



Gwasanaeth Ynni
Energy Service

Welsh Public Sector Net Zero Reporting (2022/23)

Swansea Council

Cyngor Abertawe

Local Authority

Introduction and Context

This report summarises the 2023 carbon footprint for **Swansea Council**. The footprint has been compiled based on the data submitted to Welsh Government for the purpose of tracking Welsh public sector carbon emissions.

Carbon emissions are calculated based on the guidance provided in Welsh Public Sector Net Zero Reporting Guide and the Greenhouse Gas Protocol. This covers the main sources of emissions from Welsh Public Bodies which includes buildings, fleet, business travel, commuting, homeworking, waste streams, land use and removals and supply chain. Other sources are included for some organisations where these are relevant: streetlighting, agriculture, and other gases (medical gases and refrigerants). Lastly it covers reporting of renewable energy procured and generated.

The standard approach to calculating carbon emissions is to multiply units of 'activity' data by an emission factor (EF). Activity data refers to a measure of the amount of the action that produces emissions. This can be tonnes of fuel used, kilometres travelled, kilowatt hours (kWh) of electricity consumed etc. Emission factors describe the amount of carbon emissions produced from one unit of an activity.

Some emission sources are straight forward to assess, such as those associated with fuel used in buildings and fleet. Other sources that involve significant uncertainties are more difficult to address. These more challenging emission sources often utilise proxy approaches to make estimates. A key source which introduces a high level of uncertainty is supply chain-based emissions. Commuting and home working-based emissions also rely on high level estimates or survey data.

The scope of reporting and methods taken were updated for 2023. The resulting datasets are not well suited for comparison between years in aggregate. Building related emission estimates are largely comparable between years however (due to the year-on-year consistency in source data and methods). Given the nature of operations and emissions sources for **Swansea Council** and across Welsh Public Bodies, any direct comparisons are to be avoided. Where possible however, average emissions for the public sector and average emissions for Local Authority organisations are provided.

This individual report supplements the main report which summarises the entire carbon footprint for all Welsh Public Sector bodies. The two reports should be read in conjunction for a full understanding of the emissions landscape and progress towards targets.





Disclaimer

This report presents data that has been submitted through the 2023 Net Zero Reporting process. If data hasn't been submitted against a particular emissions source, then it will not appear in this report. All emissions data is presented in ktCO₂e. Some values may not appear if they are below a certain threshold. This report also provides percentage change in emissions against previous years. Where data has been submitted for one year but not another, this may result in an error, or blank or null values being shown within the body of the text.

