CARBON REDUCTION INSTITUTE

# NoCO2 Audit Report

## BREATHE ARCHITECTURE

FY2022 Annual Audit

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CERTIFICATION #NC379
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Completed on: 6 March 2023

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# EXECUTIVE SUMMARY

The Carbon Reduction Institute (CRI), through its certification and logo system, aims to assist organisations reduce their Greenhouse Gas (GHG) emissions and provide those organisations and consumers with a simple way of identifying carbon neutral and low carbon products and services.

Breathe Architecture is a Melbourne based studio, designing world class architecture with an enduring and meaningful impact on housing affordability, accessibility, and sustainability.. Breathe Architecture commissioned a NoCO2 audit from CRI to measure their carbon footprint, through the determination of the GHG emissions that resulted from their operations over the 2022 financial year (FY2022).

This report provides the results of this audit, and delivers an understanding of the organisation's GHG inventory. Breathe Architecture will then be able to use this knowledge to plan future reductions of its carbon footprint, as well as determine whether they have any reporting obligations under energy and emissions reporting legislation. This report is valid within the FY2022 period, subject to Breathe Architecture's compliance with the terms and conditions outlined by CRI.

CRI's NoCO2 audit follows the standards outlined by the World Business Council for Sustainable Development's Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (1), in addition to the international standard ISO 14064.1 (2).

The emissions from Breathe Architecture's operations were calculated through the application of numerous published life cycle emission factors along with the use of multi-regional input-output tables (3) derived figures. Each emissions factor is scaled to a level of consumption for its impact area, for example a kilowatt-hour of electricity or a litre of fuel.

It has been determined that the total GHG emissions from Breathe Architecture's relevant operations and activities, within the boundaries of the NoCO2 program, were **86.03 tonnes of CO2e** (tCO2e) over the FY2022 period.

A breakdown of Breathe Architecture's emissions by source is summarised in the chart immediately below.

Figure 1: Breakdown of Breathe Architecture's GHG Emissions, FY2022

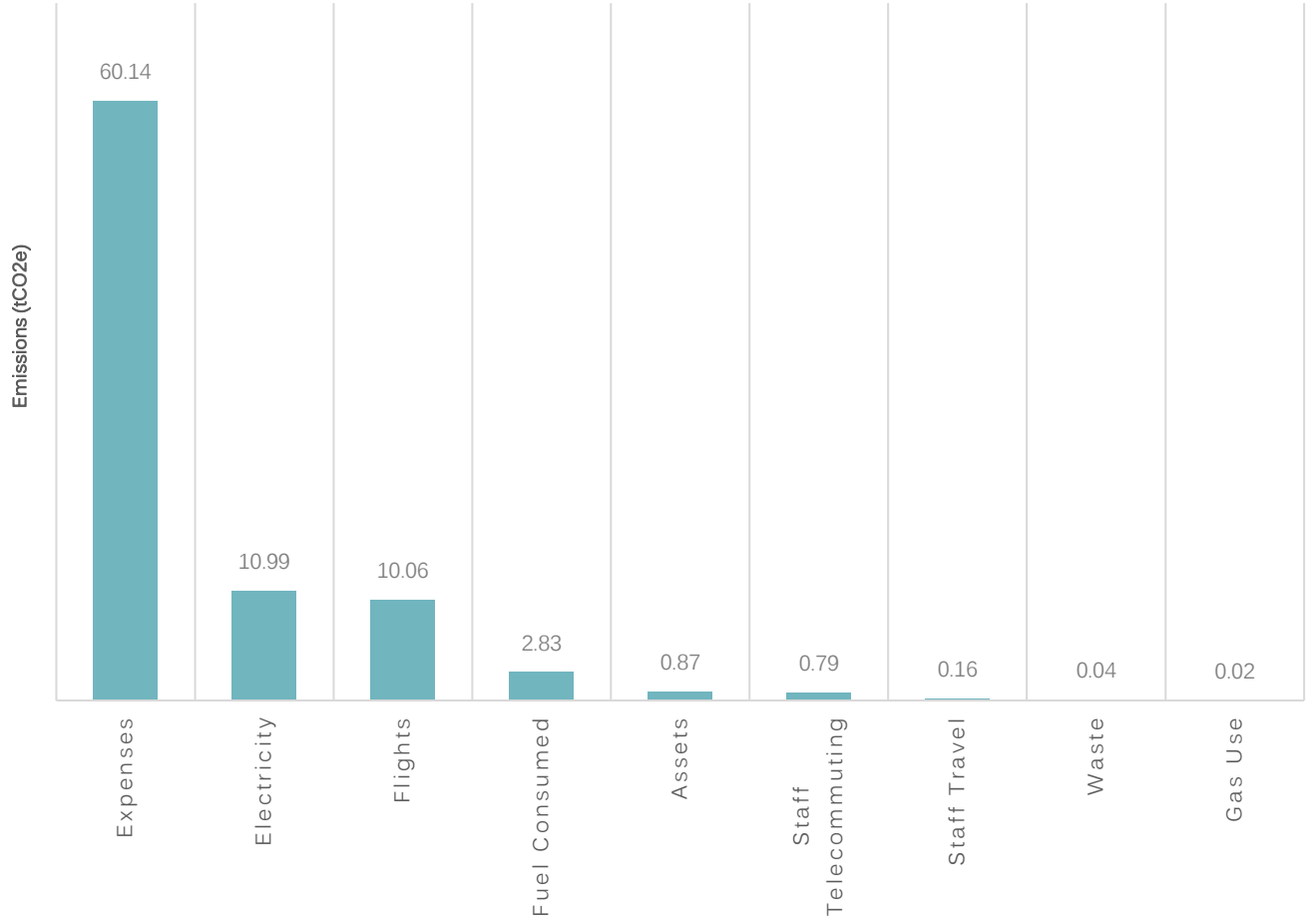
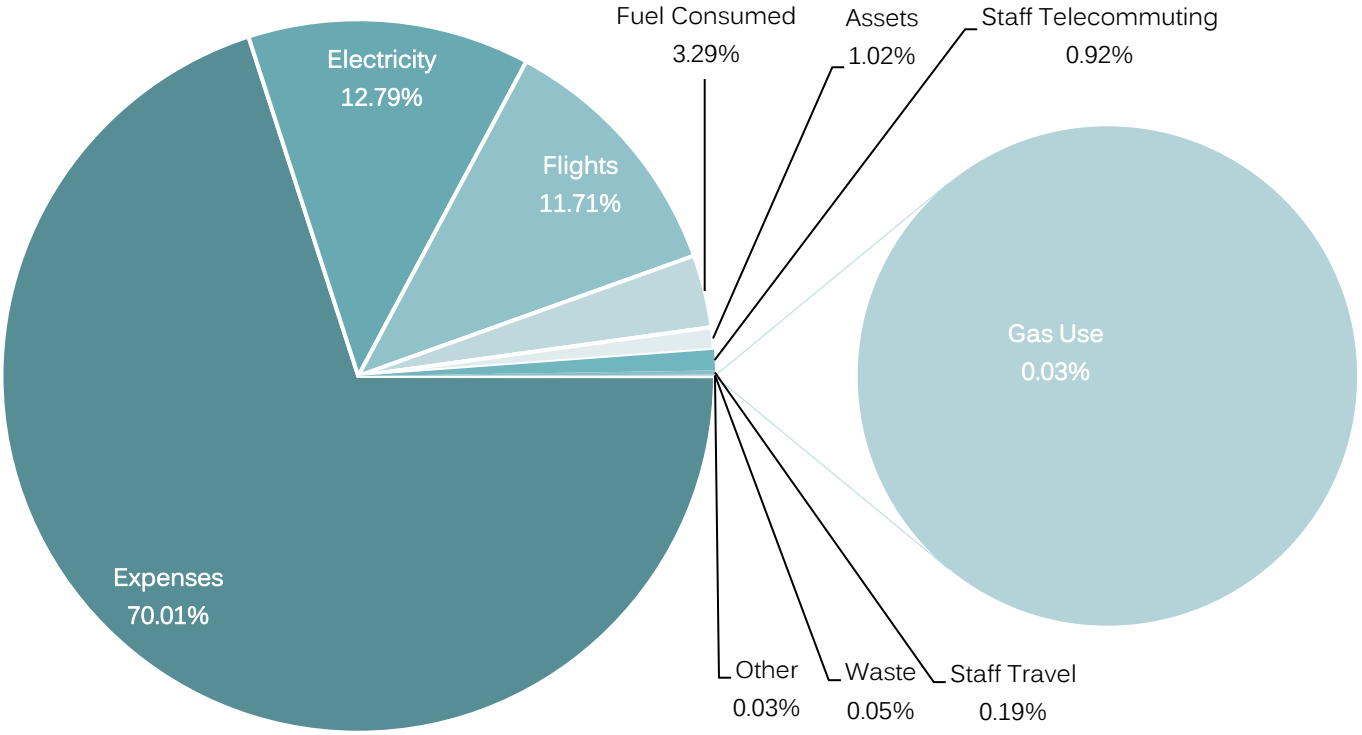


Table 1: Sources of Breathe Architecture's emissions (NoCO2 Boundaries)

| Scope | Emission Source | Emissions (tCO2e/year) |
|---|---|---|
| Scope 1 | Fuel Consumed | 2.27 |
| | Gas Use | 0.02 |
| | Refrigerants | 0.00 |
| Scope 2 | Electricity | 10.15 |
| Scope 3 | Supply of Electricity | 0.84 |
| | Supply of Gas | 0.00 |
| | Staff Travel | 0.16 |
| | Supply of Fuel | 0.56 |
| | Assets | 0.87 |
| | Expenses | 60.14 |
| | Cost Of Sales | 0.00 |
| | Flights | 10.06 |
| | Waste | 0.04 |
| | Staff Telecommuting | 0.92 |
| | **Total Footprint:** | **86.03** |
| | Carbon Neutral Expenses | 0.55 |
| | Green Power | 10.99 |
| | Flights offset | 5.29 |
| | **Total FY2022 Offset Requirement:** | **69.20** |

The table above encapsulates Breathe Architecture's total carbon footprint as per Figure 1 on page 2 before accounting for Carbon Neutral Expenses and offsets purchased through third parties. These results are subsequently summarized in Figure 2 below where it should be highlighted that Carbon Neutral Expenses account for a total of 16.83 tCO2e and 19.57% of Breathe Architecture's footprint.

Figure 2: Emission Sources for Breathe Architecture, FY2022




Breathe Architecture's FY2022 net carbon footprint for certification purposes under CRI's NoCO2 Program is **69.20 tCO2e**.

Full details of the terms and conditions of certification will be forwarded separate to this audit report.

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# GLOSSARY

| Term | Description |
|---|---|
| CO2-e | CO2 equivalent. This unit reflects the impact of the emission of all greenhouse gases, including CO2 (carbon dioxide), CH4 (Methane), N2O (Nitrous Oxide), Sulphur Hexafluoride ($SF_6$) as well as fluorocarbons PFCs and HCFCs and expresses their varying global warming impacts in terms of a weighted CO2 equivalent. |
| EF | Emissions Factor. The amount of CO2-e emitted (in kg or tonnes) per unit of according factor. |
| GHG | Greenhouse Gases (methane, CO2, N2O, etc.). Gases that contribute towards global warming. |
| p.km | Person kilometres. A value expressing the total distance travelled by multiple individuals (i.e. one individual travelling 50km plus one individual travelling 60km is 110 p.km). |
| RFI | Radiative Forcing Index. A factor that references the global warming multiplier effect of releasing GHGs in the upper atmosphere as opposed to ground level. This is relevant to commercial flights. Approximately equal to 1.9 (4). |
| FY2022 | Financial year of 2022 commencing July 2021, ending June 2022. |
| Uplift Factor | Uplift Factor. This value is an inflating factor (1.09 or, in other words, an addition of 9%) (5) that accounts for uncertainties associated with air travel such as indirect paths, delays and varying weather conditions. |

# 1. INTRODUCTION

The Carbon Reduction Institute (CRI), through its NoCO2/LowCO2 certification program, aims to help businesses reduce their greenhouse gas (GHG) emissions and demonstrate their pro-active approach toward the threats posed by climate change. This program allows businesses to position themselves within industry and community as leaders in the fight against climate change and become part of the growing 'low carbon economy'.

