Carbon footprint report

Raven Housing Trust 2023/24
September 2024

Raven Housing Trust

Contents

Introduction

Introduction

Bioregional is working with Raven Housing Trust to calculate its carbon footprint. The carbon footprint will help Raven quantify the greenhouse gas emissions associated with its operations. By measuring its carbon footprint, Raven will gain valuable insights into its environmental impact, helping to identify areas for improvement and for implementing more sustainable practices. This information empowers Raven to make informed decisions, reduce its carbon emissions, and demonstrate its commitment to environmental responsibility and sustainability.

What does this mean for Raven Housing Trust?

Raven Housing Trust already has the following targets related to its net-zero journey:

- Standard Assessment Procedure (SAP) C by 2030
- Net zero by 2050

Conducting the carbon footprint analysis helps Raven by revealing key emission sources, enabling targeted adjustments that directly steer efforts toward meeting carbon reduction targets.

This data-driven approach ensures a focused and efficient pathway to achieving Raven's specific goals as listed above.

Introduction

What is a carbon footprint?

Every kilogram of greenhouse gas released into the atmosphere has an impact on our planet and is often associated with a business cost. This is commonly related to spending on energy, building operations and transport, but also to less tangible elements further up the supply chain such as product sourcing and the production practices of suppliers.

A carbon footprint is a measure of the total greenhouse gases (GHG) produced directly and indirectly by an organisation and its operations. A full carbon footprint is made up of three levels of emissions sources called the carbon 'scopes'.

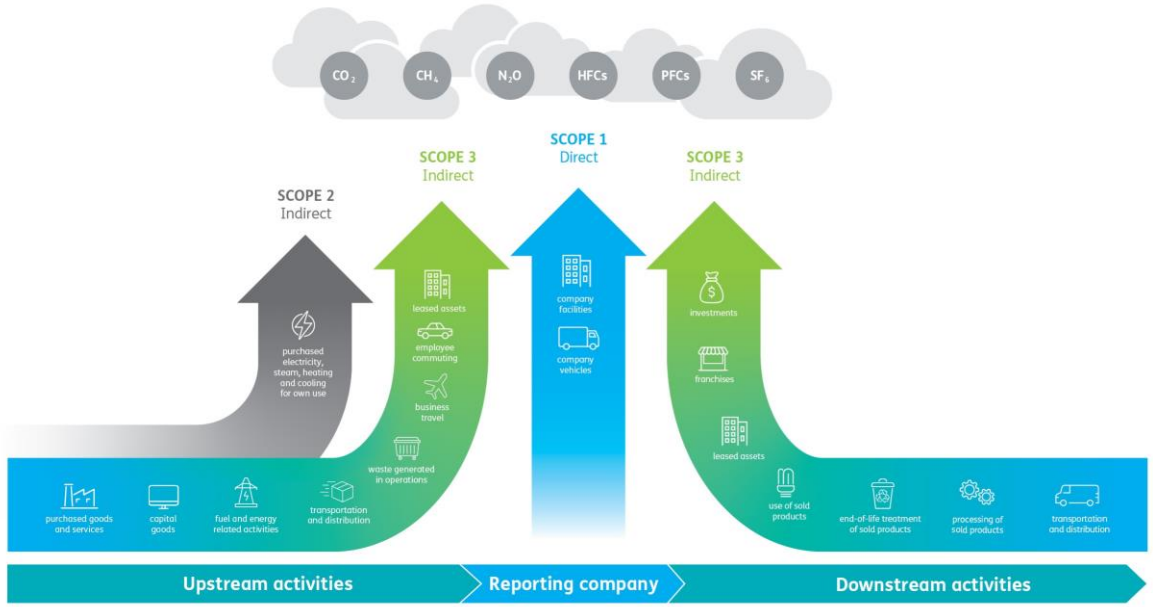


Figure 1. Levels of emission sources: scope 1, 2 and 3, and associated greenhouse gases

[1]Carbon Trust

Scope 1 - direct emissions from gas and other fuels

This includes emissions from activities owned or controlled by your organisation that release emissions into the atmosphere. Examples of scope 1 emissions include those from combustion in gas boilers and vehicle emissions from company-owned cars.

Scope 2 - indirect emissions from electricity

This includes emissions released into the atmosphere associated with your organisation's consumption of purchased electricity, heat, steam, and cooling. These are indirect emissions that are a consequence of your organisation's activities under your operational control, but which occur at sources you do not own or control. The most common example of scope 2 emissions is the electricity purchased from a supplier.

Dual reporting

The Greenhouse Gas Protocol Corporate Standard recommends dual reporting of electricity emissions. Therefore, we have calculated both the location-based and market-based emissions totals:

- Market-based approach – reflects the emissions from the electricity sources or products that the consumer has specifically chosen.
- Location-based approach – reflects the emissions from electricity coming from the national grid energy supply.

Scope 3 - other indirect emissions

While many companies report on emissions from their direct operations, emissions from a company's value chain – its scope 3 emissions – often have the biggest carbon impact. In many cases, scope 3 emissions can account for around 90% of an organisation's total carbon footprint[1].

Scope 3 emissions can be broken down into 15 categories of business activity, ranging from purchased goods and services to generated waste and employee commuting. More specific information is available in the Methodology section of this report.

Methodology

Version 1

Greenhouse gas footprint calculated by Katri Hastings and Lidya Kutlu

Checked by Will Price

Methodology

While the term 'footprint' can be used in various ways, Bioregional defines it as the sum of the direct and indirect GHG emissions that arise through Raven's activities, buildings and value chain.

The calculations include Raven's scope 1, 2 and 3 GHG emissions The carbon footprint presented in this report is for Raven's 2023/24 financial year.

This carbon footprint is calculated in the units of carbon dioxide equivalent, or CO_2e. This universal measurement is used to compare the emissions from different greenhouse gases based on their Global Warming Potential (a measure of how much heat the emissions of 1 tonne of greenhouse gas will absorb over a period of time compared to carbon dioxide). There are seven main greenhouse gases that are considered: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3).

The carbon emissions from company activities are calculated by multiplying activity data by the relevant emission conversion factor. This provides an estimate of the greenhouse gas emissions for different types of activity.

Most of the emissions factors used are sourced through the platform 'Compare your footprint'. Compare Your Footprint (CYF) adheres to the green gas accounting standard Green Gas Protocol (GHGP) Corporate Accounting and Reporting Standard developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), which is the global standard for calculating corporate GHG emissions. For estimating supply chain emissions from purchased goods and services, and capital expenditures conversion factors using environmentally extended multi-regional input-output model (MRIO) developed by Small World Consulting (SWC) are used. MRIO combines economic information about the trade between industrial sectors with environmental information about the emissions arising directly from those sectors.

Emissions associated with working from home have been estimated using the Bioregional's Homeworking emission method based on CYF's Homeworking methodology.

Data collection

Data collection was carried out through close coordination between Raven and Bioregional. Data was provided by Anthony Day and Clare Catolico.

The following data was obtained directly from Raven and validated by Bioregional:

- **Data from operations:** Raven House and communal areas
- **Data from procurement and spending:** capital spending, purchases and a variety of professional services and building expenses.

The following data was provided to Bioregional via the Parity Projects Platform:

- **Data from operations: for downstream leased assets (Raven's housing portfolio)**

Parity is a tool that uses all available property information including Energy Performance Certificate (EPC) ratings to estimate the energy use within Raven's housing portfolio (downstream leased assets).