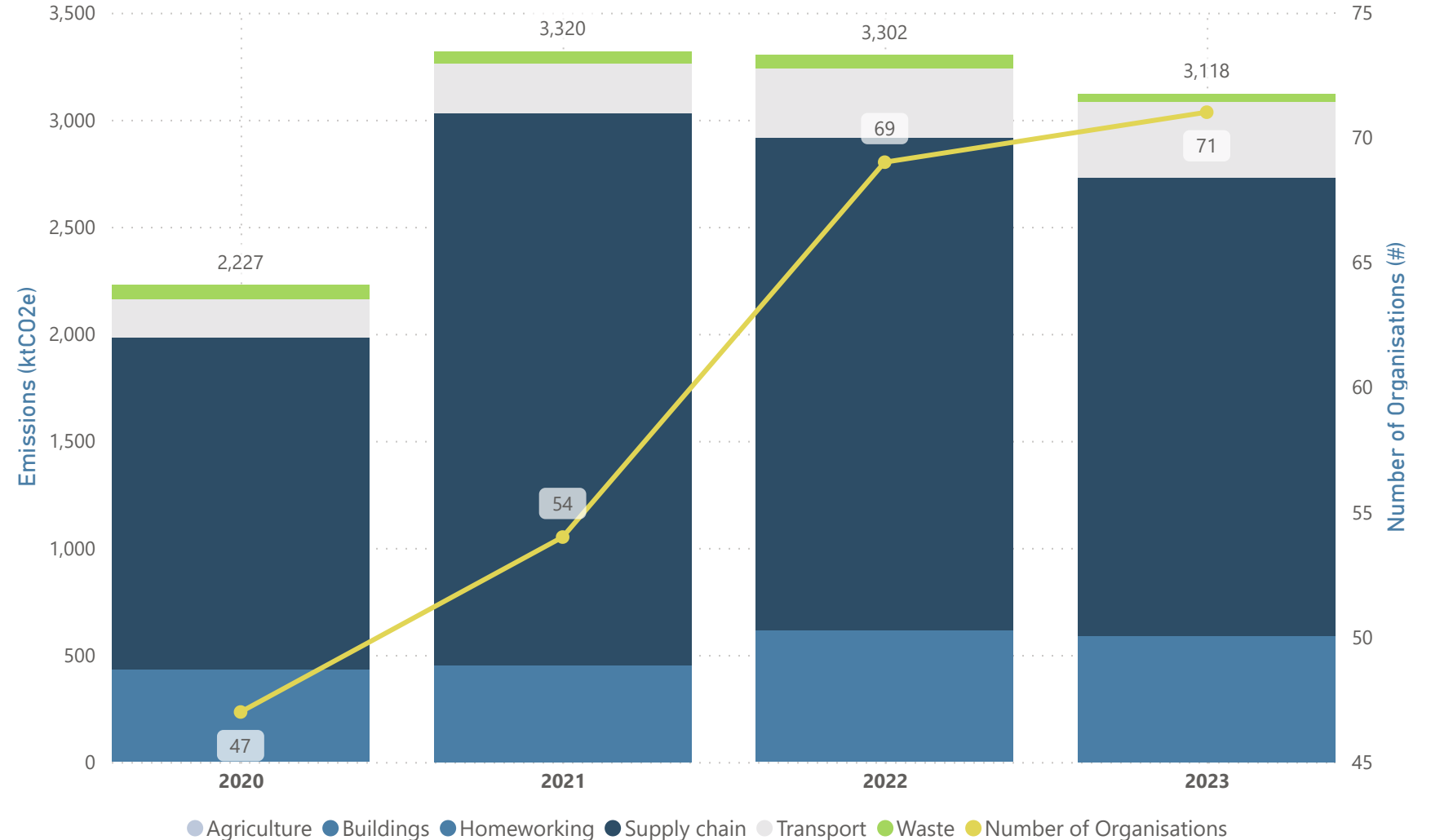
Emissions summary 2023

This page details an overview of the entire Welsh public sector emissions for the most recent reporting year (2023), and previous reporting rounds.

This reporting year saw the highest number of public sector bodies submit emissions data returns, totalling seventy-one organisations.

The chart (right) shows the total emissions for the entire Welsh public sector, broken down by emissions categories. Included is the number of organisations that submitted emission reports each year (yellow).

Excluded from this chart are emissions associated with land. These are explored further in this document and within the main report.