As part of Breathe Architecture's commitment to increase the sustainability of its business practices, it is having its overall greenhouse gas impact assessed by CRI. This audit will enable Breathe Architecture to identify areas where emissions are greatest and calculate the carbon offset requirement that Breathe Architecture must fulfil in order to achieve NoCO2 certification.

## 1.1. OPERATIONAL EMISSIONS

In order for Breathe Architecture to negate the impact of its greenhouse gas emissions, it must first quantify them. CRI does this by conducting an emissions assessment and then applying the methodologies outlined within the World Business Council for Sustainable Development's (WBCSD) Greenhouse Gas Accounting Protocol. (6)

### 1.1.1. GHG PROTOCOL

The protocol contains universally recognised accounting methods and boundaries that can be applied to different levels, sizes and types of organisations when creating their GHG inventory. This includes multinational organisations, energy intensive primary industry, as well as small to medium enterprises (SME). Boundaries are important when compiling a GHG inventory, as they give organisations consistency and scope when accounting for their emissions.

## 1.2. EMISSIONS BOUNDARIES

There are two 'types' of boundaries that need to be set when compiling a GHG inventory; an organisational boundary and an operational boundary. Organisational boundaries allow a business to distinguish between GHG emitting activities that are attributable to their organisation, and those that are not. Operational boundaries allow an organisation to define the emissions that they own or control and categorise them into different scopes (as either direct or indirect). Dividing emissions up into different scopes allows an organisation to determine opportunities for emissions reduction, as well as knowing where their emissions are occurring along the value chain.

### 1.2.1. ORGANISATIONAL BOUNDARIES

When setting organisational boundaries, CRI applies a financial control rationale, which states that businesses account for emissions generated from activities over which they have financial control, and derive the majority of financial benefits and/ or risks as a result of these activities (6). CRI uses this rationale as we believe that the consumer (in this case Breathe Architecture) is responsible for the products and services that they consume, and that the purchase is an endorsement of the conditions under, and methods used to produce the goods and services consumed. This rationale is both comprehensive and simple; if you bought it, then the emissions produced and embodied within it are your responsibility. This straightforward demarcation will ensure the best outcome for Breathe Architecture, and other certified businesses as consumers will have confidence in the authenticity of organisations certified with CRI.

### 1.2.2. OPERATIONAL BOUNDARIES

The main function of operational boundaries is to create different scopes for organisations to separate and define the emissions produced from their operations. The three scopes are described in detail below.

- **Scope 1: Direct GHG emissions** - Emissions that occur from sources that are owned or controlled by the company, for example, emissions from combustion in owned or controlled boilers, furnaces and vehicles. (6)
- **Scope 2: Electricity indirect GHG emissions** - Emissions from the generation of purchased electricity consumed by the company. (6)
- **Scope 3: Other indirect GHG emissions –** Emissions that are a consequence of the activities of the company, but occur from sources not owned or controlled by the company. These include emissions from waste, the extraction and production of purchased materials; transportation of purchased fuels and transportation of employees to and from work. (6)

The GHG protocol describes scopes 1 and 2 as mandatory reporting categories, and scope 3 as a voluntary reporting category. Under CRI's NoCO2 certification program, it is mandatory for organisations to include scope 3 emissions. This is due to the large amount of embodied emissions associated with the sale, delivery and purchase of products and services of a company. "Embodied emissions" refer to the emissions generated in the manufacture and distribution of a product. All products require energy in production and distribution. This energy is most commonly provided through the use of fossil fuels, which have a greenhouse emissions impact. Embodied emissions are included due to the products and services that Breathe Architecture has bought and used. See section 2.3 for an in-depth description of scope 3 emissions.

# 2. BREATHE ARCHITECTURE'S GHG EMISSIONS INVENTORY

## 2.1. SCOPE 1 EMISSIONS

### 2.1.1. FUEL USE

Fuel purchased as a company expense, for combustion in vehicles and onsite is classed as a Scope 1 emission source. Fuel also incurs a Scope 3 emission impact from the fuel's extraction, processing and transportation prior to use.

The emissions generated due to fuel use were based on fuel purchase details supplied by Breathe Architecture and calculated using emission factors outlined in the Department of Climate Change's National Greenhouse Account Factors (7) Equation 1 illustrates this method.

Equation 1: Fuel Combustion Emissions Formula

$$Fuel\ Emissions = Fuel\ Quantity\left(\frac{Litres}{Year}\right) \times EF\left(\frac{tCO_2e}{L}\right)$$

Table 2 shows a breakdown of the emissions incurred.

Table 2: Emissions from Fuel Combustion

| Fuel Type | Purpose | Litres of fuel Per Year | CO2 EF (kgCO2e /Litre) | CH4 EF (kgCO2e /Litre) | N2O EF (kgCO2e /Litre) | Total Scope 1 Emissions (tCO2e) | Scope 3 EF (kgCO2e /Litre) | Total Scope 3 Emissions (tCO2e) | Total Emissions (tCO2e) |
|---|---|---|---|---|---|---|---|---|---|
| Diesel | Transportation | 834.86 | 2.70 | 0.00 | 0.02 | 2.27 | 0.67 | 0.56 | 2.83 |
| Totals: | | 834.86 | | | | 2.27 | | 0.56 | 2.83 |

### 2.1.2. GAS USE

Data regarding the amount of gas used was converted into an equivalent number of gigajoules (GJ) and appropriate emissions factors were applied. This method allowed resultant scope 1 and scope 3 emissions from gas use to be calculated, as shown in Table 3.

Table 3: Summary of Emissions from Gas Use

| Address | State | Gas Use (GJ) | Scope 1 EF (kgCO2e/GJ) | Total Scope 1 Emissions (tCO2e) | Scope 3 EF (kgCO2 /GJ) | Total Scope 3 Emissions (tCO2e) | Total Emissions (tCO2e) |
|---|---|---|---|---|---|---|---|
| Studio 2, 9 Florence Street, Brunswick | VIC | 0.39 | 51.53 | 0.02009 | 4.00 | 0.00156 | 0.02165 |
| Totals: | | 0.39 | | 0.02009 | | 0.00156 | 0.02165 |

### 2.1.3. REFRIGERANTS

It was indicated to CRI that over the reporting period Breathe Architecture did not operate any significant commercial or industrial refrigeration equipment, and thus no emissions have been attributed to this sub scope.

CRI strongly suggests that refrigeration units should be degassed before disposal, as this will avoid the release of GHGs and allow the refrigerant to be recycled and used in another refrigeration unit.

## 2.2. SCOPE 2 EMISSIONS

### 2.2.1. ELECTRICITY USE (SCOPE 2 & 3)

Frameworks and data sets exist both within Australia and internationally that enable calculations of emissions from electricity, which follow the formulae below.

Equation 2: Emissions from Electricity Use (Scope 2 & 3)

$$Electricity\ Emissions(Scope\ 2) = kWh\ consumed \times Scope\ 2\ EF\left(\frac{kgCO_2e}{kWh}\right)$$

$$Electricity\ Emissions(Scope\ 3) = kWh\ consumed \times Scope\ 3\ EF\left(\frac{kgCO_2e}{kWh}\right)$$

The Department of Climate Change's National Greenhouse Accounts Factors detail the emission factors for electricity used in each state (7). These values are shown in Table 22 (Appendix D. Electricity). The following table shows a summary of the accounting implemented by CRI and resulting emissions as calculated using the described method. A more comprehensive breakdown is available in Appendix D. Electricity

Table 4: Summary of Emissions from Electricity Use

| Address | State | Electricity Usage (kWh) | Scope 2 kgCO2e/kWh | Scope 2 Emissions tCO2e | Scope 3 kgCO2e/ kWh | Scope 3 Emissions tCO2e | Total Emissions tCO2e |
|---|---|---|---|---|---|---|---|
| Studio 1, 9 Florence Street, Brunswick | VIC | 2,401.32 | 0.85 | 2.04 | 0.07 | 0.17 | 2.21 |
| Studio 2, 9 Florence Street, Brunswick | VIC | 5,246.97 | 0.85 | 4.46 | 0.07 | 0.37 | 4.83 |
| Retail 1/204-206 Albion, Brunswick | VIC | 4,296.85 | 0.85 | 3.65 | 0.07 | 0.30 | 3.95 |
| | Total: | 11,945.14 | | 10.15 | | 0.84 | 10.99 |

## 2.3. SCOPE 3 EMISSIONS

Scope 3 emissions are defined as indirect emissions that occur from sources offsite. Scope 3 emission sources are assessed through the application of life-cycle emissions coefficients in the case of cost of sales, expenses, assets, waste, flights and staff travel.

The emissions impact and calculations behind scope 3 sources are depicted in the following sections, with the exclusion of scope 3 impacts from fuel use and electricity, addressed in sections 2.1.1 and 2.2.1.

Scope 3 emissions from cost of sales, expenses and assests were calculated using Input-Output tables (8) which equate dollar values spent, within particular industries in Australia, to GHG emissions. More information on this particular method is available in Cost of Sales, Expenses & Assets

### 2.3.1. COST OF SALES

Due to the nature of Breathe Architecture's business, no cost of sales was incurred over the reporting period, and thus no emissions are attributed to this sub scope.

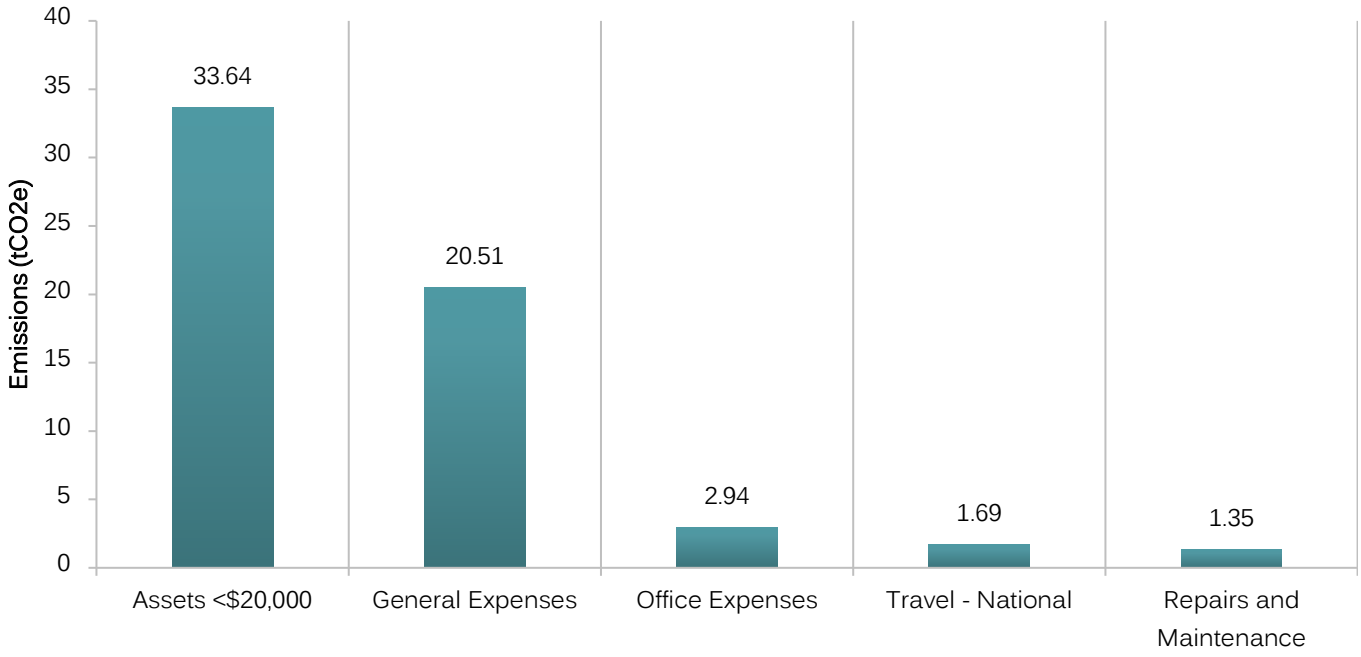
### 2.3.2. EXPENSES

Using the profit and loss statements supplied, the embodied emissions from Breathe Architecture's expenses were calculated. The following tables and figures show a summary of the type of cost of sale items that generated the most emissions.

