Commercial in confidence

GREENHOUSE GAS INVENTORY (CARBON FOOTPRINT) REPORT

for Carbon lite
Ultra·efficient·homes

1 July 2019 to 30 June 2020

Final 1.1

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
CH_4	methane
CO_2	carbon dioxide
CO_2-e	carbon dioxide equivalent
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DBEIS	Department for Business, Energy & Industrial Strategy
DEFRA	Department for Environment, Food and Rural Affairs (UK)
EF	emissions factor
EPA	Environmental Protection Authority
FY	financial year
G.W.P.	global warming potential
GHG	greenhouse gas
GJ	gigajoule
HFC	hydrofluorocarbon
ITP	International Tourism Partnership
kg	kilogram
kL	kilolitre
kWh	kilowatt hour
l	litre
ML	mega litre
N_20	nitrous oxide
NGA	National Greenhouse Accounts
NGER	National Greenhouse Energy Reporting
NO_x	nitrogen oxides
PFC	perfluorinated compound
pkm	passenger kilometre
RFI	radiative forcing index
t	tonnes
TBL	Triple Bottom Line
tkm	tonne kilometre
UK	United Kingdom
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute
WTT	well to tank

EXECUTIVE SUMMARY

Carbon Neutral has been engaged to assess CarbonLite's organisational greenhouse gas (GHG) emissions inventory, also known as a carbon footprint, for the 2019-2020 financial year (FY2020).

Gross GHG emissions from the business are estimated at 64.92 t CO_2-e for the period.

After allowances for the use of carbon neutral goods and services, net GHG emissions from the business are estimated 46.31 t CO_2-e.

CarbonLite has retired 94 tonnes of carbon credits to offset more than twice its organisational GHG emissions for the year. The organisation has exceeded carbon neutrality and can be considered a *carbon negative* organisation for FY2020.

The main GHG emitting activities were electricity consumption and staff commuting.

Gross GHG emissions have decreased in FY2020 compared to the previous year's (FY2019's) gross GHG emissions of 89.53 t CO_2-e.

Any claims made in relation to "carbon neutrality or negativity" of the business are done based on the cancellation of emissions identified in this report using carbon offsets and carbon neutral services and products.

ABOUT THE ORGANISATION

CarbonLite is a forward-thinking building company that is revolutionising building techniques in Australia. The company specialises in the design and prefabricated construction of ultra-energy efficient homes.

As part of the organisation's environmental policy, it has calculated and offset its organisational GHG emissions since FY2019.

CarbonLite chooses to voluntarily calculate and offset double the volume of its GHG emissions for FY2020 and demonstrate leadership by becoming a carbon negative organisation.

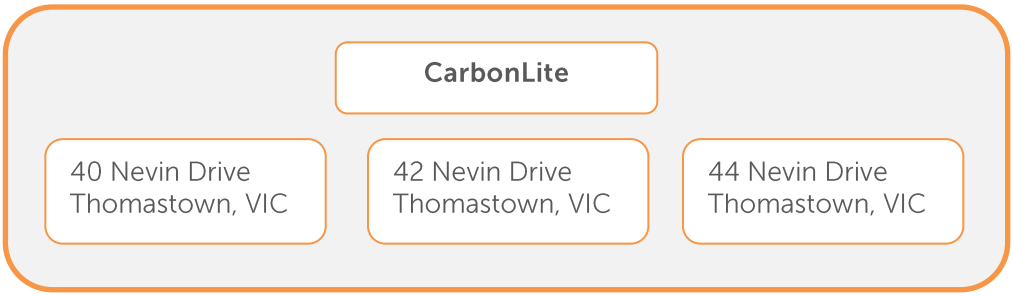
EMISSIONS SCOPE & ORGANISATIONAL BOUNDARY

The emissions scope and organisational boundary for the GHG emissions inventory has been developed in accordance with the GHG Protocol and includes GHG emitting activities considered to be under the operational control of CarbonLite.

The reporting period is the year beginning 1 July 2019 to 30 June 2020.

GHG emissions from the facilities shown below have been included and reported on where activity data has been provided.

Figure 1: Organisational boundary of FY2020 carbon footprint report – CarbonLite



CLASSIFICATION METHOD

Greenhouse gas emissions from the business are categorised into three greenhouse gas scopes.

Scope 1

These are direct emissions relating to the burning of fossil fuels, used for building heating, gas boilers for hot water, to run equipment or fuel in company vehicles.

Scope 2

These are the direct emissions from imported electricity purchased from power stations to run electrical equipment, heating and lighting systems.

Scope 3

The inclusion of indirect scope 3 emissions provides an opportunity to be innovative in GHG management.

These are indirect emissions from activities such as business-related travel, freight, waste to landfill and services and products provided by third parties.

The full fuel cycle for energy includes emissions associated with extraction, refining, transportation and delivery. The boundary of this scope generally includes only what the business can quantify and influence.