Emissions summary 2023

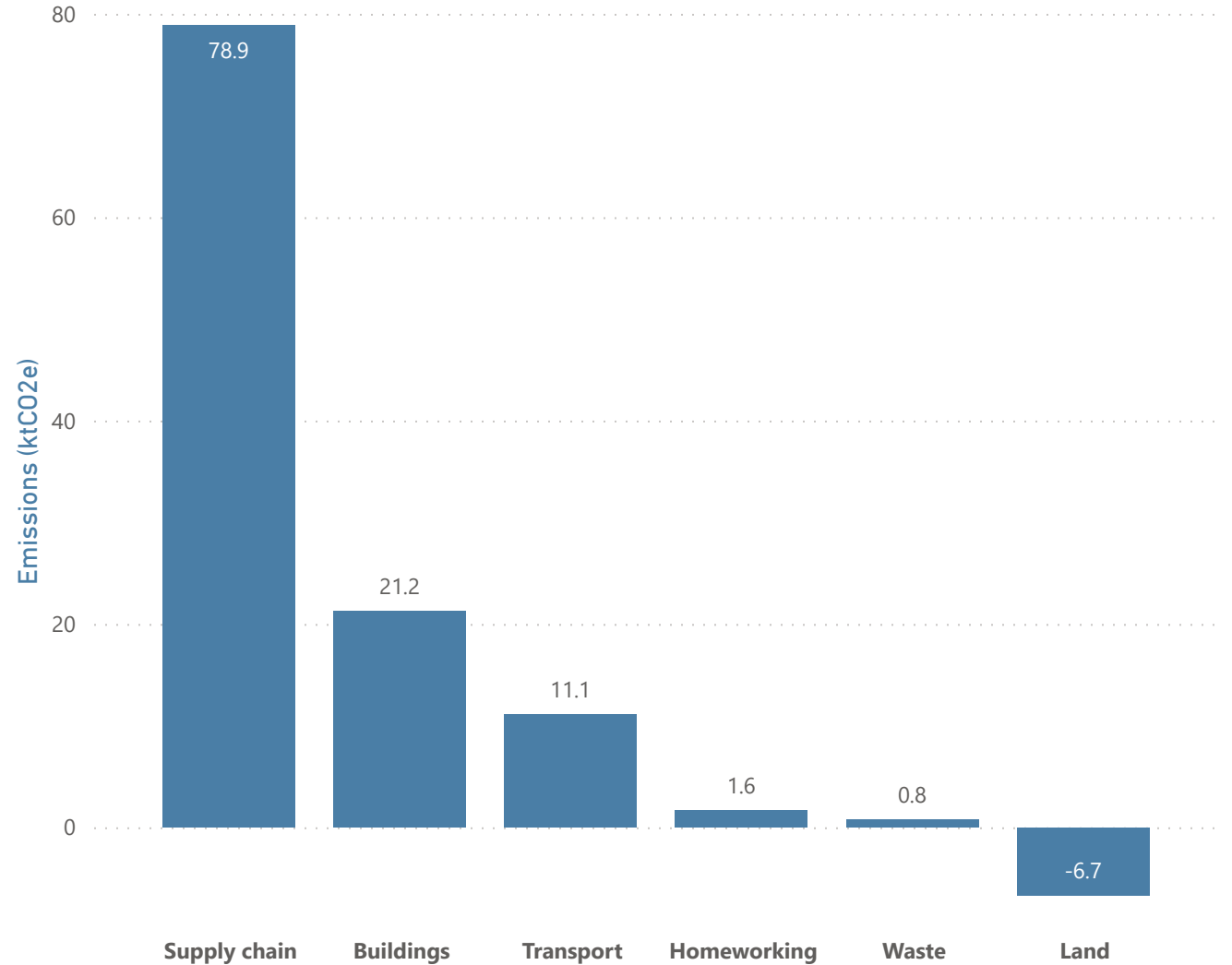
Swansea Council

This page details a summary of the 2023 carbon footprint for [Swansea Council](#). The total