Table 5: Summary of Embodied Emissions from Expenses, (by General Type)[1]

| Type of Expense | Amount Spent ($) | tCO2e/year |
|---|---|---|
| General Expenses | $3,319,123.53 | 20.51 |
| Assets <$20,000 | $92,939.69 | 33.64 |
| Building Expenses | $594.13 | 0.00 |
| Office Expenses | $58.16 | 2.94 |
| Repairs and Maintenance | $3,832.39 | 1.35 |
| Travel - National | $26,671.38 | 1.69 |
| Totals: | $3,443,219.28 | 60.14 |

Figure 3: Summary of Embodied Emissions from Expenses (by General Type)

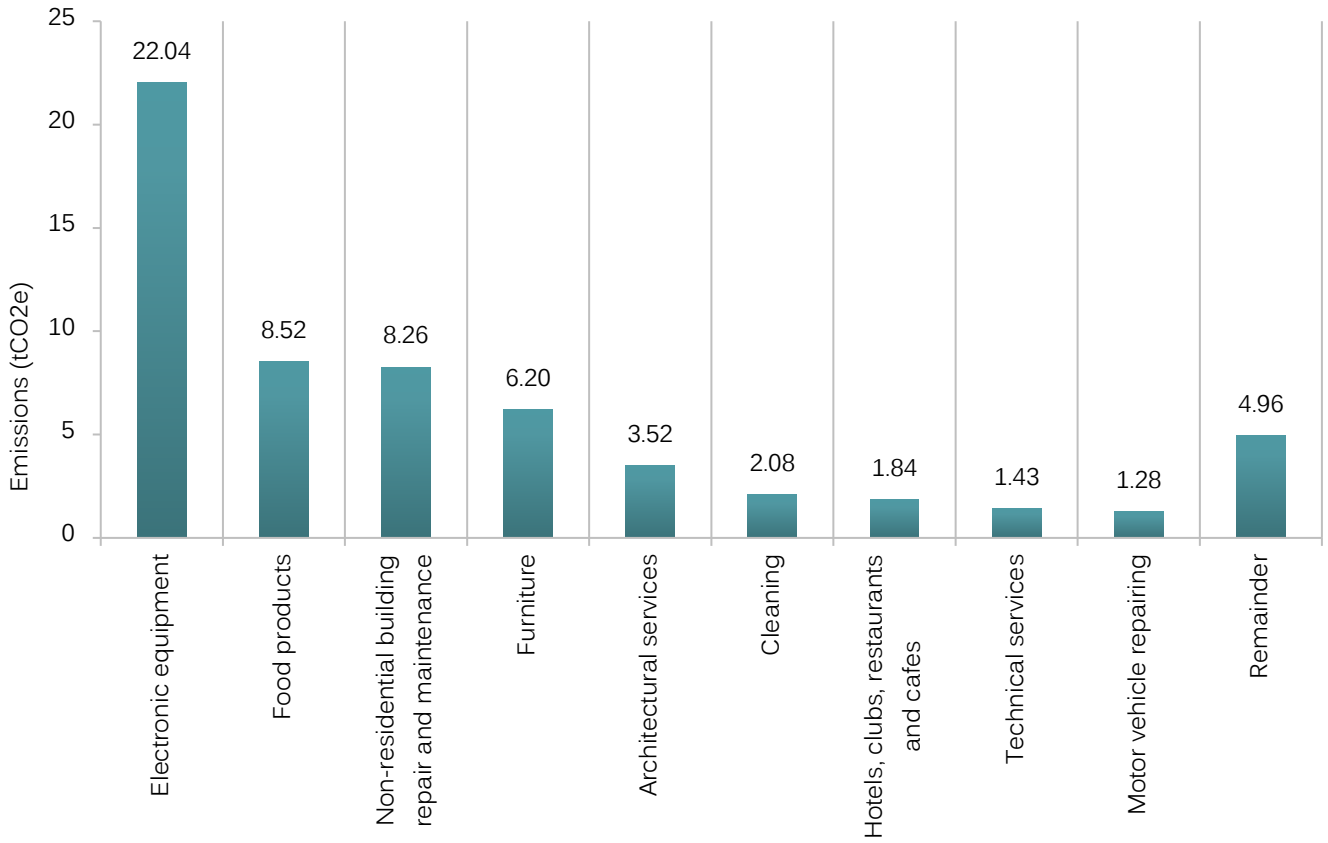



[1] The total monetary sum in Table 5 differs from that in Table 6 as categories with zero emissions are excluded.

Table 6: Summary of Embodied Emissions from Expenses (by MRIO Categories)

| Category | Expense ($AUD) | Emissions (tCO2e) |
|---|---|---|
| Electronic equipment | $63,235.30 | 22.04 |
| Food products | $19,862.99 | 8.52 |
| Non-residential building repair and maintenance | $22,019.31 | 8.26 |
| Furniture | $16,348.38 | 6.20 |
| Architectural services | $306,130.00 | 3.52 |
| Cleaning | $20,117.02 | 2.08 |
| Hotels, clubs, restaurants and cafes | $11,292.54 | 1.84 |
| Technical services | $170,933.30 | 1.43 |
| Motor vehicle repairing | $4,241.48 | 1.28 |
| Taxi VIC | $9,329.60 | 1.00 |
| Computer and technical services | $118,771.46 | 0.82 |
| Printing and stationery | $5,055.36 | 0.66 |
| Electrical equipment | $1,505.45 | 0.51 |
| Insurance | $49,544.78 | 0.35 |
| Plant leasing, hiring and renting services | $3,576.00 | 0.34 |
| Accommodation | $1,701.78 | 0.23 |
| Accounting services | $30,203.19 | 0.22 |
| Advertising services | $14,940.94 | 0.12 |
| Railway passenger transport services | $994.99 | 0.11 |
| Business services | $10,823.20 | 0.09 |
| Flowers | $611.36 | 0.07 |
| Market research and other business management services | $10,237.11 | 0.06 |
| Pesticides, insecticides and medicinal goods | $111.47 | 0.06 |
| Paper products | $198.19 | 0.05 |
| Ceramic products | $133.64 | 0.04 |
| Domestic telecommunication services | $5,742.57 | 0.04 |
| Household electrical appliances repair and service | $199.00 | 0.04 |
| Property services | $6,721.24 | 0.03 |
| Legal services | $4,311.94 | 0.03 |
| Education | $7,099.69 | 0.02 |
| Local government | $3,505.13 | 0.02 |
| Water supply; sewerage and drainage services | $4,151.26 | 0.02 |
| State government | $2,493.77 | 0.01 |
| Postal services | $102.27 | 0.01 |
| Banking | $829.02 | 0.00 |
| Employment placement | $650.00 | 0.00 |
| Security and investigation | $586.64 | 0.00 |
| Parking services | $70.47 | 0.00 |
| Health insurance | $56.36 | 0.00 |
| Totals: | $ 928,438.20 | 60.14 |

Figure 4: Summary of Embodied Emissions from Expenses (by MRIO Categories)




### 2.3.3. CARBON NEUTRAL EXPENSES

Breathe Architecture indicated that some of their expenses and/or purchased items and services were certified as Carbon Neutral under CRI's certification program or other valid certification system. As a result, the associated emissions from these items, as depicted below, have been reduced from Breathe Architecture's total offset requirement as highlighted in Table 1 (Executive Summary).

Table 7 Carbon Neutral Expense Offsets

| Type of CNE | Amount Spent ($) | tCO2e/year |
|---|---|---|
| General Carbon Neutral Expense | $80,202.33 | 0.55 |
| Totals: | $80,202.33 | 0.55 |

### 2.3.4. ASSETS

CRI used Breathe Architecture's depreciation schedule to calculate the embodied emissions attributed to current assets. When accounting for embodied emissions of assets, CRI scales the impact of an asset over the period in which it is depreciated for tax purposes. An asset depreciating at 50% per year, with total embodied emissions of 10 tCO2e, will register as 5 tCO2e each year of its two-year depreciable lifetime. This method ensures Breathe Architecture can update its emissions inventory with its tax reports. Written off assets are thus excluded from the assessment.

The tables below show a summary of the types of assets and their attributed emissions. The full breakdown of the calculations performed can be found in Appendix E. Cost of Sales, Expenses & Assets.

Table 8: Summary of Embodied Emissions from Assets (by General Type)

| Type of Assets | Value Depreciated ($) | tCO2e/year |
|---|---|---|
| Motor Vehicles | $2,076.60 | 0.87 |
| Plant & Equipment at Cost | $7.42 | 0.00 |
| Totals: | $2,084.02 | 0.87 |

Figure 5: Summary of Embodied Emissions from Assets (by General Type)