Figure 2: Diagram of scope by source (source GHG Protocol)

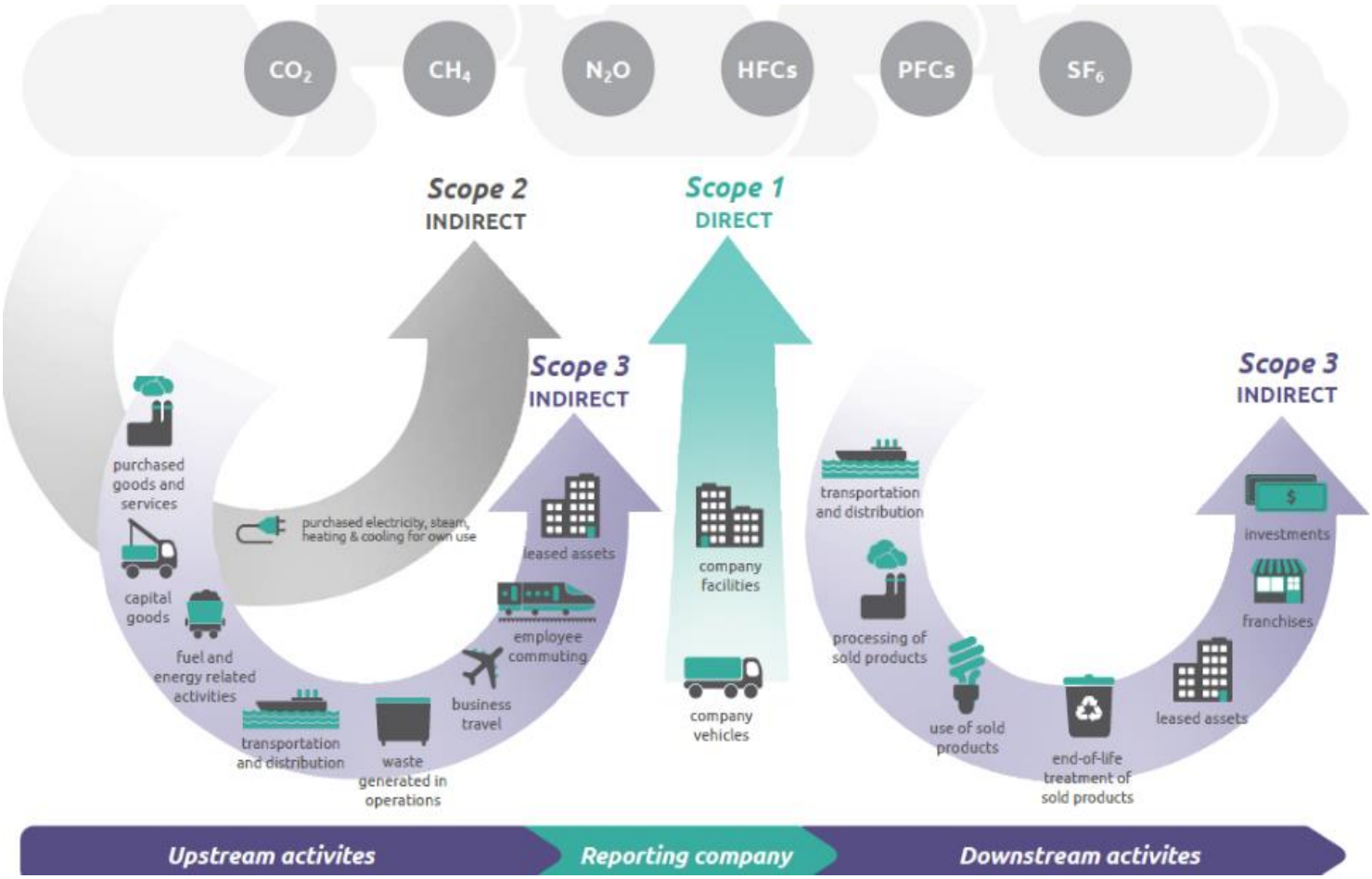
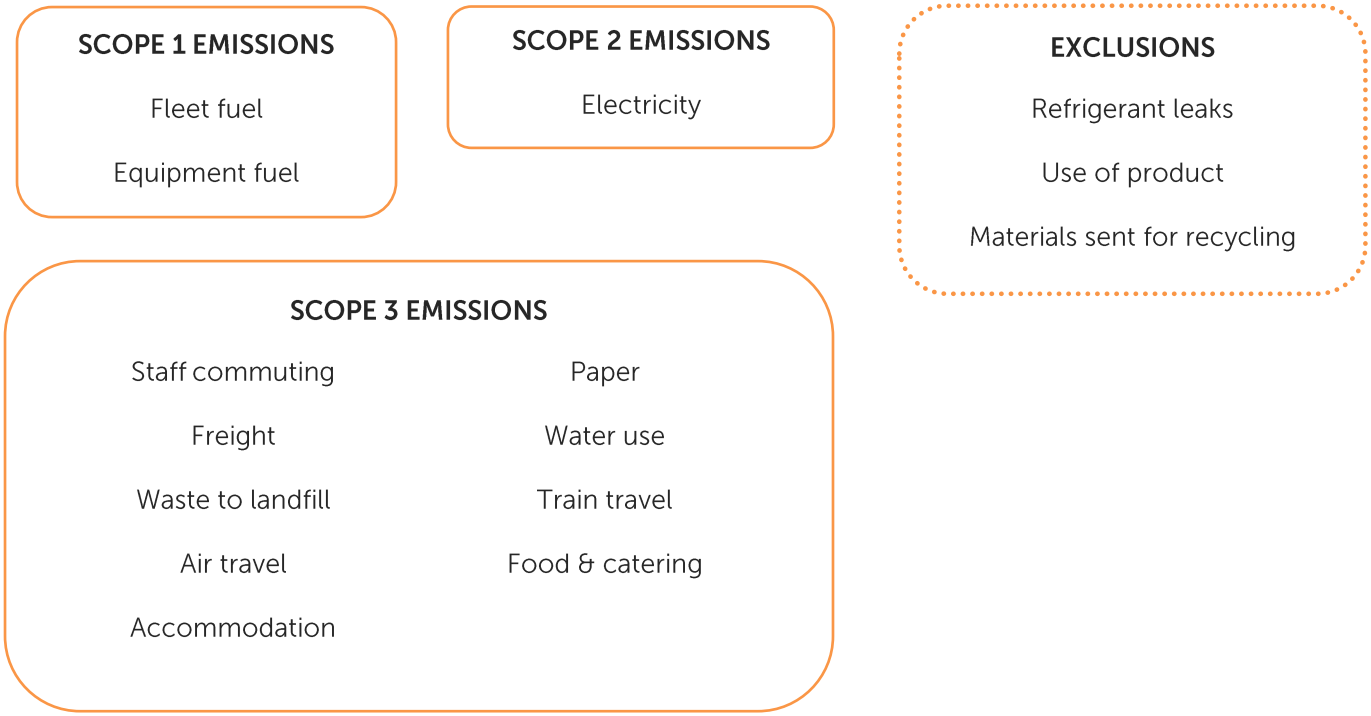