Methodology

Limitations

Regardless of methodology, footprinting has its limitations. Therefore, it can only be used as a best estimate rather than an exact measure, and the figures in this report should be viewed in that context. Bioregional operates on the principle that it is more informative to make best estimates of even the least understood components of the footprint, and to detail the assumptions made, rather than omit this data from the study.

Uncertainties over conversion factors

The areas in which the relationship between consumption and carbon is best understood are gas and electricity consumption. The next most accurate group of conversion factors are those for travel and transport.

There is greater uncertainty over supply chain emissions resulting from the purchase of goods and services. Best estimates have been made for the purposes of this report and should be viewed as a broad guide.

Uncertainties over data

Financial expenditure data was well understood within Raven and is thought to have a high degree of accuracy. Due to the unavailability of fuel activity data for company vehicles, the available spend data has been estimated based on the spend per litre, as determined by relevant research.

There may be a level of uncertainty with the employee commuting data. An internal survey captured the travel mode and duration by employees travelling to Raven House. 35% of workers responded to the survey and the data was extrapolated to ensure that the full emissions were accounted for. The respondent rate has increased by 3% compared to the last year's rate. The data is limited by the number of respondents.

There is also uncertainty in the data gathered for the estimation of the downstream leased assets. Parity uses the best public data available to model regulated energy use of the housing stock managed by Raven. This presents a limitation in the data as it is calculated on the bases of assumptions, ideally metered data would be used.

Carbon footprint results

Carbon footprint results

Raven Housing Trust's 2023/24 footprint stands at:

25,759 tonnes of carbon dioxide equivalent

This is the equivalent carbon footprint of around 3,180 UK households (covering heating, electricity, waste, car and aviation travel).[2]

The Footprint broken down by Greenhouse Gas Protocol Scopes

Scope 1 and 2 emissions cover emissions arising from property energy consumption from the office and communal areas. Further detail is provided under the 'Top carbon impacts' section of this report. Raven's scope 3 emissions account for 98.3% of emissions:, showing 5.6% reduction compared to last year's footprint (*see Appendix B for YOY changes*). This figure includes energy used in the housing stock that is leased by the Raven Housing Trust.

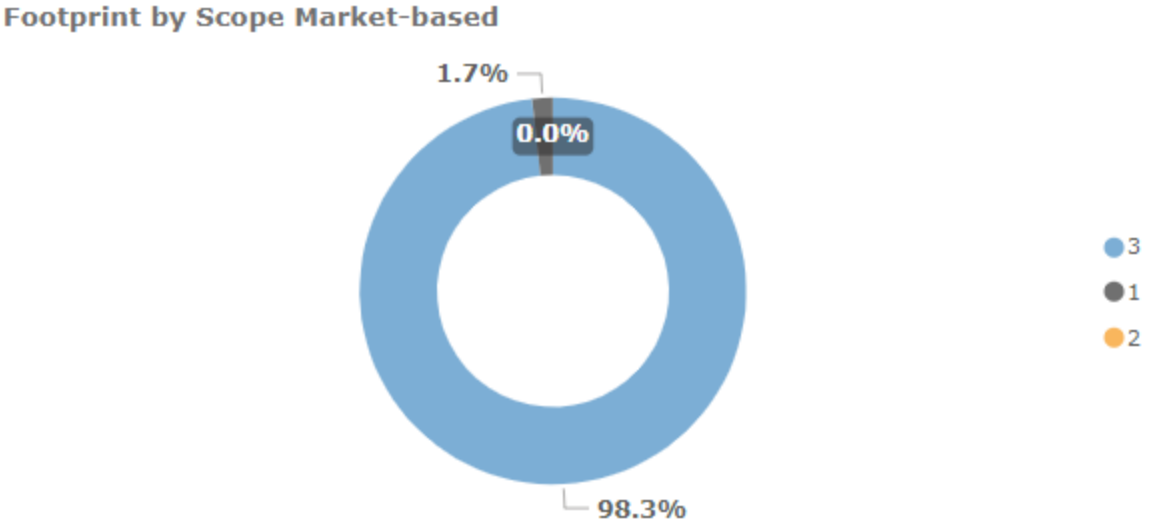


Figure 2. Total GHG footprint 2023/24

Scope	Market-based tCO_2e	Location-based tCO_2e
Scope 1	438.4	438.4
Scope 2	5.4	50.2
Scope 3	25,315	25,327.1
Avoided emissions*	NA	171

Table 1. Separates Raven's footprint by scope and by market-based and location-based reporting. Unless stated otherwise, Bioregional reports on a market-based approach.

[2] Committee on Climate Change

*Avoided emissions are emissions reductions that occur outside of a company's value chain, in Raven Housing Trusts case this refers to the estimated amount of electricity from their PV generation that is returned to the grid and not used by tenants.

Carbon footprint results

A comprehensive analysis of the Raven Housing Trust's carbon footprint categories, particularly those related to scope 3 emissions, is essential for the development of robust effective decarbonisation strategies.

Figure 3 shows the breakdown of Raven's emissions by GHG protocol categories. Anything not listed as scope 1 or 2 is a part of scope 3. Analysis of scope 3 emissions reveals that "Downstream Leased Assets" and "Purchased Goods and Services" are the major drivers of Raven Housing Trust's carbon footprint as they were in 2022/23. Unlike in 2022/23, Raven's Capital Goods emissions has a greater impact than Scope 1 (Gas and fuel) emissions this year.

To conduct a more in-depth analysis of Raven's carbon footprint, it is essential to focus on the following top four key areas of emissions:

- **Estate operational emissions: 45.2% of total footprint**
- **Spend on construction, maintenance and repair: 33.5% of total footprint**
- **Spend on Capital goods: 19.2% of total footprint**
- **Spend on Professional Services: 7.7% of total footprint**