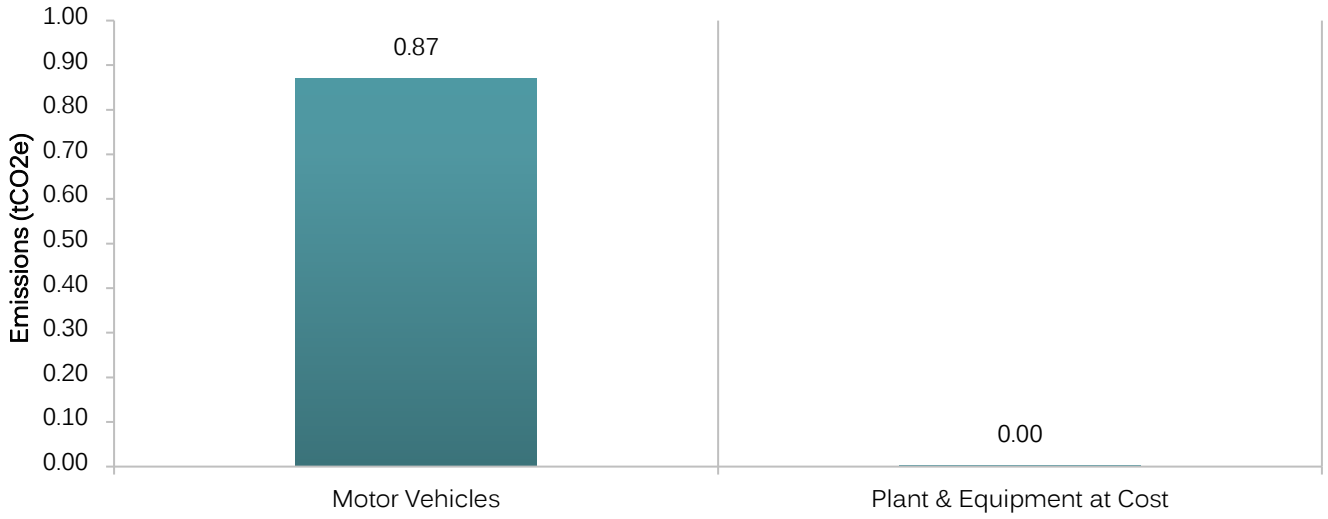
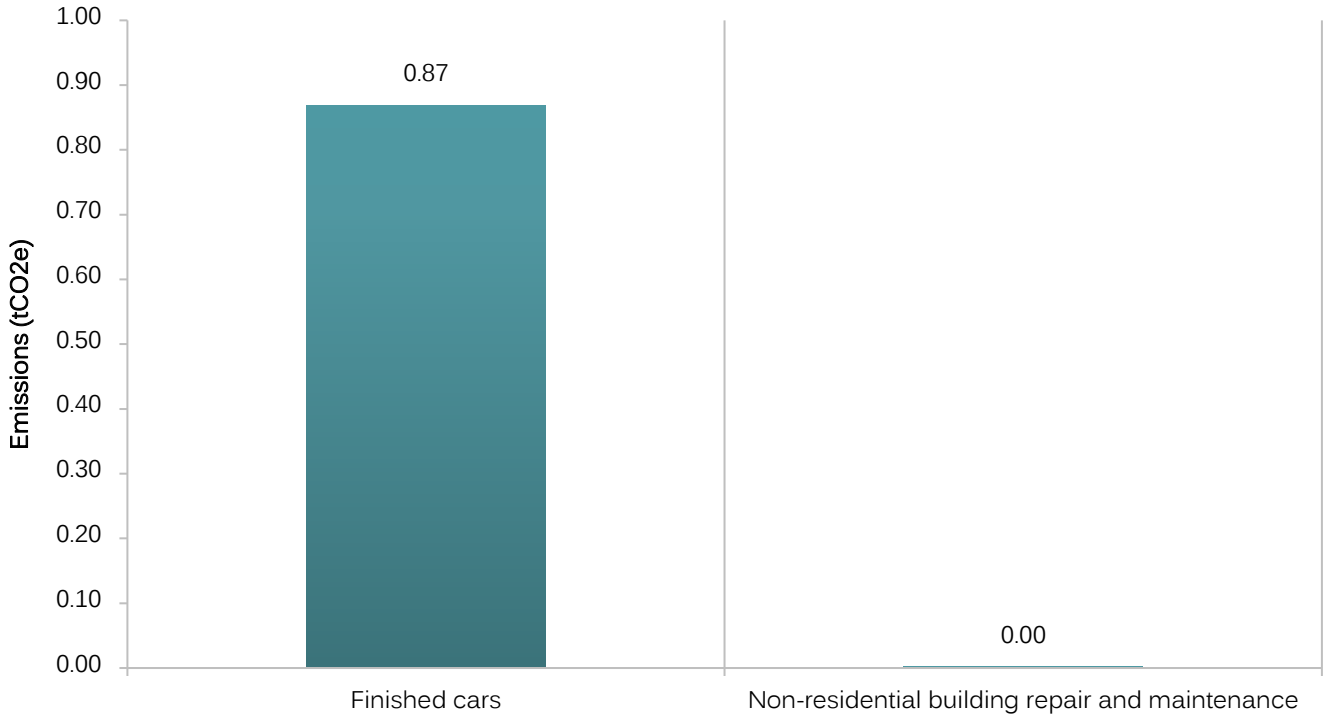



Table 9: Summary of Embodied Emissions from Assets (by MRIO Categories)

| Category | Depreciated Value ($AUD) | Emissions (tCO2e) |
|---|---|---|
| Finished cars | $2,076.60 | 0.87 |
| Non-residential building repair and maintenance | $7.42 | 0.00 |
| Totals: | $ 2,084.02 | 0.87 |

Figure 6: Summary of Embodied Emissions from Assets (by MRIO Categories)



### 2.3.5. WASTE

Breathe Architecture provided information to CRI estimating its waste generated. The Department of the Environment and Energy's National Greenhouse Accounts provide factors for emissions generated per tonne of various waste types, along with conversion factors between mass and volume for different waste streams (7). These factors can be used to account for the emissions embodied in Breathe Architecture's waste generation using the method illustrated in Equation 3 and Table 11 below.

Equation 3: Emissions from Waste

$$Waste\ Emissions = \frac{Waste\ Volume}{year} \times Waste\ Conversion\ Factor(m^3 \rightarrow tonnes) \times EF\left(\frac{kgCO_2e}{tonne}\right)$$

The following waste conversion factors were used to convert data provided in volume (m3) to weight (tonnes):

Table 10: Waste Conversion Factors (Volume To Weight)

| Waste Type | Volume to Weight (t/m3) | Reference |
|---|---|---|
| Co-Mingled | 0.12 | NGER (2018), Page 579 |

Table 11: Emissions from Waste (7)

| Volume of Waste /Yr (m3) | Waste Type | Recycled Portion (%) | Conversion Factor (m3 to tonnes) | Tonnes Recycled | Tonnes Landfilled | Waste Type | tCO2e /tonne waste | tCO2e |
|---|---|---|---|---|---|---|---|---|
| 0.26 | Co-Mingled | 0% | 0.120 | 0.00 | 0.03 | Commercial & Industrial Waste | 1.30 | 0.04 |
| 0.36 | | 100% | 0.120 | 0.04 | 0.00 | | 1.30 | 0.00 |
| 0.62 | | | | 0.04 | 0.03 | | | 0.04 |

### 2.3.6. STAFF AIR TRAVEL (FLIGHTS)

The emissions from flights taken by Breathe Architecture were calculated employing the distance between airports, the emissions factor associated with passenger flights, the RF Index factor and the Greater Circle Flight factor. This method is illustrated in Equation 4.

Equation 4: Emissions from Air Travel

$$Flight\ Emissions = Distance\ (km) \times RFI\ Factor \times GCF\ Factor \times EF\left(\frac{kgCO_2e}{km}\right)$$

Emission factors for air travel are sourced from the UK Department for Environment, Food and Rural Affairs' (11) data for air passenger emission factors per passenger kilometre, and are scaled for domestic flights, short haul flights and long haul flights. Such values are shown in Table 30 (Appendix G. Staff Air Travel).

Table 12 shows the recorded flights taken for work related affairs by individuals from Breathe Architecture and the respective calculated emissions for each flight.

Any flight offsets purchased with supporting evidence are deducted from the overall carbon footprint as shown in Table 1. Nonetheless, flights offset through airlines may not take into account the Radiative Forcing Index (RFI) factor or the additional uplift factor inherent in travelling on a plane (GCF). For this reason, CRI has calculated and accounted for any additional emissions from these flights as well.

Table 12: Staff flights by Breathe Architecture

| Flight | Origin | Dest. 1 | Return (Y/N) | # of Passengers | tCO2e from One-way Trip to Dest. 1 | Total tCO2e | Total Flight Distance (pkm) | Third Party Offset (tCO2e) |
|---|---|---|---|---|---|---|---|---|
| 1 | Melbourne | Ballina Byron Bay | Y | 4 | 0.22 | 1.73 | 10,182.55 | 0.91 |
| 2 | Melbourne | Adelaide | Y | 1 | 0.18 | 0.35 | 1,283.32 | 0.18 |
| 3 | Melbourne | Adelaide | Y | 1 | 0.18 | 0.35 | 1,283.32 | 0.18 |
| 4 | Melbourne | Sydney | Y | 1 | 0.19 | 0.38 | 1,410.79 | 0.20 |
| 5 | Melbourne | Sydney | Y | 1 | 0.19 | 0.38 | 1,410.79 | 0.20 |
| 6 | Melbourne | Hobart (Aus) | Y | 1 | 0.17 | 0.34 | 1,233.97 | 0.18 |
| 7 | Melbourne | Hobart (Aus) | Y | 1 | 0.17 | 0.34 | 1,233.97 | 0.18 |
| 8 | Melbourne | Devonport | Y | 3 | 0.11 | 0.67 | 2,471.72 | 0.35 |
| 9 | Melbourne | Sydney | Y | 1 | 0.19 | 0.38 | 1,410.79 | 0.20 |
| 10 | Melbourne | Adelaide | Y | 1 | 0.18 | 0.35 | 1,283.32 | 0.18 |
| 11 | Melbourne | Sydney | Y | 1 | 0.19 | 0.38 | 1,410.79 | 0.20 |
| 12 | Melbourne | Adelaide | Y | 1 | 0.18 | 0.35 | 1,283.32 | 0.18 |
| 13 | Melbourne | Sydney | Y | 3 | 0.19 | 1.15 | 4,232.37 | 0.61 |
| 14 | Melbourne | Adelaide | Y | 1 | 0.18 | 0.35 | 1,283.32 | 0.18 |
| 15 | Wellington | Melbourne | Y | 1 | 0.44 | 0.88 | 5,178.92 | 0.46 |
| 16 | Melbourne | Sydney | Y | 2 | 0.19 | 0.77 | 2,821.58 | 0.41 |
| 17 | Melbourne | Wellington | Y | 1 | 0.44 | 0.88 | 5,178.92 | 0.46 |
| | | | # of Flights: | 25 | Total tCO2e: | 10.06 | 44,593.77 | 5.29 |

### 2.3.7. STAFF GROUND TRAVEL

Staff travel includes emissions from private road travel that takes place due to Breathe Architecture's operations, this includes commuting to work and any work-related travel. GHG emissions resulting from the use of public transport by Breathe Architecture's staff are not attributed to Breathe Architecture, as the emissions created from its utilisation of public transport cannot be affected by Breathe Architecture's actions through policy, technology or through direct authority.

The formulae and methods used for calculating the emissions impact for small, medium and large cars are similar. Varying parameters are fuel type, fuel consumption, vehicle type and kilometres travelled. Calculations take into account any additional passengers in each carpool. Staff travel information from Breathe Architecture is collected and figures for fuel use per kilometre (10) make calculations of emissions per kilometre possible. These figures were then increased by a factor of 15% to more accurately represent real world fuel uses (11) and are shown in Table 27 (Appendix F. Staff Ground Travel).

To obtain the final emission quantity for each employee's commuting, Scope 1 and Scope 3 emission factors for transport fuel combustion were used. Emission factors for the relevant fuel types used by Breathe Architecture are available in Table 28 (Appendix F. Staff Ground Travel).

Emissions from ground travel are calculated using information provided by Breathe Architecture's office staff and/or correspondents. A total of 10 staff answered a survey regarding their average number of kilometres travelled and their individual transport methods and Breathe Architecture has indicated that a total of 26.9 Full-Time Equivalent (FTE) staff are employed. Where private vehicles were used, type of car and type of fuel used were also considered.

Reduction in staff travel emissions due to staff working from home (WFH) during lockdown periods was also considered. A COVID-19 commuting scaling factor was calculated using Equation 5. The calculation breakdown can be seen in Table 13.