Figure 3: Diagram of activity sources included in CarbonLite's FY2020 Organisational GHG Emissions Inventory



DATA COLLECTION & QUALITY

Relevant business activities outlined under the GHG Protocol Standard are reported against where suitable activity data and emissions factors are available.

Carbon Neutral endeavours to ensure that reliable, accurate data is used and outlines all assumptions used, where appropriate, as stated in this report.

The following process was followed:

1) Carbon Neutral provided CarbonLite with a data collection tool to gather information about potential GHG emission activity sources.
2) CarbonLite provided Carbon Neutral with data relating to GHG emitting activities.
3) Carbon Neutral reviewed the data provided.
4) Carbon Neutral sought clarification of activity data where necessary, and provided advice and guidance to CarbonLite staff as required to ensure that complete, accurate and robust data sources were used.
5) Carbon Neutral applied suitable methodologies and emission factors to the activity data collected to determine the organisational GHG emissions of CarbonLite for the reporting period.
6) Carbon Neutral calculated the GHG emissions of CarbonLite in accordance with the GHG Protocol Standard (www.ghgprotocol.org) and AS ISO 14064.1 – 2006 Greenhouse gases Part 1: Specification, with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.
7) Carbon Neutral prepared this Organisational Greenhouse Gas Emissions Inventory (Carbon Footprint) Report for CarbonLite for reporting period 1 July 2019 to 30 June 2020 (FY2020).

CarbonLite provided Carbon Neutral with activity data that has been used to calculate GHG emissions. The veracity of this data is taken to be complete and accurate and has not been audited or independently verified.

A site visit was not conducted, and copies of original invoices were not reviewed.