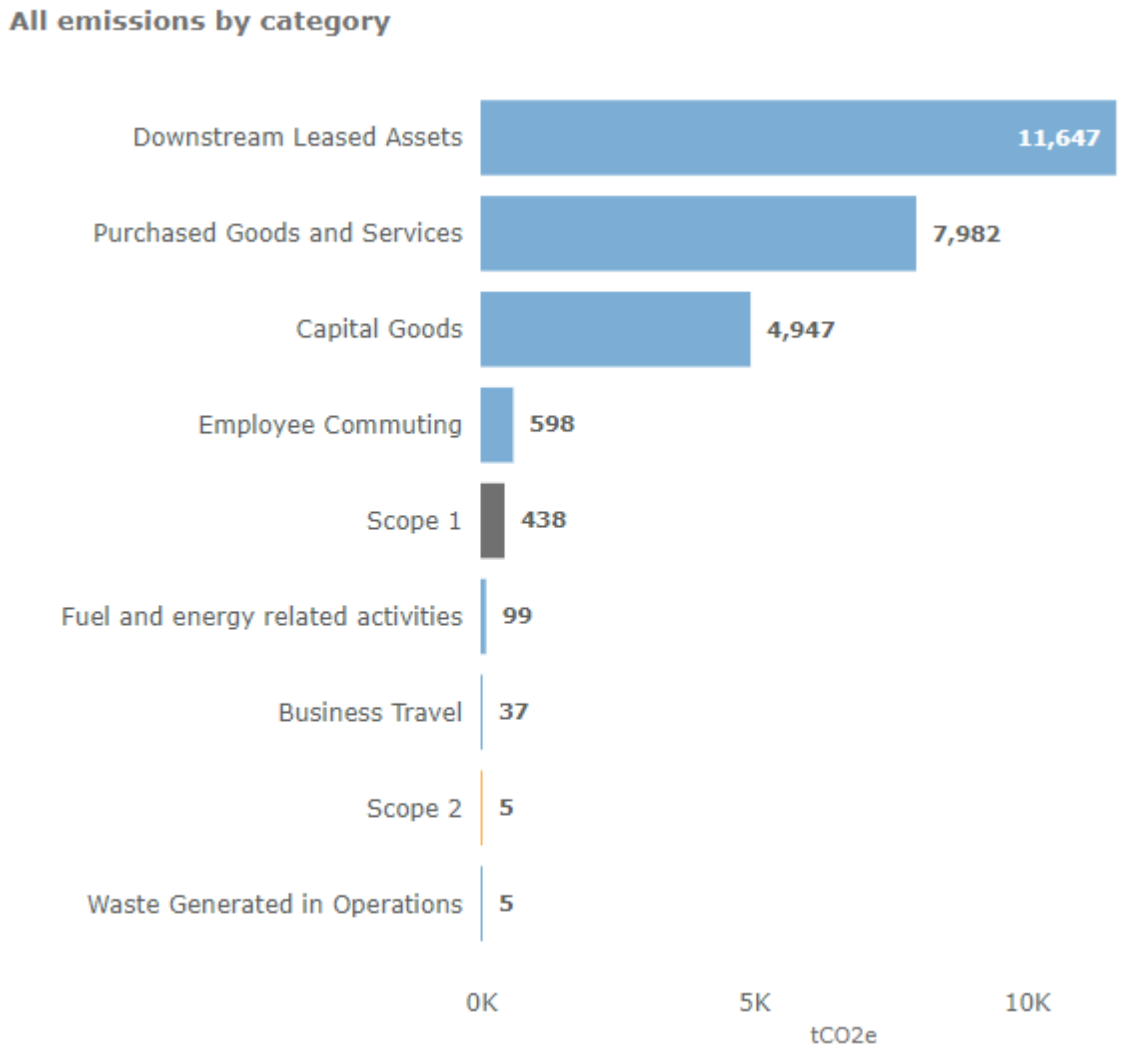


Figure 3. Total carbon footprint by GHG Protocol Categories 2023/24 – detail

Carbon footprint results

Estate operational emissions: 11,647 tCO_2e 45.2% of total market-based footprint

Figure 4, shows the breakdown of emissions from Raven's housing estate. The chart shows that gas is the dominant source of carbon emissions within the estate.

Gas is typically more carbon-intensive than electricity per kWh. Furthermore, the methodology only accounts for regulated energy - energy associated with heating, hot water and lighting. Therefore, not all electricity consumed in the properties is included - excluded electricity includes device-use, appliances and cooking.

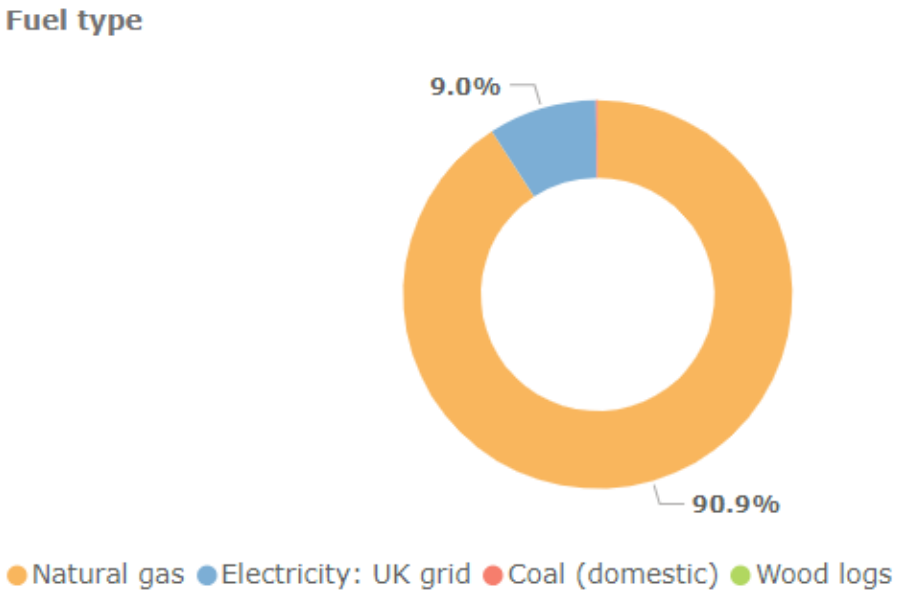


Figure 4. Total indirect emissions footprint detailed breakdown 2023/24

Carbon footprint results

Procurement and capital expenditure emissions: 12,928 tCO_2e, 50.2% of total footprint

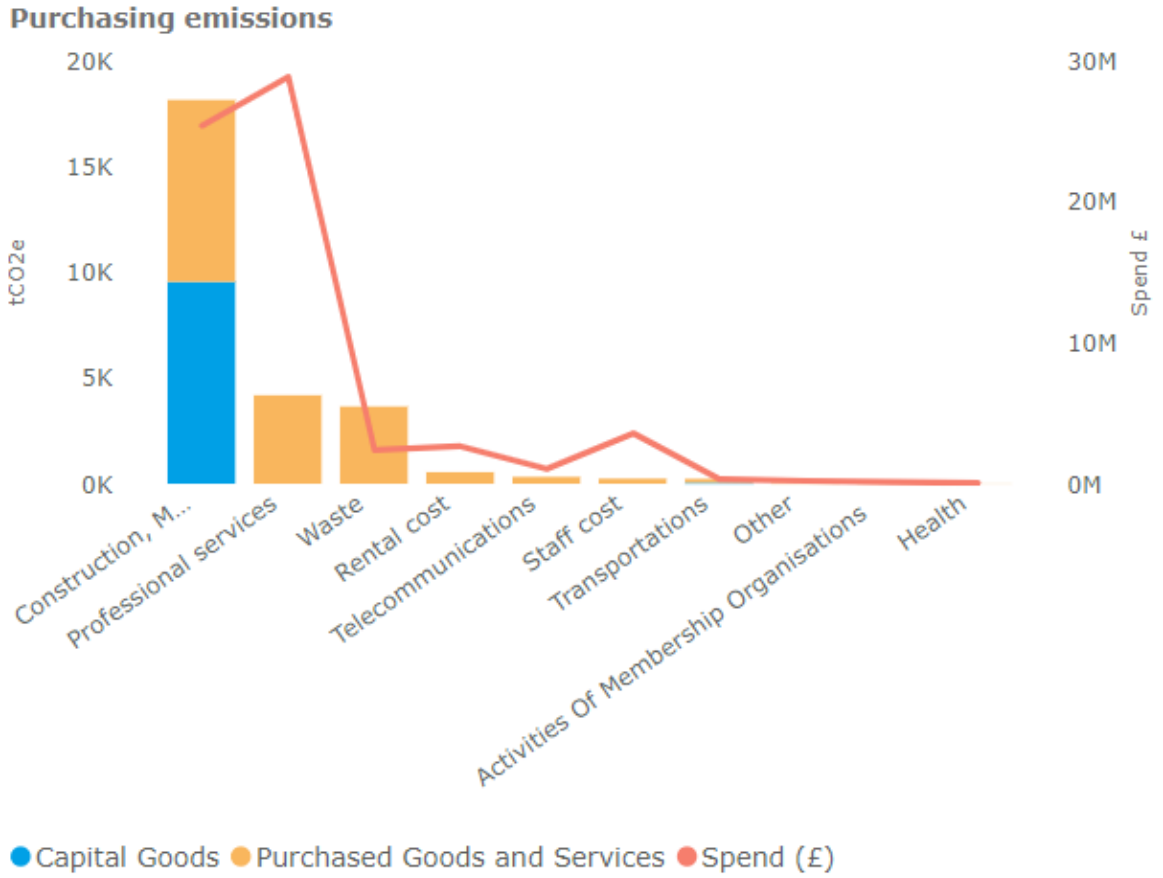


Figure 5. Total breakdown of tCO_2e from expenditure associated with capital goods and procurement 2023/24