carbon footprint for 2023 was estimated to be **106.9 ktCO₂e**.

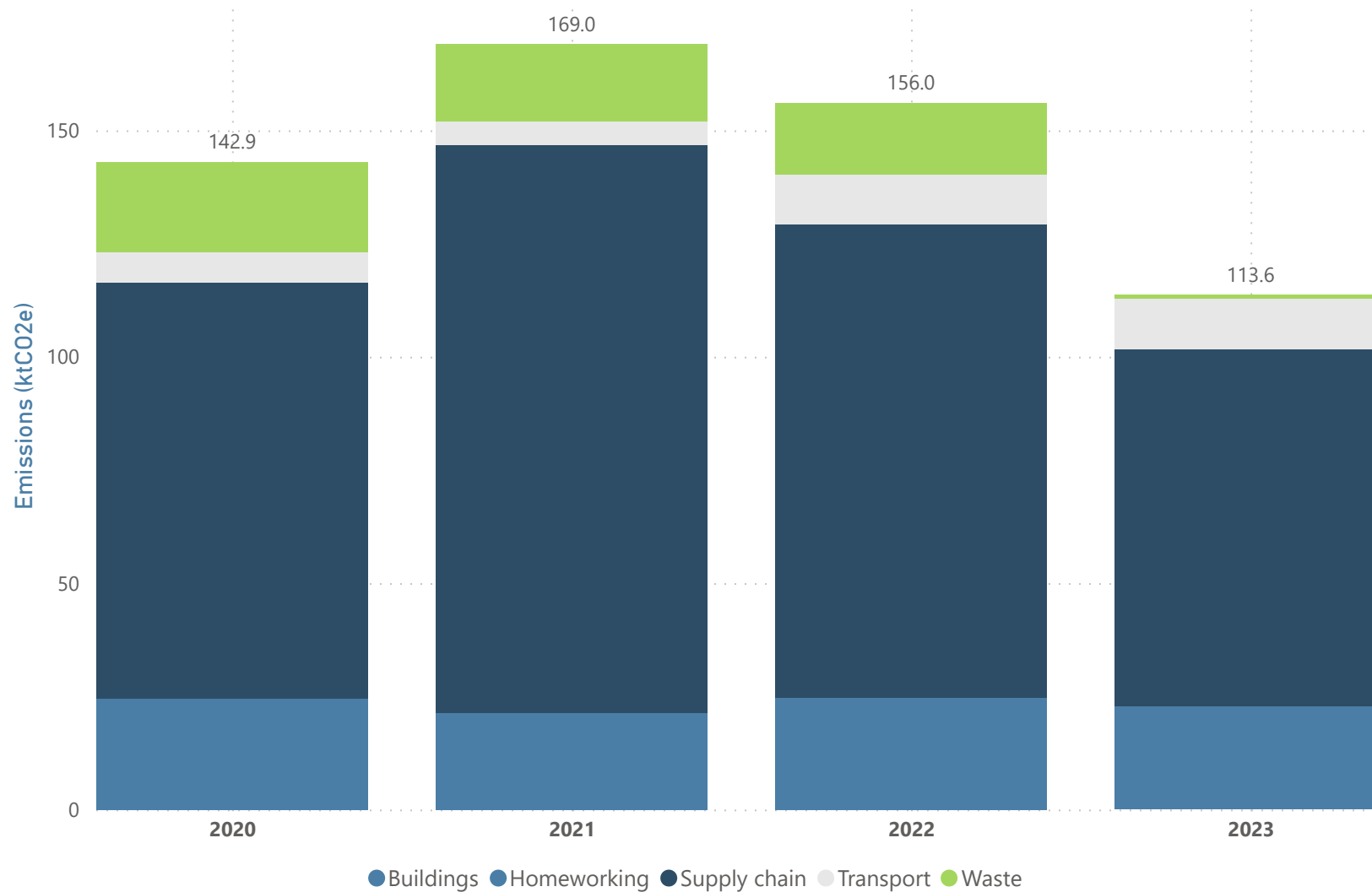
The chart (right) breaks down the 2023 emissions by emissions category.