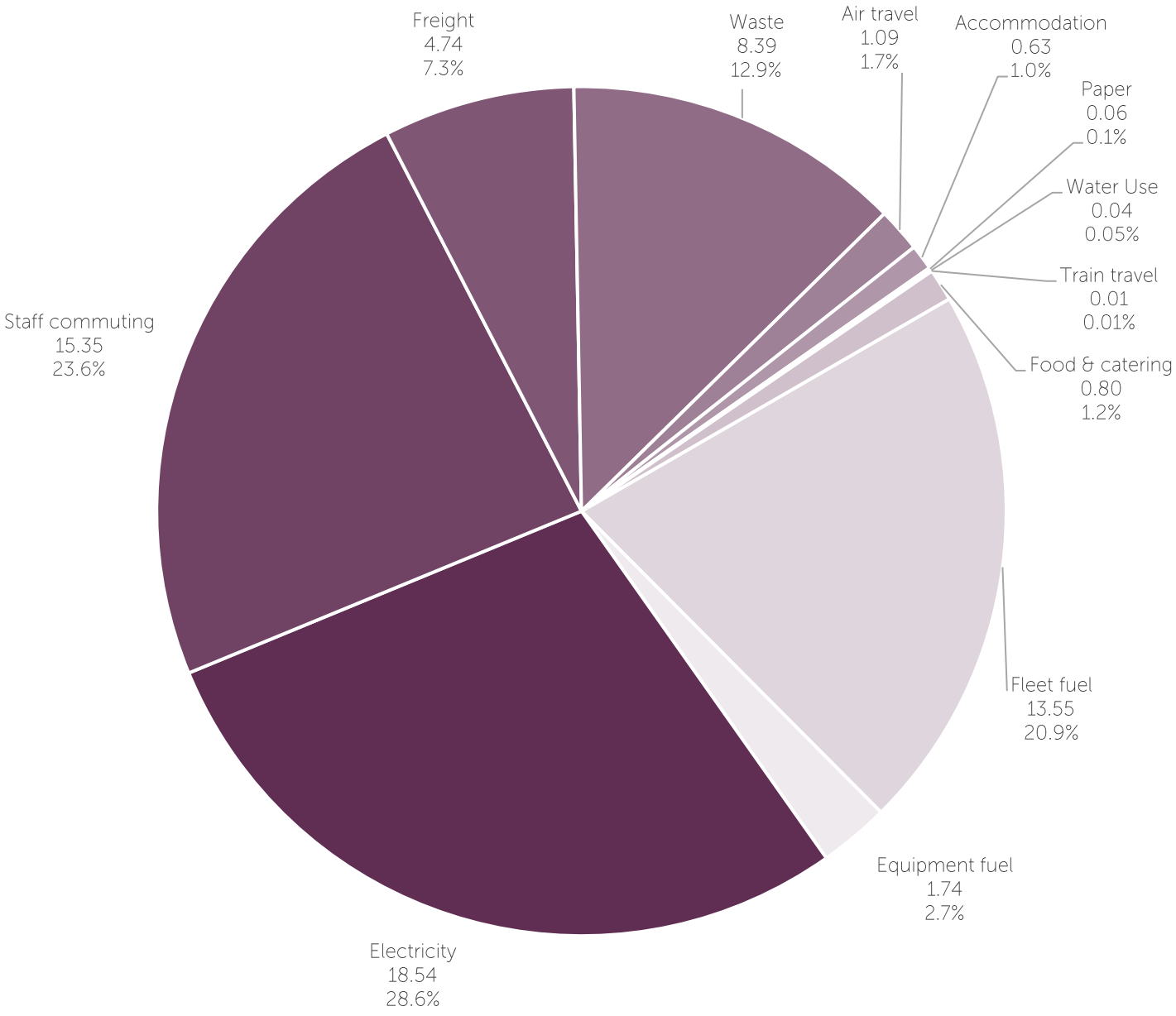
FY2020 CARBON INVENTORY

CarbonLite's gross GHG emissions for FY2020 are estimated at 64.92 tonnes of carbon dioxide equivalent (t CO_2-e).

After allowances for carbon neutral paper use and GreenPower (electricity), net GHG emissions prior to the purchase of any carbon offsets are estimated at 46.31 t CO_2-e.

A breakdown of gross GHG emissions by activity can be seen in Figure 4.

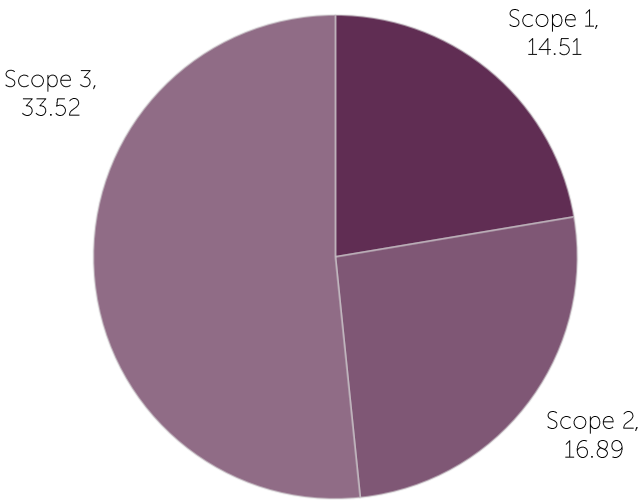
Figure 4: Gross GHG emissions by activity (t CO_2-e, %)



GHG EMISSIONS BY SCOPE

The breakdown of CarbonLite's GHG emissions inventory by scope 1, 2 and 3 emissions can be seen in Figure 5.

Figure 5: Total GHG emissions by scope (t CO_2-e, %)



GHG FACTORS & CALCULATION METHODOLOGY

PRINCIPLES

Carbon Neutral conducts its assessment of CarbonLite's GHG emissions inventory in accordance with the GHG Protocol which is regarded as the international standard for company reporting.

These principles are consistent with those outlined under the Australian and International Standards including AS ISO 14064: Greenhouse gases Part 1, 2 and 3. Carbon Neutral's assessment of emissions has not been third party verified. A copy of the principles applied can be found in Table 1.

Table 1: GHG Accounting Principles (GHG Protocol Standard)

Relevance	Ensure the GHG inventory appropriately reflects the GHG emissions of the company and serves the decision-making needs of users – both internal and external to the company.
Completeness	Account for and report on all GHG emission sources and activities within the inventory boundary. Disclose and justify any specific exclusion.
Consistency	Use consistent methodologies to allow for meaningful performance tracking of emissions over time. Transparently document any changes to the data, inventory boundary, methods, or any other relevant factors in the time series.
Transparency	Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.
Accuracy	Ensure that the quantification of GHG emissions is systematically neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable confidence as to the integrity of the reported information.

METHODOLOGY, DATA SOURCES & ASSUMPTIONS

Except where otherwise stated in this report, Carbon Neutral has calculated CarbonLite's scope 1 and 2 GHG emissions using Department of the Environment and National Greenhouse Accounts (NGA) Factors (August 2019).

Scope 3 emissions are difficult to quantify, as these emissions come from various sources with no direct way to easily measure the contribution to climate change. In these cases, in addition to the NGA Factors, we use external, credible sources to perform our calculations.