Figure 5 illustrates the carbon emissions resulting from different subcategories within procurement and capital expenditure. Five major sectors are represented:

- **Construction and maintenance**
- **Professional services**
- **Waste**
- **Rental costs**
- **Telecommunications**

Emissions related to Construction and maintenance activities are particularly prominent due to its significant environmental footprint and accounts for 33.5% of total carbon footprint (8,638 tCO2e). For Raven, this encompasses spending on development projects, major capital works, and routine repairs and maintenance. The construction sector is highly dependent on energy-intensive processes, raw material consumption, and transportation, making it a major contributor to emissions.

The Professional Services expenditure category contributes a moderate yet notable amount of emissions (1,986 tCO2e). Within Raven's carbon footprint, this can be attributed to activities such as legal services, accounting, general financial operations (e.g. bank charges) and software services. These emissions primarily stem from energy consumption in data centers, business travel, and other operational functions tied to these services. This is followed by the waste (1,110 tCO2e) where emissions for Raven arrive from disposal activities which often involves the usage of fuel-powered waste collection vehicles and less efficient waste management practices.

Finally, among the primary emission sources is the expenditure related to rental costs. These emissions arise from Raven's leased assets, with costs associated with licensing, services, caretaking, and support activities contributing to the overall carbon footprint.

Bioregional requested Raven's VAT details based on each account code. Therefore, the emissions are calculated excluding VAT to avoid over-estimating the emissions associated with purchasing goods and services and capital expenditure.

Carbon footprint results

Scope 1 emissions: 438.4 tCO_2e, 1.7% of total market-based footprint

Scope 1 Direct operational emissions and energy consumption splits

Scope 1 is the emissions from activities owned or controlled by Raven. This includes gas boilers and vehicles owned by Raven. Figure 6 provides a breakdown by fuel type. Most emissions come from fuel consumption (278.7 tCO2e) which shows an 86.6% reduction compared to last year's figure.

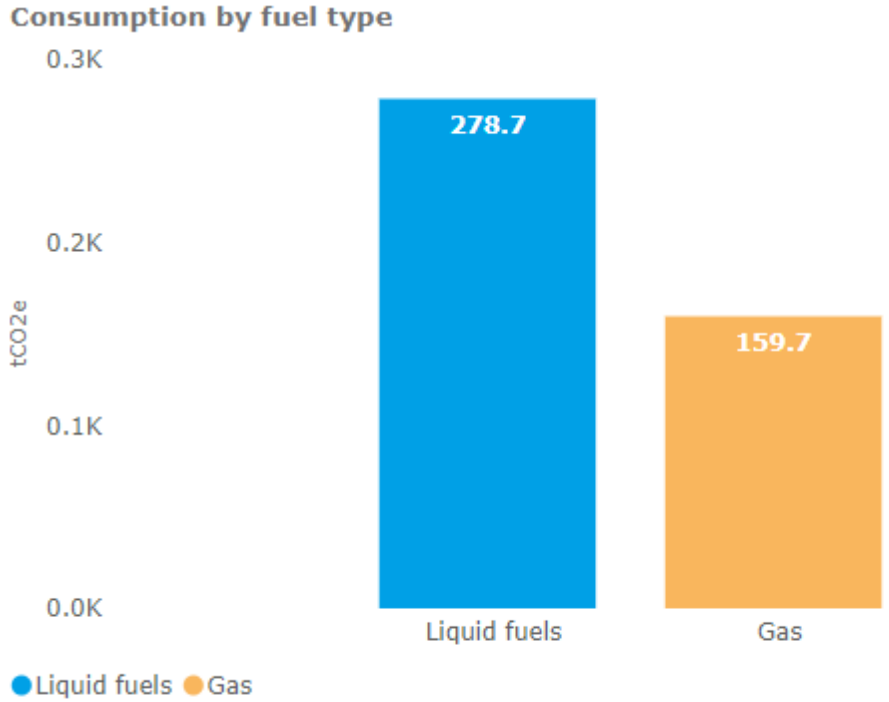


Figure 6. Scope 1 total emissions split by fuel type 2023/24

Carbon footprint results

Scope 2 emissions

The graphs below detail the scope 2 emissions of the Raven Housing Trust. These are the emissions that come from electricity use by Raven's own operations*, not their tenants.

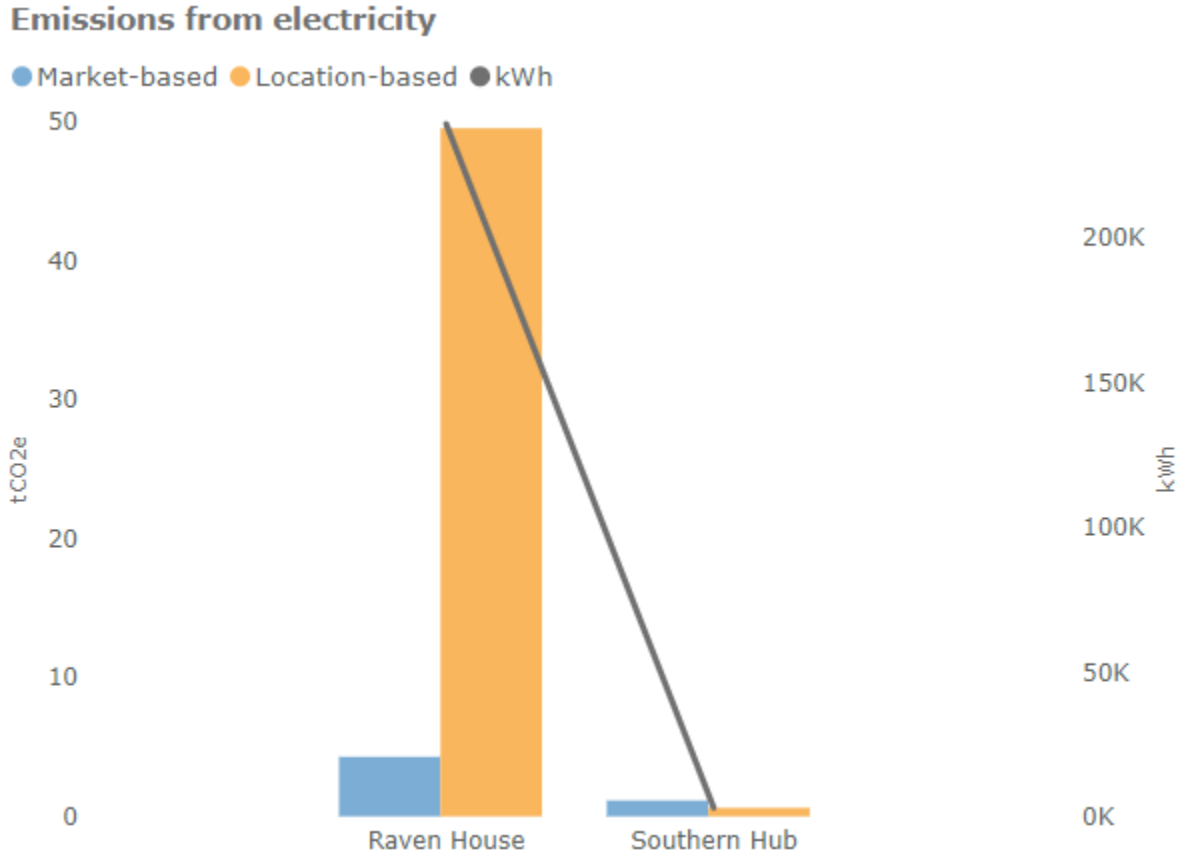


Figure 7. kWh associated with the Raven Housing Trust's scope 2 2023/24

**The electricity data depicted in Figure 7 includes consumption within communal spaces.*

Figure 8 displays the emissions in a location-based (also known as grid-average) and market-based approach which accounts for the source of electricity generation based on the tariff's energy mix. During the data collection process, Raven reported its suppliers as SSE. The figure demonstrates that Raven House is on a renewable energy contract and that most communal areas are also on renewable energy.

