%
Nashua West Rand: Weltevreden Park	13		15	7%
Nashua Cape Town	5		5	1%
CBI - Australia	5		3	-53%
Omnigo: Waltloo	5		5	2%
Nashua Tygerberg: Tygervalley	1		1	1%

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.
- Conduct an employee commute survey next year.

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 One Stream'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



tCO₂e 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.

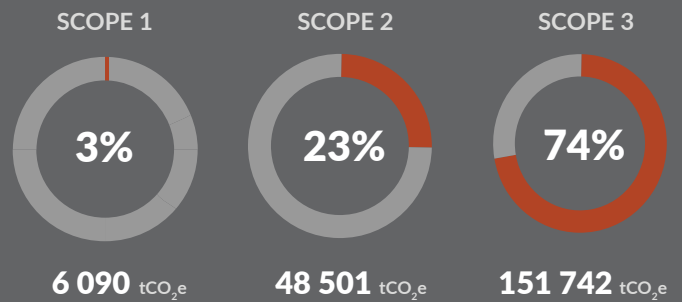
Continuous Reunert's efforts around improving activity data quality for carbon footprint will enable more accurate reporting to CDP Climate Change and CDP Water Programmes.

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
 2020 - 2021 FOLLOWING THE GREENHOUSE GAS PROTOCOL.
206 333 tCO₂e



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.



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

Reunert has installed a 297 kWpeak solar PV system in Reunert Park as well as a 429 kWpeak solar PV system at Fuchs Electronics facilities.

In 2020 - 2021, Reunert generated 1 105 MWh's of renewable energy, resulting in saving 1 127 tCO₂e.

1 127 tCO₂e saved in 2020 - 2021.



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.