The table (below) highlights the total emissions for [Swansea Council](#) for 2023 showing 'including land' and 'excluding land' emissions. These can be reviewed alongside the average total emissions across all [Local Authority](#) organisations, and the average total emissions across all Public Sector Bodies.

	Emissions excl. land (ktCO ₂ e)	Emissions incl. land (ktCO ₂ e)
Swansea Council	113.6	106.9
Local Authority	62.5	62.2
Public Sector Average	43.9	38.1



Year on year changes



This chart (left) shows the change in total emissions from the first reporting year to present for Swansea Council. The totals for each year are shown as a stacked bar. The values on the chart show the footprint for each year in ktCO₂e of each year. Land emissions are excluded (presented in another section).

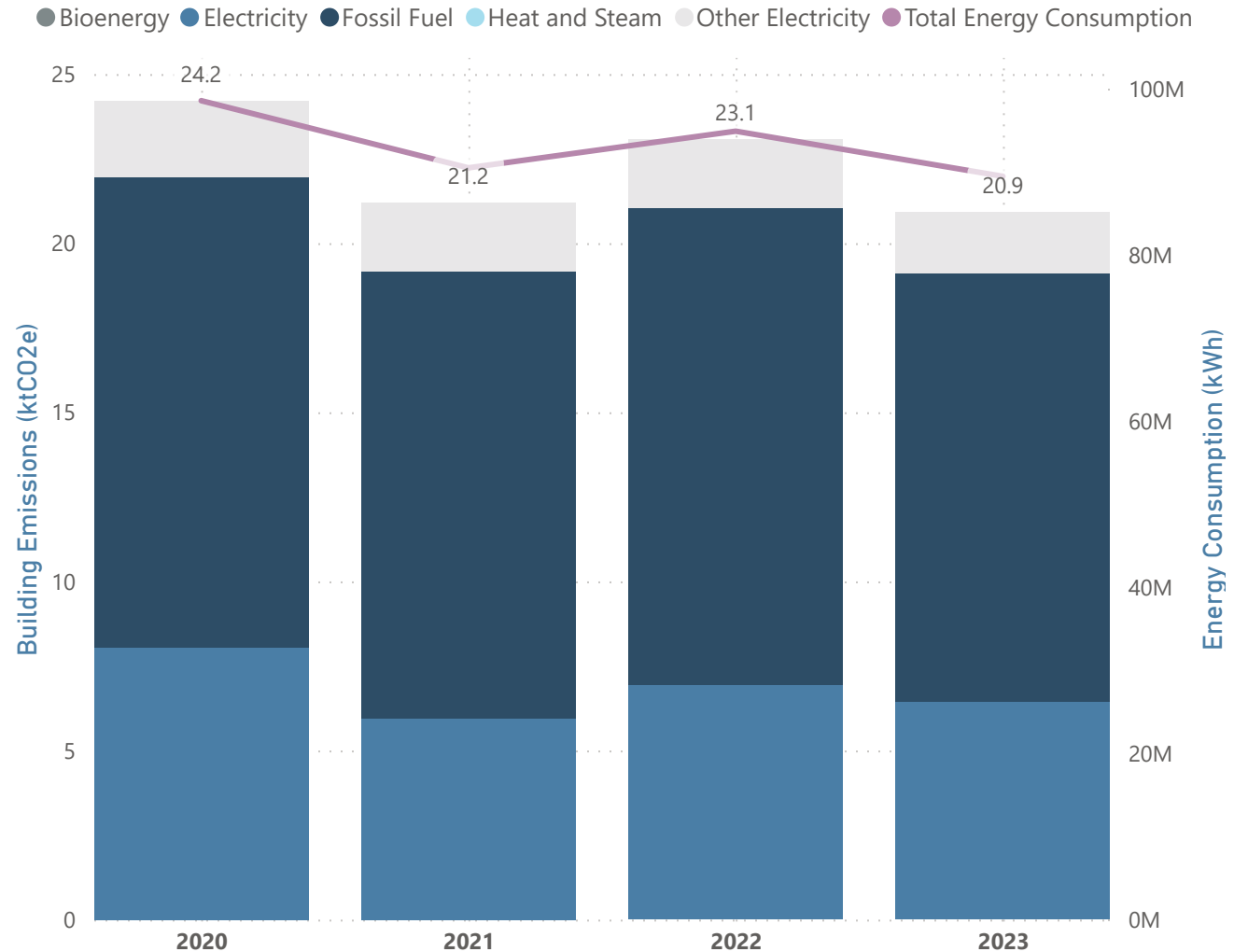
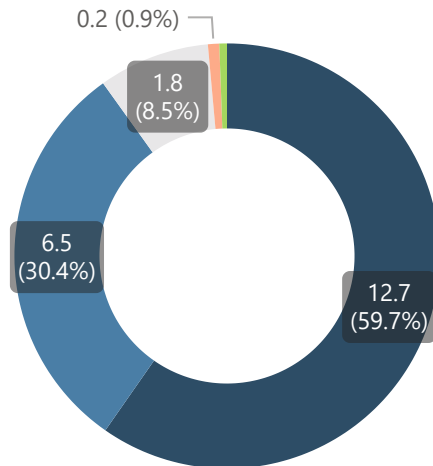
Since the previous reporting year, the total footprint (excl. land) has changed by -27.2 %. This represents an absolute emissions change of -42.3 ktCO₂e.

Building emissions

Building related emissions totalled 21.2 ktCO₂e in 2023. This represents a -8.5% change from the previous reporting year. There are two charts on this page:

- **Below** - This shows the breakdown of building related emissions for 2023 only; it shows all emissions sources (incl. water supply and treatment). The data labels show the total emission from each source and the associated building emissions proportion (%).
- **Right** - This shows the emissions associated with energy consumption (only) within buildings. This is shown as a stacked bar chart over time. Each area within the stack represents a different emissions source from energy consumption. The total emissions from building energy consumption are shown in the data labels at the top of each stack. Included is the total energy consumption from those sources, represented as a line (related to the axis on the right).