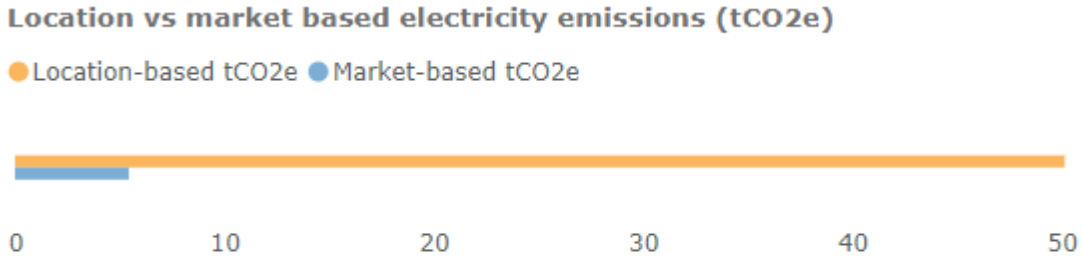


Figure 8. Shows the market and location based emissions (tCO_2e) associated with scope 2 2023/24

Waste emissions

Waste: 6 tCO_2e, 0.02% of the total market-based footprint

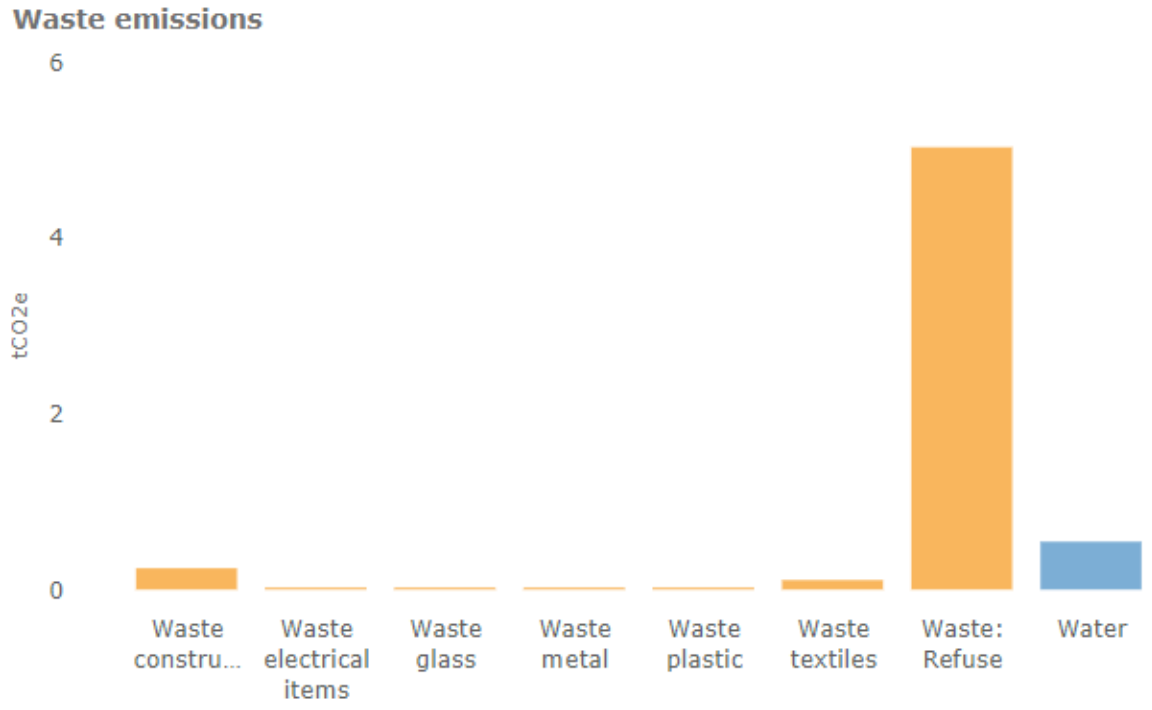


Figure 9. Waste emissions by waste types 2023/24

Refuse accounts for the greatest portion of the waste emissions (5 tCO2e). Whilst this is a very small proportion of the total emissions it is an area that Raven have a reasonable amount of control over.

Transport emissions

Employee commuting: 598.3 tCO_2e, 2.3% of total market-based footprint

The majority of commuting is by car, it was estimated that Raven employees commuted 2,325,947 km in the footprint year. The emissions related to employee commuting only are increased by 100.2% this year compared to Raven's 2022/23 figures because of increased staff mileage observed in Employee commuting survey. Raven's Homeworking emissions accounts for 10.5% of the employee commuting emissions (62.8 tCO_2e). Whilst this is a small proportion of the total emissions it is an area that Raven have a reasonable amount of control over.

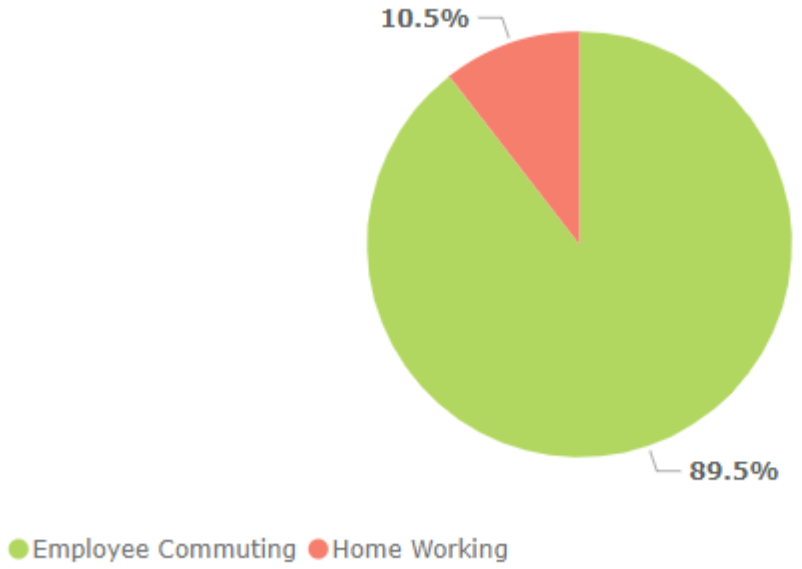


Figure 10. Employee commuting and homeworking emissions 2023/24

Business travel: 37.1 tCO_2e, 0.1% of total market-based footprint

Raven's all business travel emissions are associated with mileage in staff's own vehicles, 176,599 km in the footprint year. These emissions are increased by 29.2% this year compared to Raven's 2022/23 figures.