Equation 5: COVID-19 Commuting Scalar

$$COVID-19\ Commuting\ Scalar = 1 - \frac{\sum No.\ Days\ WFH + \sum No.\ Days\ WFH \times \%\ of\ Staff\ WFH}{No.\ Days\ in\ Reporting\ Period}$$

Table 13: COVID-19 Commuting Scalar Derivation

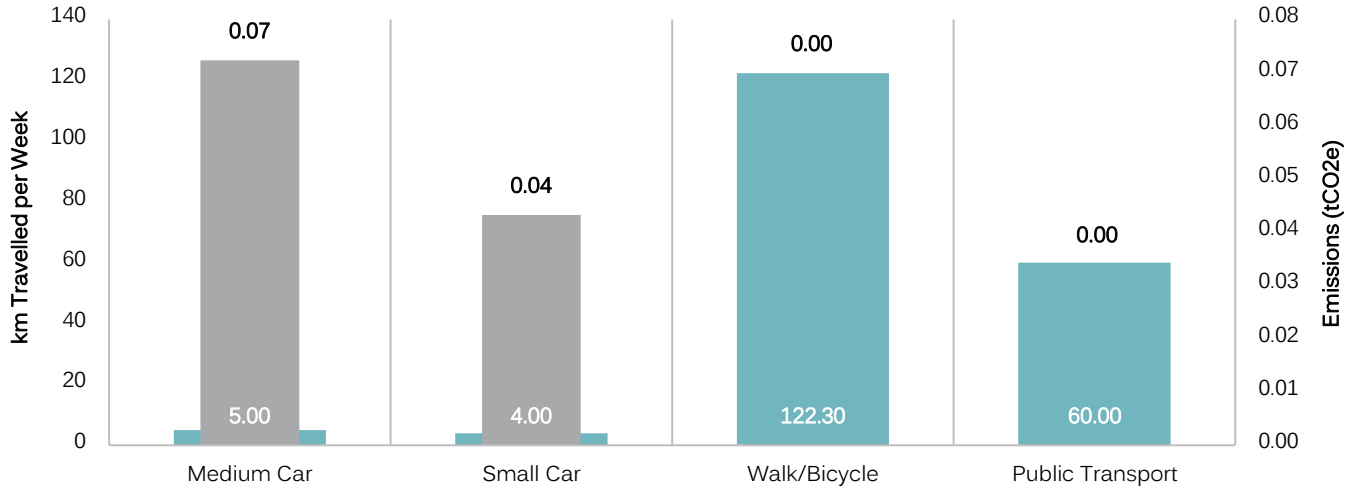
| % Staff WFH in Period | Period Start Date | Period Finish Date | Number of days |
|---|---|---|---|
| 100.00% | 01/07/2021 | 31/12/2021 | 184 |
| | | Total: | 184 |
| | | Covid-19 Commuting Scalar: | 0.50 |

Summarized results for each relevant vehicle type are shown in Table 14 and the full log of received data and calculations available in Appendix F. Staff Ground Travel.

Table 14: Emissions from Staff Ground Travel by Vehicle Type (Summary)

| Vehicle Type | Quantity | Total km /Week | Total tCO2e /Year |
|---|---|---|---|
| Medium Car | 1 | 5.00 | 0.07 |
| Small Car | 2 | 4.00 | 0.04 |
| Walk/Bicycle | 8 | 122.30 | 0.00 |
| Public Transport | 5 | 60.00 | 0.00 |
| | | Subtotal: | 0.12 |
| | | Total (Adjusted for FTE Staff and COVID Scalar) | 0.16 |

Figure 7: Summary of Staff Ground Travel Types and Emissions




## 2.3.8. STAFF TELECOMMUTING

While working remotely Breathe Architecture employees consume electricity via the operation of their personal electronic devices and use of lighting. Recent trends in staff telecommuting habits would lead to significant amounts of leakage in Breathe Architecture's GHG inventory were these emissions not accounted for. This includes electricity use from contingent staff and employees. As such, CRI has estimated these emissions through the use of conservative assumptions on the types of electronic equipment that would be in use in conjunction with estimates of the total number of hours worked from home by Breathe Architecture employees per state. Staff telecommuting emissions were calculated using the following equation.

Equation 6: Emissions from Telecommuting

$$Telecommuting\ Emissions = Annual\ Working\ Hours \times Power(W) \times \left( Scope\ 2\ EF\left(\frac{kgCO_2e}{kWh}\right) + Scope\ 3\ EF\left(\frac{kgCO_2e}{kWh}\right)\right)$$

As mentioned in section 2.2.1, the emission factors for electricity used in each state (7) are shown in Table 22 (Appendix D. Electricity). The following table shows a summary of the accounting implemented by CRI and resulting emissions as calculated

using the described method. The appliances assumed to be used for staff telecommuting and the respective power outputs can be found in Appendix H. Staff Telecommuting.

Table 15: Emissions from Staff Telecommuting by State

| State | Number of FTE Staff | # Weeks WFH | Annual Hours | Power (kW) | Electricity Use (kWh) | Scope 2 kgCO2e/ kWh | Scope 2 Emissions tCO2e | Scope 3 kgCO2e/ kWh | Scope 3 Emissions tCO2e | Total Emissions tCO2e |
|---|---|---|---|---|---|---|---|---|---|---|
| VIC | 9.60 | 26.29 | 9,462.86 | 0.11 | 1003.06 | 0.85 | 0.85 | 0.07 | 0.07 | 0.92 |
| Totals: | 9.60 | | 9,462.86 | | 1003.06 | | 0.85 | | 0.07 | 0.92 |

# 3. EMISSIONS ANALYSIS

This audit found that Breathe Architecture's total emissions footprint in FY2022 was **86.03 tCO2e** and that the majority of these emissions were the result of Expenses (70%), followed by Electricity (13%) and Flights (12%).

The measure to which a company relies on a carbon-intensive economy can be deduced by looking at the average intensity of emissions per dollar spent and per full-time-equivalent employee. These two indicators have been calculated for Breathe Architecture as shown below:

Table 16: Carbon Intensity Indicators for Breathe Architecture, (FY2022)

| Indicator | Value |
|---|---|
| Emissions per dollar spent (kgCO2e /$AUD) [2] | 0.06 |
| Emissions per FTE employee (tCO2e /FTE) | 3.19 |

**3.1.** Emissions from **fuel use** (2.83 tonnes of CO2e) were a small source of GHG emissions in the context of Breathe Architecture's total emissions. The entirety of fuel-based emissions, resulted from the combustion of Diesel with a combined (scope 1 & 3) emissions intensity of 3.39 kgCO2e/L.

**3.2.** The **combustion of gas** generated 0.02 tCO2-e (a negligible emissions source), resulting from a total gas consumption of 389.79 MJ.

**3.3.** **Electricity use** produced 10.99 tCO2-e over FY2022. These emissions were resultant from a total electricity consumption of 11,945.14 kWh which compares to 14,005.62 kWh in FY2021.

**3.4.** Emissions from **expenses** were attributed 60.14 tCO2-e in FY2022. The most emissions-intensive expense item recorded for the given audit period was Electronics, with an expense of $58,953.52 being attributed 20.55 tCO2-e.

**3.5.** Emissions from the depreciation of **assets** were attributed 0.87 tCO2-e in FY2022. The most emissions-intensive asset item recorded for FY2022 was Tesla Model 3 Rear Wheel Drive 2022 Black NEW, with a depreciated value of $2,076.60 being attributed 0.87 tCO2-e.

**3.6.** Emissions attributed to **waste** contributed 0.79 tCO2-e to FY2022's carbon footprint (a negligible source) stemming from the 0.03 tonnes of waste that were sent to landfill (0.04 tonnes were recycled). CRI recommends referring to services like those offered in www.cleanup.org.au for the disposal and recycling of waste types.

**3.7.** **Staff travel**: There was no new staff travel survey completed for FY2022. Since the number of staff is similar for both FY2022 and FY2021(when a staff travel survey *was* conducted), the same travel survey has been used and scaled up for the current number of full-time-equivalent staff (26.9). Ultimately, emissions from staff travel increased slightly from 0.14 $tCO_2$-e in FY2021 to 0.16 tCO2-e in FY2022, a negligible contribution towards Breathe Architecture's entire carbon footprint.

**3.8.** Work related **flights** generated 10.06 tCO2-e in FY2022, from the 25 flights that were recorded to have been taken by Breathe Architecture's staff. These covered a total of 44,593.77 individual person kilometres and generated emissions equivalent to the combustion of 22 barrels of oil.

**3.9.** **Staff Telecommuting** produced 0.92 tCO2-e over FY2022. These emissions were resultant from a total electricity consumption of 1003.6 kWh which compares to 817.71 kWh in FY2021.

[2] Emissions per dollar spent were calculated by dividing the total carbon footprint from expenses (60.14 tCO2e) by the monetary sum of all valid expense entries (i.e. excluding entries marked as 'N/A').

## 3.10. COMPARISON WITH PREVIOUS YEARS

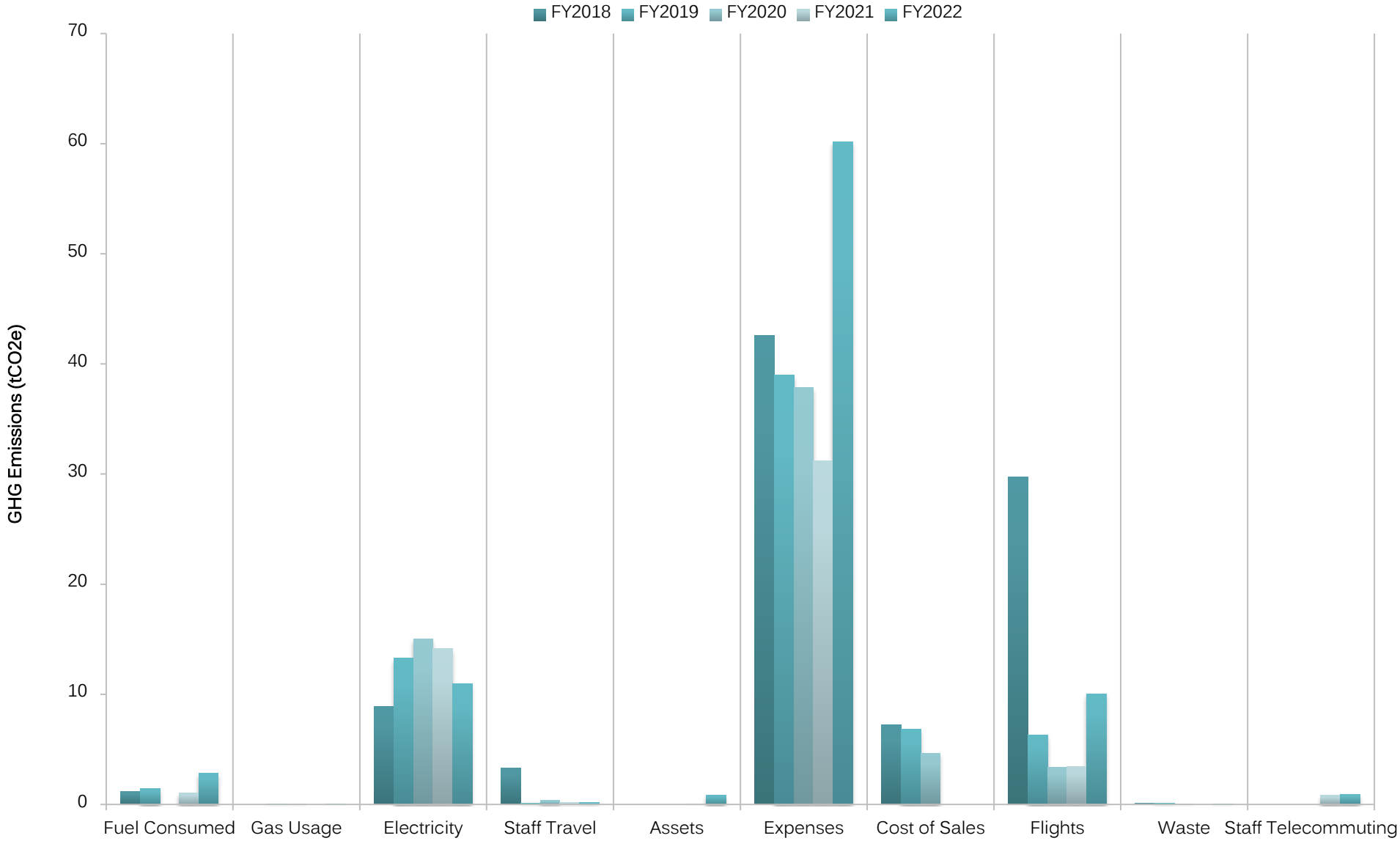
This audit found that Breathe Architecture's total emissions footprint has increased significantly from 50.82 tCO2-e in FY2021, to 86.03 tCO2-e in FY2022.