- Fossil Fuel
- Electricity
- Other Electricity
- Other Gases
- Water

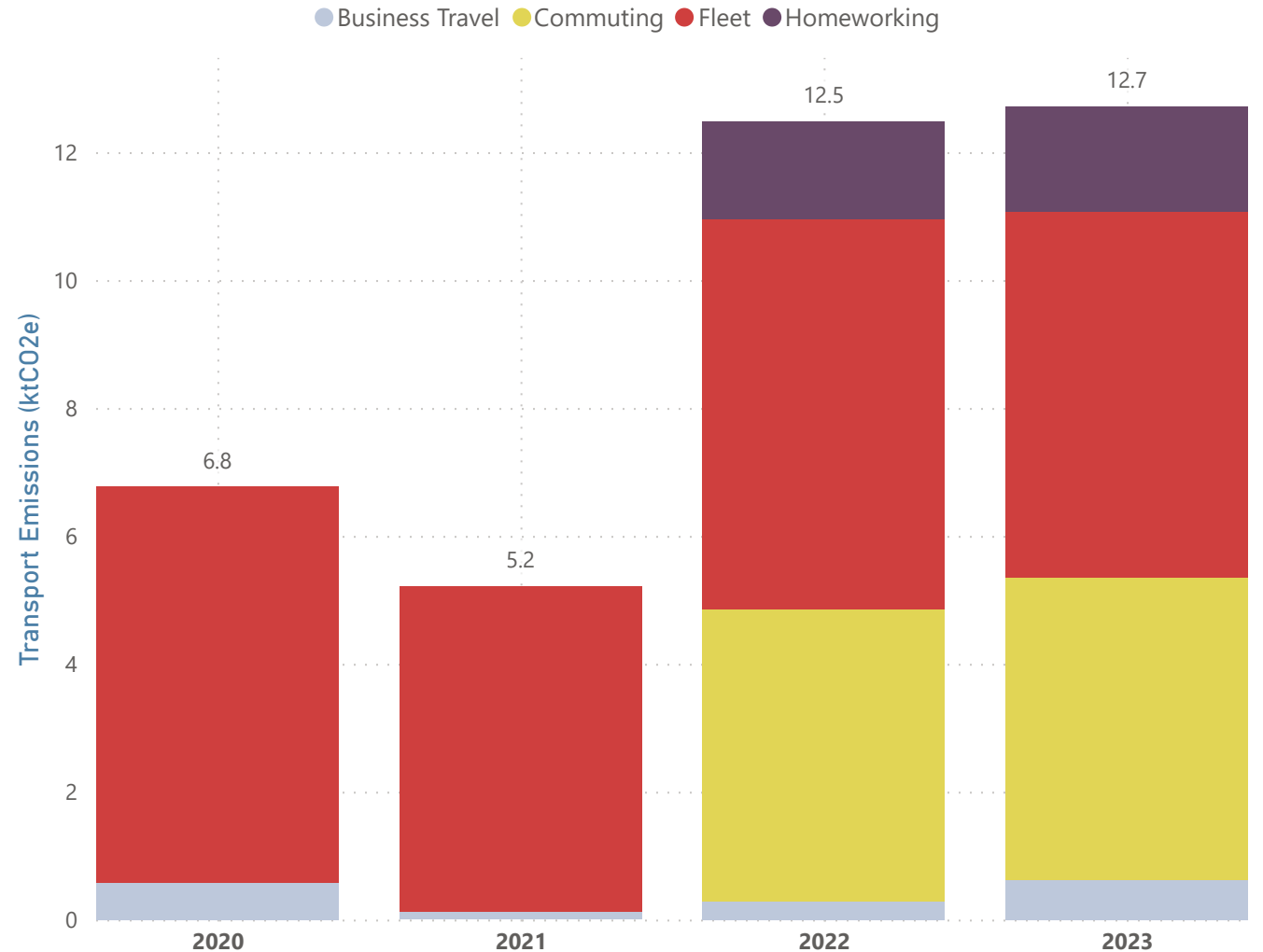
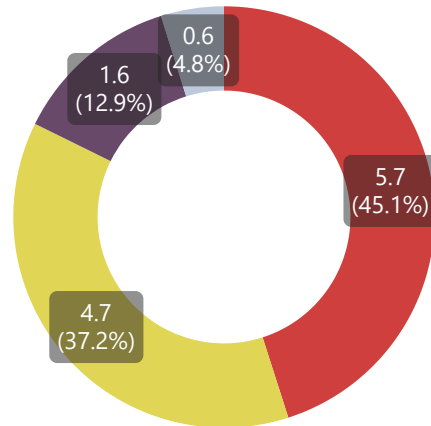


Transport emissions

Transport related emissions totalled 12.72 ktCO₂e in 2023. This represents a 1.9 % change from the previous reporting year. Homeworking has been included within transport given its interaction with commuting. There are two charts on this page:

- **Below** - This shows the breakdown of building related emissions for 2023 only. The data labels show the total emission from each emissions source and the associated proportion of transport emissions (%).
- **Right** - This shows the emissions as a stacked chart over time. Each area within the stack represents a different emissions source. The total emissions from transport related sources are shown in the data labels at the top of each stack.