This includes Australian Bureau of Statistics data and the UK Government's 2019 Conversion Factors for Company Reporting.

Data for the determination of GHG emissions was provided by CarbonLite. This data is taken to be complete and accurate and Carbon Neutral has endeavoured to ensure that all facilities have been considered.

Carbon Neutral's own calculation methodologies, assumptions and emission factors are referenced throughout the report.

GHG EMITTING ACTIVITIES

FLEET FUEL (SCOPES 1 & 3)

Emissions from fuels combusted in fleet vehicles are estimated at 13.55 tonnes of CO_2-e.

Emission factors and methodology are obtained from the NGA Factors 2019.

Fuel consumption and GHG emissions are shown in the following tables.

Table 2: Fleet GHG emissions factors FY2020

FUEL TYPE	Energy content (GJ per kL)	CO_2 EF ($kgCO_2$-e/GJ)	CH_4 EF ($kgCO_2$-e/GJ)	N_2O EF ($kgCO_2$-e/GJ)	SCOPE 3 EF ($kgCO_2$-e/GJ)
Petrol – post 2004 vehicle	34.2	67.4	0.02	0.20	3.6
Diesel – post 2004 vehicle	38.6	69.9	0.01	0.60	3.6
E10– post 2004 vehicle	33.12	60.66	0.04	0.20	3.6

Table 3: Fleet fuel use and GHG emissions FY2020

FUEL TYPE	Fuel use (kL)	CO_2 (t CO_2-e)	CH_4 (t CO_2-e)	N_2O (t CO_2-e)	SCOPE 3 (t CO_2-e)	TOTAL (t CO_2-e)
Petrol	2,505	6.76	0.00	0.06	0.35	7.17
Diesel	665	1.34	0.00	0.00	0.08	1.42
E10	2,039	4.70	0.00	0.01	0.25	4.97
TOTAL	5,209	12.80	0.00	0.08	0.68	13.55

EQUIPMENT FUEL (SCOPES 1 & 3)

Emissions from liquefied petroleum gas combusted in forklifts are estimated at 1.74 tonnes of CO_2-e.

Emission factors and methodology are obtained from the NGA Factors 2019.

Fuel consumption and GHG emissions are shown in the following tables.

Table 4: LPG GHG emissions factors FY2020

FUEL TYPE	Energy content (GJ per kg)	CO_2 EF ($kgCO_2$-e/GJ)	CH_4 EF ($kgCO_2$-e/GJ)	N_2O EF ($kgCO_2$-e/GJ)	SCOPE 3 EF ($kgCO_2$-e/GJ)
Petrol – stationary energy	0.0501*	60.2	0.2	0.2	3.6

*density of LPG reported as 50.1MJ/kg by Elgas

Table 5: LPG use and GHG emissions FY2020

FUEL TYPE	Fuel use (kg)	CO_2 (t CO_2-e)	CH_4 (t CO_2-e)	N_2O (t CO_2-e)	SCOPE 3 (t CO_2-e)	TOTAL (t CO_2-e)
LPG	540	1.63	0.01	0.01	0.10	1.74

ELECTRICITY (SCOPES 2 & 3)

Gross GHG emissions from electricity use are estimate at 18.54 tonnes of CO_2-e.

Emission factors and methodology are obtained from the NGA Factors 2019.

CarbonLite uses GreenPower which is renewably sourced and has no net GHG emissions associated with its use.

Emission factors, electricity consumption and GHG emissions are shown in the following table.

Table 6: Electricity use and gross GHG emissions FY2020

FACILITY	Usage	Scope 2 EF	Scope 3 EF	Scope 2 emissions	Scope 3 emissions	GHG emissions
	kWh	(kg CO_2-e/kWh)		Gross (t CO_2-e)		
40 Nevin Dve	533	1.01	0.1	0.54	0.05	0.60
42 Nevin Dve	11,786			12.02	1.18	13.20
44 Nevin Dve	4,236			4.32	0.42	4.74
TOTAL	16,555			16.89	1.66	18.54

STAFF COMMUTING (SCOPE 3)

GHG emissions associated with staff commuting in private vehicles are estimated at 15.35 tonnes CO_2-e for the period.

Carbon Neutral has used ABS data and applied an emission factor of 0.2745 g CO2-e per passenger kilometre travelled in private vehicles.

GHG emissions associated with the combustion of fuel in private vehicles are determined using the NGA Factors 2019.

No emissions are assigned to staff who catch the train, cycle or walk to work.

A summary of staff survey results and GHG emissions for the business is provided in the following table.

Table 7: Staff commuting activity data, emissions factors and GHG emissions FY2020 – private vehicles only

STAFF	Mode	Distance travelled (km)	GHG Emissions (t CO_2-e)
A1	Train	Not provided	-
C1	Fleet vehicle	-	-
C2/ M1	Car	519	0.14
I1	Car	7,370	2.02
J1	Car	14,669	4.03
J2	Car	8,454	2.32
K1	Car	4,995	1.37
L1	Car	12,672	3.48
R1	Fleet vehicle	-	-
R2	Car	3,533	0.97
S1	Bike	-	0.00
T1	Car	3,712	1.02
TOTAL			15.35

FREIGHT (SCOPE 3)

Gross GHG emissions from freight are estimated at 4.74 tonnes CO_2-e for the year.