The most significant change that has occurred during FY2022 is the increase of emissions attributed to Expenses, as these changed from 31.19 tCO2-e in FY2021 to 60.14 tCO2-e in FY2022. The second largest change in emissions was an increase in those attributed to Flights.

Table 17: Sources of Breathe Architecture's emissions for Audited Periods (NoCO2 Boundaries)

| Scope | Emission Source | FY2018 | FY2019 | FY2020 | FY2021 | FY2022 | % Difference From Initial Audit | % Difference From Previous Audit |
|---|---|---|---|---|---|---|---|---|
| Scope 1 & 3 | Fuel Consumed | 1.19 | 1.45 | 0.00 | 1.05 | 2.83 | 138% | 170% |
| | Gas Usage | 0.00 | 0.06 | 0.06 | 0.00 | 0.02 | - | - |
| | Refrigerants | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Scope 2 & 3 | Electricity | 8.87 | 13.26 | 15.05 | 14.15 | 10.99 | 24% | -22% |
| Scope 3 | Staff Travel | 3.30 | 0.10 | 0.37 | 0.14 | 0.16 | -95% | 12% |
| | Assets | 0.00 | 0.00 | 0.00 | 0.01 | 0.87 | - | 10283% |
| | Expenses | 42.61 | 39.01 | 37.86 | 31.19 | 60.14 | 41% | 93% |
| | Cost of Sales | 7.21 | 6.84 | 4.63 | 0.00 | 0.00 | -100% | - |
| | Flights | 29.73 | 6.28 | 3.40 | 3.46 | 10.06 | -66% | 190% |
| | Waste | 0.10 | 0.10 | 0.06 | 0.00 | 0.04 | -61% | - |
| | Staff Telecommuting | 0.00 | 0.00 | 0.00 | 0.83 | 0.92 | - | -4% |
| | Gross Total | 93.02 | 67.11 | 61.42 | 50.82 | 86.03 | -8% | 69% |
| | Carbon Neutral Expenses | 29.35 | 19.55 | 18.45 | 14.03 | 16.83 | -43% | 20% |
| | Net Total | 63.67 | 47.57 | 42.97 | 36.79 | 69.20 | 8% | 88% |

Figure 8: Comparison of Emissions for Current and Previous Audit Periods



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# APPENDIX A. UNCERTAINTY OF SCOPE 1 COMPONENTS

CRI has itemised and assessed the uncertainty margins of all scope 1 emissions.

Uncertainty margins were derived by calculating emissions using values at each extreme end of their own uncertainty margins and then inspecting how much the results (upper bound and lower bound values) deviated from the actual value. Sometimes uncertainty margins can be asymmetric, meaning it is more likely to deviate one way than the other (this is common for values which have lower or upper limits).

Uncertainty margins were assigned from published figures or using CRI's own judgment on the expected variability of a value, for example:

- Emission factors from the IPCC or NGA have uncertainty margins published (at a 95% level of confidence). CRI uses these error margins where available.
- For values for other quantities (e.g. quantity of fuel prices, etc) CRI uses specialised judgement and assigns a reasonable uncertainty margin on a case-by-case basis.

The following summary tables show similar calculations to those shown in their respective parts of this report. However, each variable shows the specific uncertainty range that is inherent to its value.

Table 18: Summary Emissions from Fuel Consumed (with Uncertainties)

| Type of Fuel | Litres of Fuel per Year | CO2 EF (kgCO2 /Litre) | CH4 EF (kgCO2 /Litre) | N2O EF (kgCO2 /Litre) | CO2 Emissions (tCO2e) | CH4 Emissions (tCO2e) | N2O Emissions (tCO2e) | Scope 1 Emissions (tCO2e) |
|---|---|---|---|---|---|---|---|---|
| Diesel | 834.86 -17% to +25% | 2.7 ±4% | 0 ±52% | 0.02 ±52% | 2.25 -20% to +30% | 0 -60% to +90% | 0.02 -60% to +90% | 2.27 -20% to +30% |
| Totals: | 834.86 -17% to +25% | | | | 2.25 -20% to +30% | 0 -60% to +90% | 0.02 -60% to +90% | 2.27 -20% to +30% |

Table 19: Summary Emissions from Gas (with Uncertainties)

| Address | Gas Type | Gas Use (GJ) | Scope 1 EF (kgCO2e/GJ) | Total Scope 1 Emissions (tCO2e) | Scope 3 EF (kgCO2 /GJ) | Total Scope 3 Emissions (tCO2e) | Total Emissions (tCO2e) |
|---|---|---|---|---|---|---|---|
| Studio 2, 9 Florence Street, Brunswick | Natural Gas | 0.39 | 51.53 ±4% | 0.02 ±4% | 4 ±50% | 0 ±50% | 0.02 ±7% |
| Totals | | 0.39 | | 0.02 ±4% | | 0 ±50% | 0.02 ±7% |

# APPENDIX B. BREAKDOWN OF SCOPE 1 CONSTITUENTS

The IPCC stresses that quantification of GHGs should be expressed separating each of the principal GHGs: Carbon dioxide (CO2), nitrous oxide (N2O), & methane (CH4). CRI has completed calculations to meet these requirements by including the breakdown scope 1 emissions from fuel use, gas use and refrigerant leakage. This is instanced in the following table.

Table 20: Scope 1 Breakdown of Emission Totals, with Uncertainties

| Emissions Source | CO2 | CH4 | N2O |
|---|---|---|---|
| Liquid Fuels | 2.25 -20% to +30% | 0 -60% to +90% | 0.02 -60% to +90% |
| Gaseous Fuels | 0.02 ±4% | 0 ±50% | 0 ±50% |
| Totals (tCO2e): | 2.27 -20% to +30% | 0 -59% to +86% | 0.02 -60% to +90% |
| Totals (tCO2e) (All): | 2.29 -20% to +30% | | |

# APPENDIX C. GAS USE

Table 21: Site(s)' Full Gas Emissions Calculations (7)

| Units of Consumption: | | GJ | Gas Type: | | Natural Gas | | Site Address: | Studio 2, 9 Florence Street, Brunswick | | | | State: | VIC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Supply Start Date | Supply End Date | No. of Days | Water Volume (L) | Gas Use (GJ) | CO2 EF (kgCO2e /GJ) | CH4 EF (kgCO2e /GJ) | N2O EF (kgCO2e /GJ) | CO2 Emissions (tCO2e) | CH4 Emissions (tCO2e) | N2O Emissions (tCO2e) | Total Scope 1 Emissions (tCO2e) | Scope 3 EF (kgCO2e /GJ) | Scope 3 Emissions (tCO2e) | Total Emissions (tCO2e) |
| 10/06/2021 | 6/08/2021 | 58 | 220.00 | 0.04 | 51.4000 | 0.1000 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 4.00 | 0.00 | 0.00 |
| 7/08/2021 | 6/10/2021 | 61 | 240.00 | 0.04 | 51.4000 | 0.1000 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 4.00 | 0.00 | 0.00 |
| 7/10/2021 | 29/11/2021 | 54 | 220.00 | 0.04 | 51.4000 | 0.1000 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 4.00 | 0.00 | 0.00 |
| 30/11/2021 | 31/01/2022 | 63 | 170 | 0.03 | 51.4000 | 0.1000 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 4.00 | 0.00 | 0.00 |
| 1/02/2022 | 7/04/2022 | 66 | 450 | 0.08 | 51.4000 | 0.1000 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 4.00 | 0.00 | 0.00 |
| 8/04/2022 | 9/06/2022 | 63 | 810 | 0.15 | 51.4000 | 0.1000 | 0.03 | 0.01 | 0.00 | 0.00 | 0.01 | 4.00 | 0.00 | 0.01 |
| Totals for Period: | | 364 | 2,110.00 | 0.39 | | | | 0.02 | 0.00 | 0.00 | 0.02 | | 0.00 | 0.02 |
| Totals for Year: | | 365 | 2,115.80 | 0.39 | | | | 0.02 | 0.00 | 0.00 | 0.02 | | 0.00 | 0.02 |

# APPENDIX D. ELECTRICITY

Table 22: Emission Factors for Electricity Consumption in Australian States (7)

| State | Scope 2 kgCO2e/ kWh | Scope 3 kgCO2e/ kWh | Reference |
|---|---|---|---|
| VIC | 0.85 | 0.07 | National Greenhouse Accounts (NGA) Factors by the Australian Government: Department of Environment and Energy. November 2022, Table 1 |

Table 23: Site(s)' Full Electricity Emission Calculations

| Address | Period Start Date | Period Finish Date | No. of Days | Electricity Use (kWh) | Scope 2 kgCO2e/ kWh | Scope 2 Emissions tCO2e | Scope 3 kgCO2e/ kWh | Scope 3 Emissions tCO2e | Total Emissions tCO2e |
|---|---|---|---|---|---|---|---|---|---|
| Studio 1, 9 Florence Street, Brunswick | 1/07/2021 | 31/07/2021 | 31 | 402.19 | 0.85 | 0.34 | 0.07 | 0.03 | 0.37 |
| Studio 1, 9 Florence Street, Brunswick | 1/08/2021 | 31/08/2021 | 31 | 191.44 | 0.85 | 0.16 | 0.07 | 0.01 | 0.18 |
| Studio 1, 9 Florence Street, Brunswick | 1/09/2021 | 30/09/2021 | 30 | 114.12 | 0.85 | 0.10 | 0.07 | 0.01 | 0.10 |
| Studio 1, 9 Florence Street, Brunswick | 1/10/2021 | 31/10/2021 | 31 | 92.78 | 0.85 | 0.08 | 0.07 | 0.01 | 0.09 |
| Studio 1, 9 Florence Street, Brunswick | 1/11/2021 | 30/11/2021 | 30 | 221.27 | 0.85 | 0.19 | 0.07 | 0.02 | 0.20 |
| Studio 1, 9 Florence Street, Brunswick | 1/12/2021 | 31/12/2021 | 31 | 139.93 | 0.85 | 0.12 | 0.07 | 0.01 | 0.13 |
| Studio 1, 9 Florence Street, Brunswick | 1/01/2022 | 31/01/2022 | 31 | 76.88 | 0.85 | 0.07 | 0.07 | 0.01 | 0.07 |
| Studio 1, 9 Florence Street, Brunswick | 1/02/2022 | 28/02/2022 | 28 | 107.19 | 0.85 | 0.09 | 0.07 | 0.01 | 0.10 |
| Studio 1, 9 Florence Street, Brunswick | 1/03/2022 | 31/03/2022 | 31 | 174.10 | 0.85 | 0.15 | 0.07 | 0.01 | 0.16 |
| Studio 1, 9 Florence Street, Brunswick | 1/04/2022 | 30/04/2022 | 30 | 174.08 | 0.85 | 0.15 | 0.07 | 0.01 | 0.16 |
| Studio 1, 9 Florence Street, Brunswick | 1/05/2022 | 31/05/2022 | 31 | 282.49 | 0.85 | 0.24 | 0.07 | 0.02 | 0.26 |
| Studio 1, 9 Florence Street, Brunswick | 1/06/2022 | 30/06/2022 | 30 | 424.85 | 0.85 | 0.36 | 0.07 | 0.03 | 0.39 |
| Total for Period: | | | 365 | 2,401.32 | | 2.04 | | 0.17 | 2.21 |
| Total for Year: | | | 365 | 2,401.32 | | 2.04 | | 0.17 | 2.21 |