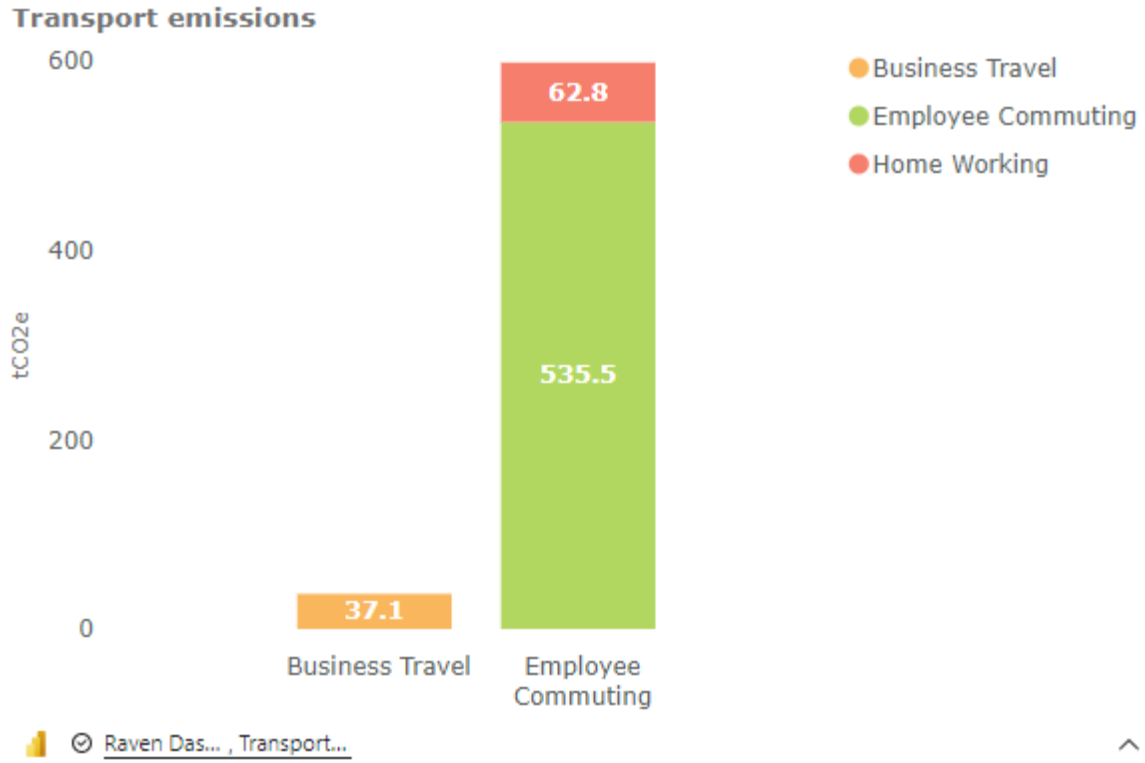


Figure 11. Transport emissions by categories 2023/24

Recommendations and next steps

Recommendations and next steps

Improvements to the footprint data

Estate operational energy consumption data

Parity Projects offers valuable insights and is a suitable method of estimation, however metered data will always be preferable as it can capture accurately the comprehensive picture of carbon emissions generated by both regulated and unregulated electricity and represents actual energy use. The current methodology's exclusion of metered electricity data means that certain aspects of emissions data are excluded. Electric appliances and various equipment contribute significantly to indirect operational emissions that are not currently accounted for. Raven may want to investigate ascertaining metered information for the downstream leased assets to build a better picture of the carbon emissions. To do this, they should focus on data collection and monitoring with facilities managers by using data templates, while tenants should engage in data sharing agreements through green leases. Additionally, training sessions should be made for asset managers to enhance their understanding of data requirements.

Own operations data

It should be noted that there is some uncertainty regarding the accuracy of gas and electricity data, as last year's figures exhibited slight discrepancies. This year's figure could not be obtained through a facility-level breakdown, resulting in some uncertainty in the data as well. To mitigate any potential issues for next year, the expected data should be shared with facility managers and details on the data should be proved by documents.

Spend data

For emissions hotspots such as contractions, maintenance and repair, Raven should identify top suppliers and engage with them to gain supplier specific emissions data.

Company vehicles data

Spend on fuel for company vehicles is shared by Raven and this data is calculated based on fuel prices data on a research. Actual activity data by fuel type and litres would be preferred for next year's calculations.

Reduction recommendations

Focusing efforts on leased assets

Strategic investments in energy-efficient technologies, renewable energy sources, and sustainable operational practices should be explored. Implementing best practices and creating exemplar properties across the portfolio, will lead to substantial reductions in carbon emissions and align Raven's properties with its commitment to environmental sustainability.

Raven should focus on the buildings that have the largest footprint or conduct an analysis of the estate to see where the most cost-effective savings can be made. To see the impact of the full estate, the online dashboard shows which assets have the biggest impact to inform decision making. The high-impact areas within Raven's portfolio, underscore the significance of addressing carbon emissions and serve as a basis for developing targeted sustainability strategies. By focusing on the most carbon-intensive properties and adopting sustainable practices, Raven can achieve tangible reductions in its overall carbon footprint.

Procurement and capital expenditure

Raven can aim to reduce the impact of procurement and capital expenditure through adopting sustainable sourcing practices, and prioritising suppliers with eco-friendly materials and processes. For construction and materials expenses, Raven should prefer low embodied energy materials to reduce emissions. In addition to this a sustainable procurement policy can also support this in embedding processes to prioritise environmental-friendly practices principles e.g. re-use, repair, and recycling in day to day purchasing.

Aiming to reduce Scope 1

Raven's third most carbon-intense aspect of the business is scope 1. This figure shows an increase compared to last year's figure. To reduce scope 1 emissions, Raven can prioritise energy efficiency improvements in operations, transition to renewable energy sources like solar and wind, and optimise the vehicle fleet by incorporating electric or hybrid vehicles and implementing smarter route planning.