- Fleet
- Commuting
- Homeworking
- Business Travel

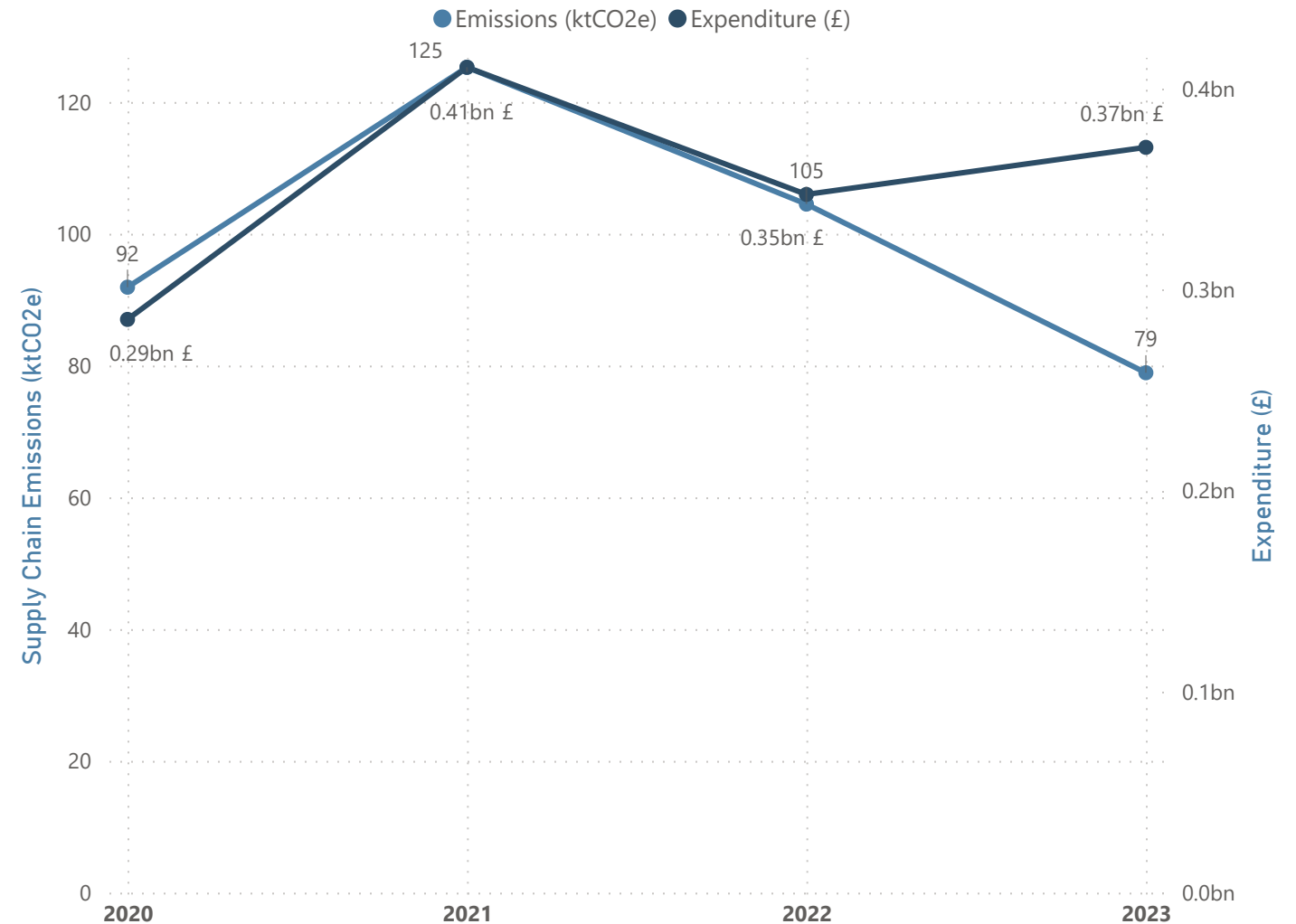


Supply chain emissions

This page summarises emissions from activities related to Swansea Council's supply chain. Supply chain emissions are calculated using a spend-based approach. Total spend related to a particular good or service category are matched with a spend-based emission factor.

The spend-based emissions factors are produced by [Defra](#). They were updated in 2022 to include emissions factors up to 2019. The most recent reporting year uses the 2019 factors. Previous reporting rounds all used the same set of (2011) factors. The new factors have decreased by 15% on average across all goods and service categories.