| Address | Period Start Date | Period Finish Date | No. of Days | Electricity Use (kWh) | Scope 2 kgCO2e/ kWh | Scope 2 Emissions tCO2e | Scope 3 kgCO2e/ kWh | Scope 3 Emissions tCO2e | Total Emissions tCO2e |
|---|---|---|---|---|---|---|---|---|---|
| Studio 2, 9 Florence Street, Brunswick | 1/07/2021 | 31/07/2021 | 31 | 664.76 | 0.85 | 0.57 | 0.07 | 0.05 | 0.61 |
| Studio 2, 9 Florence Street, Brunswick | 1/08/2021 | 31/08/2021 | 31 | 375.41 | 0.85 | 0.32 | 0.07 | 0.03 | 0.35 |
| Studio 2, 9 Florence Street, Brunswick | 1/09/2021 | 30/09/2021 | 30 | 240.13 | 0.85 | 0.20 | 0.07 | 0.02 | 0.22 |

| Address | Period Start Date | Period Finish Date | No. of Days | Electricity Use (kWh) | Scope 2 kgCO2e/ kWh | Scope 2 Emissions tCO2e | Scope 3 kgCO2e/ kWh | Scope 3 Emissions tCO2e | Total Emissions tCO2e |
|---|---|---|---|---|---|---|---|---|---|
| Studio 2, 9 Florence Street, Brunswick | 1/11/2021 | 30/11/2021 | 30 | 419.46 | 0.85 | 0.36 | 0.07 | 0.03 | 0.39 |
| Studio 2, 9 Florence Street, Brunswick | 1/12/2021 | 31/12/2021 | 31 | 315.05 | 0.85 | 0.27 | 0.07 | 0.02 | 0.29 |
| Studio 2, 9 Florence Street, Brunswick | 1/01/2022 | 31/01/2022 | 31 | 262.36 | 0.85 | 0.22 | 0.07 | 0.02 | 0.24 |
| Studio 2, 9 Florence Street, Brunswick | 1/02/2022 | 28/02/2022 | 28 | 363.34 | 0.85 | 0.31 | 0.07 | 0.03 | 0.33 |
| Studio 2, 9 Florence Street, Brunswick | 1/03/2022 | 31/03/2022 | 31 | 429.54 | 0.85 | 0.37 | 0.07 | 0.03 | 0.40 |
| Studio 2, 9 Florence Street, Brunswick | 1/04/2022 | 30/04/2022 | 30 | 362.66 | 0.85 | 0.31 | 0.07 | 0.03 | 0.33 |
| Studio 2, 9 Florence Street, Brunswick | 1/05/2022 | 31/05/2022 | 31 | 548.72 | 0.85 | 0.47 | 0.07 | 0.04 | 0.50 |
| Studio 2, 9 Florence Street, Brunswick | 1/06/2022 | 30/06/2022 | 30 | 819.91 | 0.85 | 0.70 | 0.07 | 0.06 | 0.75 |
| Total for Period: | | | 334 | 4,801.34 | | 4.08 | | 0.34 | 4.42 |
| Total for Year: | | | 365 | 5,246.97 | | 4.46 | | 0.37 | 4.83 |

| Address | Period Start Date | Period Finish Date | No. of Days | Electricity Use (kWh) | Scope 2 kgCO2e/ kWh | Scope 2 Emissions tCO2e | Scope 3 kgCO2e/ kWh | Scope 3 Emissions tCO2e | Total Emissions tCO2e |
|---|---|---|---|---|---|---|---|---|---|
| Retail 1/204-206 Albion, Brunswick | 1/07/2021 | 31/07/2021 | 31 | 3.47 | 0.91 | 0.00 | 0.10 | 0.00 | 0.00 |
| Retail 1/204-206 Albion, Brunswick | 1/08/2021 | 31/08/2021 | 31 | 261.60 | 0.91 | 0.24 | 0.10 | 0.03 | 0.26 |
| Retail 1/204-206 Albion, Brunswick | 1/09/2021 | 30/09/2021 | 30 | 186.84 | 0.91 | 0.17 | 0.10 | 0.02 | 0.19 |
| Retail 1/204-206 Albion, Brunswick | 1/10/2021 | 31/10/2021 | 31 | 189.13 | 0.91 | 0.17 | 0.10 | 0.02 | 0.19 |
| Retail 1/204-206 Albion, Brunswick | 1/11/2021 | 30/11/2021 | 30 | 453.28 | 0.91 | 0.41 | 0.10 | 0.05 | 0.46 |
| Retail 1/204-206 Albion, Brunswick | 1/12/2021 | 31/12/2021 | 31 | 343.12 | 0.91 | 0.31 | 0.10 | 0.03 | 0.35 |
| Retail 1/204-206 Albion, Brunswick | 1/02/2022 | 28/02/2022 | 28 | 500.39 | 0.91 | 0.46 | 0.10 | 0.05 | 0.51 |
| Retail 1/204-206 Albion, Brunswick | 1/03/2022 | 31/03/2022 | 31 | 473.64 | 0.91 | 0.43 | 0.10 | 0.05 | 0.48 |
| Retail 1/204-206 Albion, Brunswick | 1/04/2022 | 30/04/2022 | 30 | 394.75 | 0.91 | 0.36 | 0.10 | 0.04 | 0.40 |
| Retail 1/204-206 Albion, Brunswick | 1/05/2022 | 31/05/2022 | 31 | 478.10 | 0.91 | 0.44 | 0.10 | 0.05 | 0.48 |
| Retail 1/204-206 Albion, Brunswick | 1/06/2022 | 30/06/2022 | 30 | 647.59 | 0.91 | 0.59 | 0.10 | 0.06 | 0.65 |
| Total for Period: | | | 334 | 3,931.91 | | 3.58 | | 0.39 | 3.97 |
| Total for Year: | | | 365 | 4,296.85 | | 3.91 | | 0.43 | 4.34 |

# APPENDIX E. COST OF SALES, EXPENSES & ASSETS

To attain NoCO2 certification the embodied emissions in expense items (that is cost of sales, expenses and assets) must be accounted for and offset. Embodied emissions are premised on the basis that the end user is responsible for the impacts incurred in the life cycle of the products that they purchase (11). However, for some uses of products, services and trade between businesses, there is an issue of a shared responsibility for the emissions. As such, the Carbon Reduction Institute defines different purchase types:

- **Wholly consumed (Scope 3 incl.):** Where a product or service's life has been fully developed and/or purchased for the sole purpose of consumption by the end consumer. For these purchases, the responsibility of the complete life cycle emissions associated with the delivery of that good or service is ascribed to the purchaser and thus emissions up to and including the scope 3 boundary are attributed to the expense.

- **Discretely consumed (Scope 2 incl.)**: Where a good or service has been provided by another business for discrete use by the organisation, and the use of that service incurs a direct emissions impact (from fuel use, electricity use or waste production). For these purchases, the responsibility of the purchaser is only for those emissions that result as a direct result of use of the good or service and thus emissions up to and including the scope 2 boundary are attributed to the expense.

Examples of either purchase types are shown in the following table:

Table 24: Examples of Different Embodied Energy Emission Categories

| Wholly Consumed (Scope 3) | Discretely Consumed (Scope 2) | Hired (Scope 2) |
|---|---|---|
| Food | Consultancy | Scaffold |
| Furniture | Repairs/Labour | Marque |
| Stationary | Fee for service | Cutlery |
| Fuel | Accommodation | Leased Car |
| Appliances | Freight | Hired Equipment |

The categorization of expense items under these two purchase types is evident in the comprehensive calculation tables instanced in. Such tables contain the calculations performed by CRI to determine the embodied emissions attributed to each expense and asset item.

The full calculations of emissions from cost of sales, expenses and assets for Breathe Architecture are shown in Table 26 and Table 25 overleaf. Input-Output tables from this report presents GHG intensities per dollar spent in over 300 different industry sectors of the Australian economy. These emission intensity factors were developed for CRI's use by Eora (12) through the use of multi-regional input-output databases (MRIO) (13).

In addition, the use of Eora's MRIO database allows expenses to be categorised by their price layer, split between a basic and a full price layer. Where appropriate, this allows the exclusion of taxes, subsidies, trade, and transport price layers from the resultant emissions intensity factor per sector.

Input-output data from these tables is configured from 2014 census data, and is presented in kgCO2-e per dollar spent in each relevant sector. As the dataset was created with 2014 data, the emissions intensity per dollar of GDP has dropped due to inflationary forces. To improve the fairness and accuracy of its calculations, CRI has adjusted the resultant MRIO emission factors by consumer price index rises as provided by the Reserve Bank of Australia (17).

Table 25: Embodied Emissions from Expenses

| Item | Value ($) | kg CO2e/$ | tCO2e/year | Category | Price Layer | Scope Boundary (inclusive) |
|---|---|---|---|---|---|---|
| General Expenses | | | | | | |
| Accountancy Fees | $30,203.19 | 0.0071 | 0.22 | Accounting services | Full | 2 |
| Admin Wages | $169,777.31 | | | N/A | | |
| Advertising & Promotions | $14,940.94 | 0.0078 | 0.12 | Advertising services | Full | 2 |
| Bank Fees | $740.17 | 0.0031 | 0.00 | Banking | Full | 2 |
| Body Corporate Fees | $6,721.24 | 0.0048 | 0.03 | Property services | Full | 2 |
| Catering | $262.73 | 0.4289 | 0.11 | Food products | Full | 3 |
| Cleaning | $20,117.02 | 0.1033 | 2.08 | Cleaning | Full | 3 |
| Client Gifts | $2,708.31 | 0.1630 | 0.44 | Hotels, clubs, restaurants and cafes | Full | 3 |
| Computer Expenses | $5,530.12 | 0.0069 | 0.04 | Computer and technical services | Full | 2 |
| Council Rates | $3,505.13 | 0.0057 | 0.02 | Local government | Full | 2 |
| Depreciation - Motor Vehicles | $2,076.60 | | | Accounted For | | |
| Depreciation - Small Business Pool | $7.42 | | | Accounted For | | |
| Donations | $5,205.97 | | | N/A | | |
| Electricity | $4,491.71 | | | Accounted For | | |
| Entertainment | $6,395.80 | 0.1630 | 1.04 | Hotels, clubs, restaurants and cafes | Full | 3 |
| Filing Fees | $1,272.00 | 0.0057 | 0.01 | State government | Full | 2 |
| Finance Consultant | $128,465.00 | 0.0084 | 1.08 | Technical services | Full | 2 |
| Fines & Penalties | $143.00 | | | N/A | | |
| Foreign Currency Gains and Losses | -$395.28 | | | N/A | | |
| Hire of plant and equipment | $3,576.00 | 0.0964 | 0.34 | Plant leasing, hiring and renting services | Full | 3 |
| HR Consultants | $2,425.00 | 0.0084 | 0.02 | Technical services | Full | 2 |
| Insurance | $48,614.09 | 0.0071 | 0.35 | Insurance | Full | 2 |
| Interest Paid | $126.81 | | | N/A | | |
| IT Subscriptions | $64,951.35 | 0.0069 | 0.45 | Computer and technical services | Full | 2 |
| Legal/Professional Fees | $4,311.94 | 0.0064 | 0.03 | Legal services | Full | 2 |
| Marketing General | $10,237.11 | 0.0063 | 0.06 | Market research and other business management services | Basic | 2 |
| Marketing Wages | $45,327.80 | | | N/A | | |
| Motor Vehicle Expenses - Rego & Insurance | $930.69 | 0.0071 | 0.01 | Insurance | Full | 2 |
| Motor Vehicle Expenses - Repairs and Main | $4,241.48 | 0.3027 | 1.28 | Motor vehicle repairing | Full | 3 |