Appendices

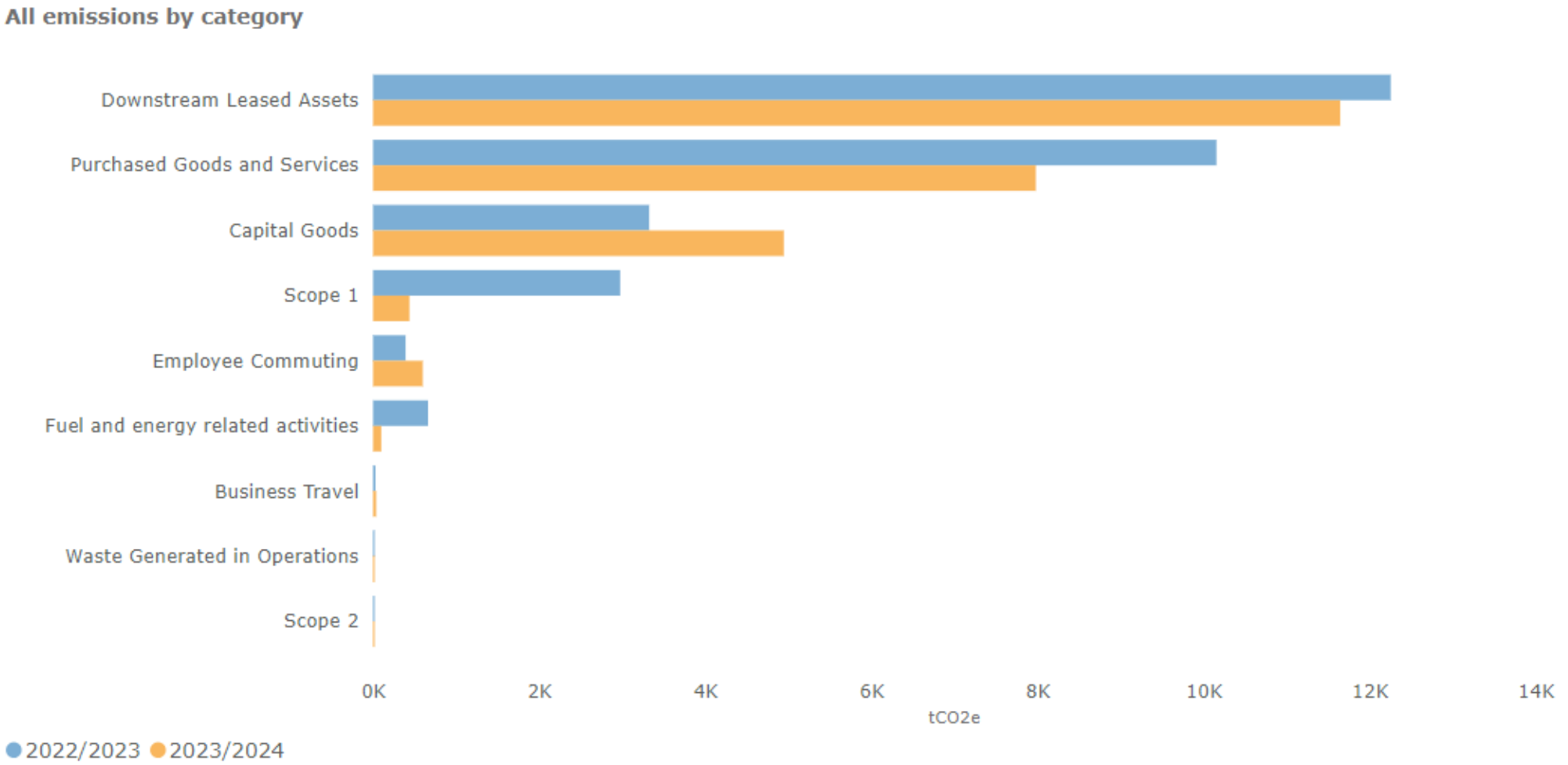
Appendices

Appendix A: detailed table of results in descending emissions impact by GHG Protocol categories

Reporting Year	2022/2023		2023/2024	
Scope	Location-based tCO2e	Market-based tCO2e	Location-based tCO2e	Market-based tCO2e
1	**2,975.80**	**2,975.8**	**438.42**	**438.4**
Scope 1	**2,975.80**	**2,975.8**	**438.42**	**438.4**
Gas	885.50	885.5	159.75	159.7
Liquid fuels	2,079.66	2,079.7	278.68	278.7
Refrigerant	10.64	10.6		
2	**295.48**	**1.4**	**50.16**	**5.4**
Scope 2	**295.48**	**1.4**	**50.16**	**5.4**
3	**26,014.41**	**26,824.1**	**25,327.12**	**25,315.2**
Business Travel	**29.18**	**29.2**	**37.14**	**37.1**
Capital Goods	**3,325.15**	**3,325.2**	**4,946.80**	**4,946.8**
Downstream Leased Assets	**11,352.04**	**12,255.4**	**11,647.32**	**11,647.3**
Employee Commuting	**381.51**	**391.7**	**598.32**	**598.3**
Fuel and energy related activities	**766.06**	**662.1**	**110.58**	**98.7**
Purchased Goods and Services	**10,156.90**	**10,156.9**	**7,981.54**	**7,981.5**
Waste Generated in Operations	**3.58**	**3.6**	**5.41**	**5.4**
Total	**29,285.69**	**29,801.3**	**25,815.70**	**25,759.1**

Appendices

Appendix B: Total carbon footprint by GHG Protocol Categories YOY 2022/23 - 2023/24 – detail



Appendices

Appendix C: Scope of work (also provided as a separate Excel file)

The following table shows the scopes and activity covered in Raven Housing Trust's carbon footprint undertaken by Bioregional, greyed-out rows are out of scope for the footprint.

Reporting Scope	Category	Impact	Description	Data required	Data gaps
Scope 1	**Direct emissions**	**Fuel use (buildings)**	Consumption of gas and other fuels in buildings owned or operated by Raven Housing Trust e.g. office (DO NOT include assets that are owned but leased as this will be included in scope 3, category 13. See below for more information)	Activity data: kWh, litres of fuel etc.	The figure could not be obtained through a facility-level breakdown, resulting in some uncertainty in the data, it covers total consumption by Raven House and communal areas.
		Fuel use (company vehicles)	Consumption of fuel by Raven Housing Trust-owned/long lease vehicles	Activity data:litres of fuel e.g. petrol, diesel	With the provision of the spend data, the activity data has been calculated by applying the 2023 fuel prices to the provided figures.
		Fugitive emissions	Refrigerants for use in air conditioning and fridges in buildings owned or operated by Raven	Refrigerant top-ups within the year (litres) by gas type	This data claimed as "0"by Raven.
Scope 2	**Indirect emissions**	**Electricity use (buildings)**	Consumption of electricity in buildings operated by Raven Housing Trust	Activity data: kWh. Details on purchased renewables and/or electricity suppliers and tariffs in use	The figure could not be obtained through a facility-level breakdown, resulting in some uncertainty in the data, it covers total consumption by Raven House and communal areas. Consequently, provided supplier mix applied for both.

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Reporting Scope	Category	Impact	Description	Data required	Data gaps
Scope 2	**Indirect emissions**	**Electricity use (vehicles)**	Consumption of electricity by Raven Housing Trust-owned vehicles	Activity data: kWh. Details on purchased renewables and/or electricity suppliers and tariffs	
Scope 3	**1. Purchased goods and services**	**Procurement**	This includes all purchased products and services by Raven Housing Trust. It will include all procurement (e.g. office supplies) and services (e.g. cleaning, IT services).	Purchase ledger for the agreed financial year broken down by procurement category and/or supplier. The purchase ledger is reviewed and assigned SIC in order to establish related CYF categories.	
		Water use	Water used in company owned/operated buildings.	Activity data: Water consumption (volume) - litres or m3	No data for communal water (plus the Southern Hub includes this in their lease costs and they are not privy to the costs)

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Reporting scope	Category	Impact	Description	Data required	Data gaps
Scope 3	**2. Capital goods**	**Capex spend**	All fixed assets acquired by Raven within the year e.g. equipment, machinery, buildings, facilities, vehicles. For building developers, any costs allocated to an asset register should be considered capital expense and included in this category	Purchase ledger for CAPEX costs for agreed financial year.	
Scope 3	**3. Fuel and energy related activities**	**Energy extraction, production and transportation**	These are energy related impacts not captured by Raven Housing Trust under Scope 1 & Scope 2.	Data collected under Scope 1 & 2 reporting: • Electricty kWh • Gas kWh • Company cars mileage, fuel type and engine size	
Scope 3	**4. Upstream transportation and distribution**	**Upstream transport**	Transportation and distribution of products purchased by Raven Housing Trust, between tier 1 suppliers and its own operations (in vehicles and facilities not owned or controlled by the reporting company) e.g. Material, parts, components, any courier activity etc.	Activity data: • First priority: litres of fuel/fuel type • Second priority: km/miles travelled, vehicle type • Lowest priority: Spend data (GBP)	

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Reporting Scope	Category	Impact	Description	Data required	Data gaps
Scope 3	**5. Waste generated in operations**	**Operational waste**	Third-party disposal and treatment of waste generated in Raven Housing Trust's owned or controlled operations in the reporting year.	Activity data: tonnage separated by material and waste stream (recycled, landfilled, composted)	Data is provided with a detail report on total weight, m3 per waste and treatment percentages. Based on the ratio of m3 to waste treatments, the weight per treatments was calculated for each waste type.
		Construction waste	Third-party disposal and treatment of waste generated through construction/refurbishment activities over which Raven Housing Trust has responsibility	Activity data: tonnage separated by material and waste stream (recycled, landfilled, composted)	No construction waste data is shared for project completed in May 2023.
		Waste water	This category includes emissions from disposal of wastewater from Raven's owned or controlled buildings	Sewerage by volume (preferred) otherwise spend on waste treatment for sewerage	Estimated calculations using 0.95 ratio.