Two different methodologies were used to determine GHG emissions associated with the freighting of goods.

Activity data for incoming and outgoing freight is based supplier invoices (cost) as well as a spreadsheet which show the distance travelled.

The type of freight and transport classification allowances are as follows:

- Outgoing: Assume articulated vehicle
- Incoming: Assume road freight

The following tables show the activity data allowances, emission factor references and GHG emissions associated with freight movements.

Table 8: Freight emission factor references

FREIGHT TYPE	Emissions factor references (detailed)
Outgoing	ABS Survey of Motor Vehicle Use, Australia, 12 months ended 30 June 2018 Table 6 Average rate of fuel consumption, by state/territory of registration by type of vehicle by type of fuel – Australia Articulated trucks – 55.2 litres diesel/100km. NGA Factors 2019 – tables 4 and 40 – general transport – diesel oil – 2.86 t CO_2-e/kL
Incoming	Balancing Act 2005 – Sector 6101: Road Freight – 0.57 kg CO_2-e/$ RBA Inflation Calculator – Adjustment for inflation – 1.77 Emission factor for road freight (FY20) – 0.32 kg CO_2-e/$

Table 9: Freight activity data, emissions factors and GHG emissions

FREIGHT TYPE	Distance (km) Cost ($)	Diesel used (l)	Emission factor (t CO_2-e/kl) (kg CO_2-e/$)	GHG Emissions (t CO_2-e)
Outgoing	1,049.5 km	579	2.86 t CO_2-e/kL	1.66
Incoming	$9,560	N/A	0.32 kg CO_2-e/$	3.08
TOTAL				4.74

WASTE TO LANDFILL (SCOPE 3)

GHG emissions from waste sent to landfill are estimated at 8.39 t CO_2-e.

The business uses two waste service types;

- A municipal collection service and
- A bulk bin service.

In addition, some materials are diverted away from landfill and recycled. Emissions associated with materials sent for recycling have been excluded. Avoided emissions from diverting these materials from landfill are estimated at 0.97 t CO_2-e.

GHG emissions associated with waste generation and disposals are reported as scope 3 emissions.

A volume to weight conversion factor of 0.12 is applied as per the guidance offered by the 2017-18 NGER Technical Guidelines:

The methodology and emission factors used for the determination of GHG emissions from waste sent to landfill are sourced from the NGA Factors 2019.

Waste allowances and GHG emissions from waste sent offsite to landfill are shown in the following table.

Table 10: Waste activity data, GHG emissions factors, avoided GHG emissions and total GHG emissions FY2020

SEVICE/WASTE TYPE	Volume (m^3)	Weight (tonnes)	Emissions factor (t CO_2-e/t)	GHG emissions (t CO_2-e)
JJ Richards / Construction & demolition	180	21.6	0.2	4.32
Council / Municipal co-mingled	24.24	2.9	1.4	4.07
TOTAL		24.5		8.39

AIR TRAVEL (SCOPE 3)

GHG emissions from air travel are estimated at 1.09 tonnes CO_2-e for the year.

Air travel emissions calculations are based on a methodology consistent with the Department for Business, Energy & Industrial Strategy (DBEIS) and the Department for Environment, Food & Rural Affairs' (DEFRA) Government GHG Conversion Factors for Company Reporting.

Under this methodology, direct and indirect (well-to-tank (WTT) emissions factors relate to the type of cabin class as well as the distance travelled per flight. DBEIS's 2019 emission factors are used to determine emissions from each flight.

Flights are classified into the following lengths:

- Domestic haul <785km
- Medium haul 785 – 3,700km
- Long haul >3,700km

A radiative forcing index (RFI) of x1.9 is applied to flights to account for other non-CO_2 climate change effects of aviation (e.g. NO_X, water vapour, contrails).

There is currently no suitable climate metric to express the relationship between emissions and climate warming effects from aviation. It is clear, however, that aviation imposes other effects on the climate which are greater than that implied from simply considering its CO_2 emissions alone.

A central estimate RFI multiplier of 1.9 is recommended by the DBEIS/DEFRA based on the best available scientific evidence currently available and this has been applied for this inventory. This has not been applied to regional flights which do not reach high cruising altitudes where the contribution to warming from these effects are multiplied.

The following tables show the emissions factors applied for different flight classifications.

Table 11: Flight emission factors FY2020

FLIGHT	Total distance (km)	Direct emission factor	WTT emission factor	Total emission factor	GHG Emissions (t CO_2-e)
		($kgCO_2$-e/pkm)			
Adelaide to Melbourne (x6)	3,846	0.25493	0.02791	0.28284	1.09

ACCOMMODATION (SCOPE 3)

GHG emissions associated with accommodation are estimated at 0.63 tonnes CO_2-e for the period.

Carbon Neutral uses DBEIS factors which provides an average emission per room night stay for different countries.

Accommodation activity data, emission factors and GHG emissions are shown in the following table.

Table 12: Accommodation activity data, references, emission factors and GHG emissions FY2020

LOCATION	No room night stays	Emissions factor (kg CO_2-e/room night)	GHG Emissions (t CO_2-e)
Australia	14	44.9	0.63

OFFICE PAPER (SCOPE 3)

Gross GHG emissions from the use of office paper are estimated at 0.06 tonnes CO_2-e for the period.