| Item | Value ($) | kg CO2e/$ | tCO2e/year | Category | Price Layer | Scope Boundary (inclusive) |
|---|---|---|---|---|---|---|
| Other Cost of Sales (Disbursement) | $1,001.12 | | | N/A | | |
| Parking | $57.24 | 0.0072 | 0.00 | Parking services | Full | 2 |
| Payroll Tax | $6,385.81 | | | N/A | | |
| Photography | $985.46 | 0.0084 | 0.01 | Technical services | Full | 2 |
| Postage | $102.27 | 0.0735 | 0.01 | Postal services | Full | 3 |
| Printing & Stationery | $1,565.79 | 0.1311 | 0.21 | Printing and stationery | Full | 3 |
| Professional Services- Contractors | $306,130.00 | 0.0115 | 3.52 | Architectural services | Full | 2 |
| Recruitment | $650.00 | 0.0039 | 0.00 | Employment placement | Full | 2 |
| Registration/ Membership Fees | $10,823.20 | 0.0087 | 0.09 | Business services | Full | 2 |
| Rent | $103,881.69 | | | N/A | | |
| Security Costs | $586.64 | 0.0024 | 0.00 | Security and investigation | Full | 2 |
| Staff Amenities | $19,148.97 | 0.4289 | 8.21 | Food products | Full | 3 |
| Staff Training | $7,099.69 | 0.0030 | 0.02 | Education | Full | 2 |
| Stripe Fees | $88.85 | 0.0031 | 0.00 | Banking | Full | 2 |
| Subcontractors | $37,627.82 | 0.0084 | 0.32 | Technical services | Full | 2 |
| Superannuation Contributions | $204,292.47 | | | N/A | | |
| System/IT Consultants | $40,110.00 | 0.0069 | 0.28 | Computer and technical services | Full | 2 |
| Telephone & Internet | $5,742.57 | 0.0075 | 0.04 | Domestic telecommunication services | Full | 2 |
| Wages | $1,974,403.42 | | | N/A | | |
| Water | $4,151.26 | 0.0041 | 0.02 | Water supply; sewerage and drainage services | Full | 2 |
| Website Maintenance | $7,378.61 | 0.0069 | 0.05 | Computer and technical services | Full | 2 |
| Subtotal (General Expenses): | $ 3,319,123.53 | | 20.51 | | | |

| Assets <$20,000 | | | | | | |
|---|---|---|---|---|---|---|
| Electrical equipment | $1,505.45 | 0.3399 | 0.51 | Electrical equipment | Full | 3 |
| Electronics | $58,953.52 | 0.3486 | 20.55 | Electronic equipment | Full | 3 |
| Office furniture | $13,105.41 | 0.3791 | 4.97 | Furniture | Full | 3 |
| Office repair and maintenance | $20,294.31 | 0.3753 | 7.62 | Non-residential building repair and maintenance | Full | 3 |
| Refunds | -$919.00 | | | N/A | | |
| Subtotal (Assets <$20,000): | $ 92,939.69 | | 33.64 | | | |

| Item | Value ($) | kg CO2e/$ | tCO2e/year | Category | Price Layer | Scope Boundary (inclusive) |
|---|---|---|---|---|---|---|
| Building Expenses | | | | | | |
| Software services | $594.13 | 0.0069 | 0.00 | Computer and technical services | Full | 2 |
| Subtotal (Building Expenses): | $ 594.13 | | 0.00 | | | |
| Office Expenses | | | | | | |
| Ceramic decorations | $133.64 | 0.3300 | 0.04 | Ceramic products | Full | 3 |
| Electronics | $2,373.39 | 0.3486 | 0.83 | Electronic equipment | Full | 3 |
| Flower decorations | $611.36 | 0.1102 | 0.07 | Flowers | Full | 3 |
| Staff expenses | $451.29 | 0.4289 | 0.19 | Food products | Full | 3 |
| Furniture | $3,242.97 | 0.3791 | 1.23 | Furniture | Full | 3 |
| Uber | $32.62 | 0.1074 | 0.00 | Taxi VIC | Full | 2 |
| RAT Testing Kit | $111.47 | 0.5475 | 0.06 | Pesticides, insecticides and medicinal goods | Full | 3 |
| Toilet paper | $198.19 | 0.2301 | 0.05 | Paper products | Full | 3 |
| Refund and deductions | -$12,223.61 | | | N/A | | |
| Software services | $207.25 | 0.0069 | 0.00 | Computer and technical services | Full | 2 |
| Office supplies and stationary | $3,489.57 | 0.1311 | 0.46 | Printing and stationery | Full | 3 |
| Technical services | $1,430.02 | 0.0084 | 0.01 | Technical services | Full | 2 |
| Subtotal (Office Expenses): | $ 58.16 | | 2.94 | | | |
| Repairs and Maintenance | | | | | | |
| Electrical equipment | $990.00 | 0.3486 | 0.35 | Electronic equipment | Full | 3 |
| Building electronic equipment | $918.39 | 0.3486 | 0.32 | Electronic equipment | Full | 3 |
| Building repair and maintenance | $1,725.00 | 0.3753 | 0.65 | Non-residential building repair and maintenance | Full | 3 |
| Appliances repair | $199.00 | 0.1806 | 0.04 | Household electrical appliances repair and service | Full | 3 |
| Subtotal (Repairs and Maintenance): | $ 3,832.39 | | 1.35 | | | |
| Travel - National | | | | | | |
| Accommodation | $1,701.78 | 0.1323 | 0.23 | Accommodation | Full | 3 |
| Domestic flights | $13,601.14 | | | Accounted For | | |
| Health insurance | $56.36 | 0.0040 | 0.00 | Health insurance | Full | 2 |
| Hotel and meals | $2,188.43 | 0.1630 | 0.36 | Hotels, clubs, restaurants and cafes | Full | 3 |

| Item | Value ($) | kg CO2e/$ | tCO2e/year | Category | Price Layer | Scope Boundary (inclusive) |
|---|---|---|---|---|---|---|
| Parking | $13.23 | 0.0072 | 0.00 | Parking services | Full | 2 |
| Public transport | $994.99 | 0.1059 | 0.11 | Railway passenger transport services | Full | 2 |
| Refund | -$2,403.30 | | | N/A | | |
| Taxi and car rental | $9,296.98 | 0.1074 | 1.00 | Taxi VIC | Full | 2 |
| Road toll | $1,221.77 | 0.0057 | 0.01 | State government | Full | 2 |
| Subtotal (Travel - National): | $ 26,671.38 | | 1.69 | | | |

Table 26: Embodied Emissions from Assets

| Item | Value Depreciated ($) | kg CO2e/$ | tCO2e/year | Category | Price Layer | Scope Boundary (inclusive) |
|---|---|---|---|---|---|---|
| Motor Vehicles | | | | | | |
| Tesla Model 3 Rear Wheel Drive 2022 Black NEW | $2,076.60 | 0.4186 | 0.87 | Finished cars | Full | 3 |
| VW Polo | $0.00 | 0.4186 | 0.00 | Finished cars | Full | 3 |
| Subtotal (Motor Vehicles): | $ 2,076.60 | | 0.87 | | | |
| Plant & Equipment at Cost | | | | | | |
| Tim Christian - Repairs and alterations to office space - Labour and Materials/Other trades | $7.42 | 0.3753 | 0.00 | Non-residential building repair and maintenance | Full | 3 |
| Subtotal (Plant & Equipment at Cost): | $ 7.42 | | 0.00 | | | |

# APPENDIX F. STAFF GROUND TRAVEL

Table 27: Staff Travel Emissions[3]

| # Days Worked /wk | Last Name | First Name | Weekly km by Foot /Bicycle | Public Transport km /wk | Private Vehicle km /wk | Vehicle Type | Fuel Type | Carpools? | km /Yr | Fuel Economy (L /km) | Litres /Yr | Scope 1 EF (kgCO2e /L) | Scope 3 EF (kgCO2e /L) | kgCO2e/km (EV only) | Staff Travel Emissions (tCO2e /Yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | Sewall | Madeline | 0.1 | 0 | 0 | Not Applicable | Not Applicable | No | 0.00 | 0.00 | 0.00 | - | - | N/A | 0.00 |
| 5 | Agudelo | Renee | 4 | 8 | 4 | Small Car (1.4ltr, 4cyl) | 10% Ethanol | No | 192.00 | 0.09 | 16.68 | 2.017 | 0.577 | N/A | 0.04 |
| 4 | Herring | Bonnie | 0.1 | 0 | 0 | Not Applicable | Not Applicable | No | 0.00 | 0.00 | 0.00 | - | - | N/A | 0.00 |
| 5 | Smith | Amy | 30 | 0 | 0 | Small Car (1.4ltr, 4cyl) | Petrol | No | 0.00 | 0.08 | 0.00 | 2.313 | 0.588 | N/A | 0.00 |
| 5 | Freeman | Faith | 40 | 10 | 0 | Not Applicable | Not Applicable | No | 0.00 | 0.00 | 0.00 | - | - | N/A | 0.00 |
| 5 | Carmichael | Camilla | 0 | 0 | 0 | Not Applicable | Not Applicable | No | 0.00 | 0.00 | 0.00 | - | - | N/A | 0.00 |
| 5 | McDowell | Simon | 28 | 7 | 0 | Not Applicable | Not Applicable | No | 0.00 | 0.00 | 0.00 | - | - | N/A | 0.00 |
| 4 | Robinson | Bettina | 0 | 15 | 5 | Medium Car (2.0ltr, 4cyl) | Diesel | No | 240.00 | 0.09 | 21.36 | 2.718 | 0.668 | N/A | 0.07 |
| 5 | Galbraith | Ali | 20 | 20 | 0 | Not Applicable | Not Applicable | No | 0.00 | 0.00 | 0.00 | - | - | N/A | 0.00 |
| 5 | Nguyen | Jacqueline | 0.1 | 0 | 0 | Not Applicable | Not Applicable | No | 0.00 | 0.00 | 0.00 | - | - | N/A | 0.00 |
| | | | | | | | | | | | | | | Total Emissions (tCO2e): | 0.12 |
| | | | | | | | | | | | | | | Number of Surveyed Staff (FTE): | 9.60 |
| | | | | | | | | | | | | | | Number of Full-Time-Equivalent Staff: | 26.95 |
| | | | | | | | | | | | | | | Total Emissions (tCO2e) (Adjusted for FTE Staff and COVID Scalar): | 0.16 |

[3] Annual km are calculated based on the assumption of 48 working weeks per year.

Table 28: Fuel Efficiency for Different Vehicle Types (10)

| Vehicle Type | Fuel Consumption (Litres /km) |
|---|---|
| 10% Ethanol Small Car (1.4ltr, 4cyl) | 0.0869 |
| Petrol Small Car (1.4ltr, 4cyl) | 0.076 |
| Diesel Medium Car (2.0ltr, 4cyl) | 0.089 |

Table 29: Emissions Factors of Fuels (7)

| Fuel Type | Scope 1 EF (kgCO2e/L) | Scope 3 EF (kgCO2e/L) | Reference |
|---|---|---|---|
| 10% Ethanol | 2.01694 | 0.57742 | National Greenhouse Accounts (NGA) Factors by the Australian Government: Department of Environment and Energy. November 2022, Table 7 |
| Petrol | 2.31260 | 0.58824 | |
| Diesel | 2.71783 | 0.66778 | |

# APPENDIX G. STAFF AIR TRAVEL

Table 30: Kilograms of CO2e per passenger.km (10) (For Different Types of Flights)

| Description | Distance (km) | Emission Factors (kg-CO2e/passenger.km) |
|---|---|---|
| Domestic Flights | 0-463 | 0.20515 |
| Short Haul Flights | 464-1108 | 0.11600 |
| Long Haul Flights | >1109 | 0.13535 |

# APPENDIX H. STAFF TELECOMMUTING

Table 31: Power consumption of working from home equipment

| Appliance | Power (W) | Source |
|---|---|---|
| Laptop | 60 | https://energyusecalculator.com/electricity_laptop.htm |
| Monitor | 30 | https://energyusecalculator.com/electricity_lcdleddisplay.htm |
| Lighting | 16 | https://energyusecalculator.com/electricity_cfllightbulb.htm |
| Total | 106 | |