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Reporting scope	Category	Impact	Description	Data required	Data availability	Data gaps
Scope 3	**6. Business travel**	**Staff business travel**	Transportation of employees for Raven Housing Trust's business-related activities - all transport modes considered (in vehicles not owned or controlled by your company).	Activity data: • First priority: litres of fuel/fuel type • Second priority: km/miles travelled, vehicle type • Lowest priority: Spend data (GBP)	Fuel litres and type rather than mileage	Mileage staff data is provided by Raven. Raven's business travel only includes car transportation. Last year's data was provided in miles.
Scope 3	**7. Employee Commuting**	**Employee commuting**	Transportation of Raven Housing Trust employees between their homes and their worksites (in vehicles not owned or controlled by your company).	Activity data: Number of days of commute, mode of transport, average miles		Used a staff survey of 130 (35%) recipients detailing how many days they commute to work and what method. This was then extrapolated for the full organisation. Rather than accounting for FTE the distance was multiplied by the total number of employees as the survey took into account working from home etc and assumed this included part-time staff distance.

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Appendix C: Scope of work (also provided as a separate Excel file)

The following table shows the scopes and activity covered in Raven Housing Trust's carbon footprint undertaken by Bioregional, greyed-out rows are out of scope for the footprint.

Reporting scope	Category	Impact	Description	Data required	Data availability	Data gaps
Scope 3	**7. Employee Commuting**	**Employee homeworking**	Employee homeworking emissions can be captured here as an optional data point	Activity data: Number of homeworking employees, Number of homeworking days per year		The commuting survey includes questions on homeworking, which allow Bioregional to estimate the kWh of electricity and gas used by Raven staff whilst homeworking. Calculations are made according to the Bioregional's Homeworking Methodology inspired by CYF's home working methodology. Total gas and electricity consumption is calculated according to the work, lighting and heating categories. All employees state they use 100% Renewables electricity we require REGO's to claim this in a market-based footprint so haven't been able to adjust according to this.

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Appendices

Appendix C: Scope of work (also provided as a separate Excel file)

The following table shows the scopes and activity covered in Raven Housing Trust's carbon footprint undertaken by Bioregional, greyed-out rows are out of scope for the footprint.

Reporting scope	Category	Impact	Description	Data required	Data availability	Data gaps
Scope 3	**8. Upstream Leased Assets**	**Leased assets (as lessee)**	Emissions from the operation of assets that are leased by Raven Housing Trust in the reporting year and not already included in the reporting company's scope 1 or scope 2 inventories. Examples of upstream leased assets may be rented offices, machinery or equipment.	Activity data: kWh, litres of fuel etc.	Does Raven Housing trust lease any assets?	
Scope 3	**9. Downstream Transportation and Distribution**	**Downstream transport**	This category includes emissions that occur in the reporting year from transportation and distribution of sold products in vehicles and facilities not owned or controlled by Raven Housing Trust.	Activity data: • First priority: litres of fuel/fuel type • Second priority: km/miles travelled, vehicle type • Lowest priority: Spend data (GBP)	Unlikely to be applicable to Raven	

Continues overleaf

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Reporting scope	Category	Impact	Description	Data required	Data availability	Data gaps
Scope 3	**10. Processing of Sold Products**	**Products**	Includes emissions from processing of sold intermediate products by third parties (e.g., manufacturers) subsequent to sale by Raven Housing Trust. Intermediate products are products that require further processing,transformation, or inclusion in another product before use, and therefore result in emissions from processing subsequent to sale by the reporting company and before use by the end consumer.	•Quantities of energy (including electricity and fuels) consumed in process(es) • To the extent possible, mass of waste generated in process(es)		
Scope 3	**11. Use of Sold Products**	**Products**	For building developers, expected operational emissions for any buildings sold over their lifetime, accounted for in the reporting year. For building owners (including operators and managers), tenant emissions should be included in '13. Downstream leased assets'	Details of assets sold Expected lifetime of assets (e.g 60 years) Expected energy consumption of assets		
Scope 3	**12. End-of-life treatment of sold products**	**Products**	Includes emissions from the waste disposal and treatment of products sold by Raven Housing Tust. For building developers, this would be the expected end-of-life emissions for any buildings sold, accounted for in the reporting year.	Details of assets sold Expectal disposal/resale rate Expected disposal method		

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Appendices

Appendix C: Scope of work (also provided as a separate Excel file)

The following table shows the scopes and activity covered in Raven Housing Trust's carbon footprint undertaken by Bioregional, greyed-out rows are out of scope for the footprint.

Reporting scope	Category	Impact	Description	Data required	Data availability	Data gaps
Scope 3	**13. Downstream leased assets**	**Leased assets (as leasor)**	Operation of assets owned by Raven Housing Trust and leased to other entities, not included in scope 1 and scope 2. Leased assets may include offices, stores or vehicles. Tenant emissions fall under this category. There may be a range of accuracy for this	Activity data: kWh, litres of fuel etc.	Data to be collected via Parity Projects Tool	Actual metered data Data on Kwh has been provided to us by the team at Parity. This is split into different types of fuel. Where on the fuel type "community" has been added we have assumed that this is still the standard supply. When adding on 'compare your footprint' some fuel types were unavailable to add in Kwh. For these wave used DEFRA Greenhouse Gas 2022 Conversion factors to convert Kwh into tonnes using the listed Kwh/Kg. We have used the factor for Kg to Tonne is 1kg=0.001 Tonnes.
Scope 3	**14. Franchises**	**Franchises**	Franchisees should include emissions from operations under Raven Housing Trust's control in this category if they have not included those emissions in scope 1 and scope 2 due to their choice of consolidation approach	If franchisees have conducted corporate scope 1 and scope 2 GHG inventory report(s), the data can be applied		

Appendices

Appendix C: Scope of work (also provided as a separate Excel file)

The following table shows the scopes and activity covered in Raven Housing Trust's carbon footprint undertaken by Bioregional, greyed-out rows are out of scope for the footprint.

Reporting scope	Category	Impact	Description	Data required	Data availability	Data gaps
Scope 3	**15. Investments**	**Investments**	Operation of Raven Housing Trust's investments not included in scope 1 and 2. For purposes of GHG accounting, the standard divides financial investments into four types: • Equity investments • Debt investments • Project finance	A reporting company's scope 3 emissions from investments are the scope 1 and scope 2 emissions of investees. This would be indirect funds or investments and not include spend on development projects.		

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