After allowances for the use of carbon neutral paper, net GHG emissions from the use of office paper are estimated at 0.02 t CO_2-e for the period.

The weight of office paper has been determined by allowing 2.5kg for every ream of A4 paper used by the business.

Emissions from the use of Australian made office paper are determined using updated EPA Victoria emission factors.

Activity data, emission factors and GHG emissions are shown in the following table.

Table 13: Office paper activity data, references, emissions factors and gross GHG emissions FY2020

PAPER TYPE	Weight (kg)	Gross emission factor (kg CO_2-e/kg)	Gross GHG Emissions (t CO_2-e)
Reflex (Australian Office Paper) – Recycled *certified carbon neutral	17.5	2.35	0.04
JJ Burrows – Recycled	5	3.22	0.02

WATER (SCOPE 3)

Gross GHG emissions associated with water use and disposal are estimated at 0.04 t CO2-e.

Net GHG emissions associated with water use and disposal are taken to be zero.

Yarra Valley Water offsets its GHG emissions to achieve net zero emissions for the water that it provides to the business.

Gross GHG emissions have been determined by using information obtained from Yarra Valley's Annual Report 2020.

Activity data and GHG emissions are shown in the following table.

Table 14:Water use and disposal emissions factors and gross GHG emissions FY2020

SUPPLIER	Volume used (kL)	Gross emission factor (kg CO_2-e/kg)	Gross GHG Emissions (t CO_2-e)
Yarra Valley Water	174.97	0.20	0.04

TRAIN TRAVEL (SCOPE 3)

GHG emissions from train travel are estimated at 0.01 tonnes CO_2-e for the period.

Emission factors for the use of trains for business trips are obtained from Victoria EPA.

The following table shows the activity data allowances, emission factor and GHG emissions associated with train travel.

Table 15: Train travel activity data, emissions factors and GHG emissions FY2020

Distance (p.km)	Emissions factor (g CO_2-e/p.km)	GHG Emissions (t CO_2-e)
380	20	0.008

FOOD & CATERING (SCOPE 3)

GHG emissions associated with food and drink consumption are estimated at 0.80 tonnes CO_2-e for the period.

Activity data is provided by CarbonLite as expenditure on various food types.

Emission factors for various types of foods purchased for staff are sourced from updated EPA Victoria Emission Factors.

A summary of activity data, emission factors, references and GHG emissions is provided in the following table.

Table 16: Food & drink activity data, emissions factors and GHG emissions

FOOD TYPE	Cost ($)	Emission factor (kg CO_2-e/$)	Emissions (t CO_2-e)
Fruit	$3.00	0.3	0.00
Biscuits	$82.27	0.34	0.03
Other	$908.55	0.82	0.75
Dairy	$25.22	0.96	0.02
TOTAL	$1,019.04		0.80

CHANGES & UPDATES

Changes to the methodology, boundary or emission factors since the previous reporting period are outlined in this section.

Carbon Neutral endeavours to use the most relevant emissions factors available and some changes have been made since the previous reporting period of FY2019 (baseline year).

Table 17 provides a summary of changes made since the previous reporting period.

Table 17: Summary of changes to boundary, methodology & emission factors from previous reporting period.

ACTIVITY	Details	Comment
Water use and disposal	Inclusion in carbon footprint (gross emissions only)	Emissions associated with water use and disposal were not included in the baseline year due to immateriality. Despite being an immaterial emission (<1% of total emission), it has been included in gross GHG emission calculations for FY2020. As CarbonLite's water supply, Yarra Valley Water, purchases carbon credits for its unavoidable GHG emissions, net emission from CarbonLite's water use and disposal are zero and do not change.

HISTORICAL GHG EMISSIONS

The following table shows a comparison of gross GHG emission over time.

Table 18: Historical and FY2020 gross GHG emissions (t CO_2-e)

ACTIVITY	FY2019	FY2020
Fleet fuel	18.49	13.55
Equipment fuel	2.41	1.74
Electricity	18.71	18.54
Staff commuting	17.54	15.35
Freight	11.25	4.74
Waste	7.45	8.39
Air travel	7.03	1.09
Accommodation	3.96	0.63
Paper	0.14	0.06
Water Use	<0.01	0.04
Train travel	0.14	0.01
Food & catering	2.43	0.80
TOTAL	**89.53**	**64.92**

EMISSIONS INTENSITY

The emissions intensity shows CarbonLite's GHG emissions relative to the number of staff employed by the organisation. This allows for a more meaningful comparison of emissions to be made on a year-to-year basis.

A GHG emissions intensity against the number of fulltime equivalent staff is shown in Table 19.

In FY2020, the emission intensity was 4.0t CO_2-e/FTE.

Table 19: Emissions intensity for CarbonLite for the baseline year of FY2019 and FY2020

PERIOD	Gross GHG Emissions (t CO_2-e)	Net GHG Emissions (t CO_2-e)	Gross GHG Intensity (t CO_2-e/FTE)	Net GHG Intensity (t CO_2-e/FTE)
FY2019	89.53	80.15	7.5	6.7
FY2020	64.92	46.31	5.6	4.0

CARBON REDUCTION ACTIONS

Several environmental improvement and carbon reduction activities have been implemented by the business.

Table 20 lists the initiatives implemented by CarbonLite to reduce its carbon footprint and other negative environmental impacts.

Table 20: GHG Reduction actions implemented at CarbonLite

DETAILS OF ACTION IMPLEMENTED	ENVIRONMENTAL & CARBON REDUCTION BENEFIT
Purchase of Natural Power	The business changed electricity suppliers to one that offers 100% renewable energy. Natural Power is an accredited GreenPower option that is sourced from renewable energy sources. CarbonLite's electricity supplier since late April 2019, Powershop, provides 100% renewable and carbon neutral electricity.
Minimisation of waste	Reduction in waste to landfill by: - Minimising printing - Minimising offcuts of timber through the optimisation of shop drawings - Working with suppliers to reduce packaging - Shredding timber offcuts to make briquettes - Recycling paper, cardboard, aluminium and some plastic - Providing Keep Cups to employees
Sustainable procurement	- Consideration of environmental issues at procurement stage - Selecting and choosing suppliers who are environmentally and socially responsible
PassivHaus Standard	Providing prefabricated building envelopes to the Passive House Standards, which incorporate principles that reduce requirements for heating and cooling.
Training & Awareness	The business seeks to increase environmental awareness and educate stakeholders including employees, customers and suppliers about the Passive House Standards and principles.
On-site electricity generation	The business aims to install an on-site renewable energy system to produce some of the electricity it uses.
Reduction in office paper use	The business has moved towards becoming a paperless office and has reduced its office paper use significantly in FY2020.

EXCLUSIONS

Exclusions and justifications are outlined in this section. Exclusions and justifications are provided where adequate activity data was not available, where emissions were deemed to be immaterial (<1% of the total) or incidental or where reliable emission factors are not available.

The GHG Protocol provides guidance on determining relevant scope 3 emission sources that should be included in organisational GHG inventories.

REFRIGERANT LEAKS

Refrigerant leaks from air conditioners and chillers used in facilities and fleet vehicles are not included as activity data is not available and minor leakages are unlikely to result in a material emission.

USE OF PRODUCTS

Emissions associated with production of materials used in building projects are excluded.

This has been excluded from the scope of the organisational carbon footprint. The embodied emissions associated with building materials used in building projects would be considered during a product carbon footprint assessment (typically requiring a Life Cycle Assessment).

Similarly, emissions associated with the use of designed and constructed projects are not included. The buildings manufactured by the business are designed to the PassivHaus Standard and are likely to be less carbon emitting than typical buildings not designed to maximise passive solar design.

The end of life emissions from materials used and construction projects at the end of their useful life are excluded.

MATERIALS SENT FOR RECYCLING

Materials sent for recycling have not been included in emissions calculations in this Report.

Emissions associated with the treatment of these materials are accounted for when these materials are re-processed and re-used.

Avoided landfill emissions associated with the recycling of materials such as paper and cardboard are estimated to be 0.97 tonnes CO_2-e for FY2020 for the business.

CARBON NEGATIVITY

Carbon Neutral calculate CarbonLite's gross organisational carbon footprint to be 64.92 t CO_2-e.

CarbonLite continually seeks to **reduce** its avoidable GHG emissions by changing its operations and processes where possible.

After allowances for the use of carbon neutral purchases and services, a net organisational carbon footprint of 46.31 t CO_2-e remains prior to the purchase and retirement of carbon offsets.

CarbonLite has purchased and retired 94 tonnes of carbon credits which is double its carbon footprint for the year. **By cancelling more carbon offsets than emissions for the year, CarbonLite claims carbon negativity organisation for the period 1 July 2019 to 30 June 2020.**

The following table shows net GHG emissions after the purchase and retirement of carbon offsets.

Table 21: Net GHG emissions for CarbonLite FY2020

DETAILS	SERIAL NUMBERS	t CO_2-e
FY2020 Gross GHG emissions		64.92
Less GreenPower		-18.54
Less Yarra Valley Water use		-0.04
Less Australian Office Paper paper use		-0.04
GHG emissions excluding carbon offsets		46.31
Carbon Offsets		
Gold Standard PER – Australian Native Reforestation Yarra Yarra Biodiversity Corridor, Vintage 2021	GS1-1-AU-G53039-21-2021-19220: 5497 - 5590	-94.00
CDM CER – China Wind Farm Project – Renewable Energy, Vintage 2013 – 2016	CN-316 1.011.033.111 – 1.011.033.204	-(94.00)
2019/20 Net GHG emissions		-47.69*

*This credit will not be carried over and used for future reporting periods making CarbonLite carbon negative for FY2020.

NOTE Gold Standard PERs: to ensure claims of carbon neutrality, and because it may be some years before actual carbon is sequestered, an equivalent number of verified carbon credits from a certified, international project have been surrendered.

DISCLAIMER

Whilst every care has been taken to ensure that the information contained in this report is accurate, complete, current, reliable and free from error, Carbon Neutral or any of its staff, members or Directors does not provide any warranty nor accept any responsibility or liability for any errors in the information provided. This report is made in good faith based on the information provided by staff and service contractors. You should and are advised to make your own due diligence inquiry as to the appropriateness and suitability of the information for your particular circumstances.

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