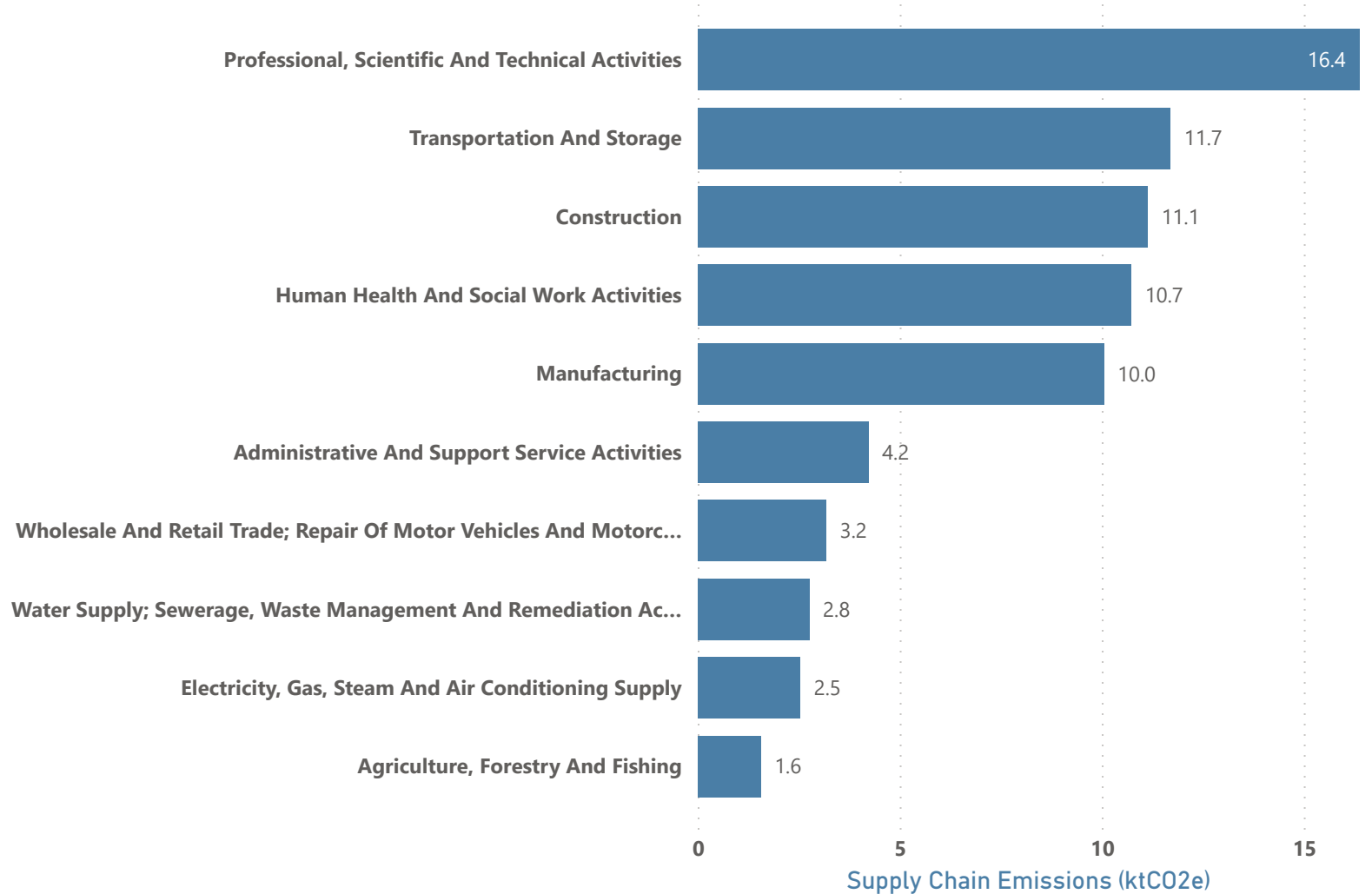
The chart (right) shows the total spend (£) for [Swansea Council](#), and the associated total emissions (ktCO₂e). Total emissions for 2023 are estimated to be [78.9](#) ktCO₂e. Emissions have changed by [-24.5 %](#) between 2023 and the previous reporting year. Over this same period total spend has changed by [6.7 %](#).



Supply chain hotspots

This page summarises Swansea Council's supply chain hotspots. The chart (right) gives the top 10 highest emitting categories (only). In total, Swansea Council submitted spend data against 74 categories.

The top 10 emitting categories accounted for 74.2 ktCO₂e equivalent to 94.1 % of Swansea Council's supply chain footprint.

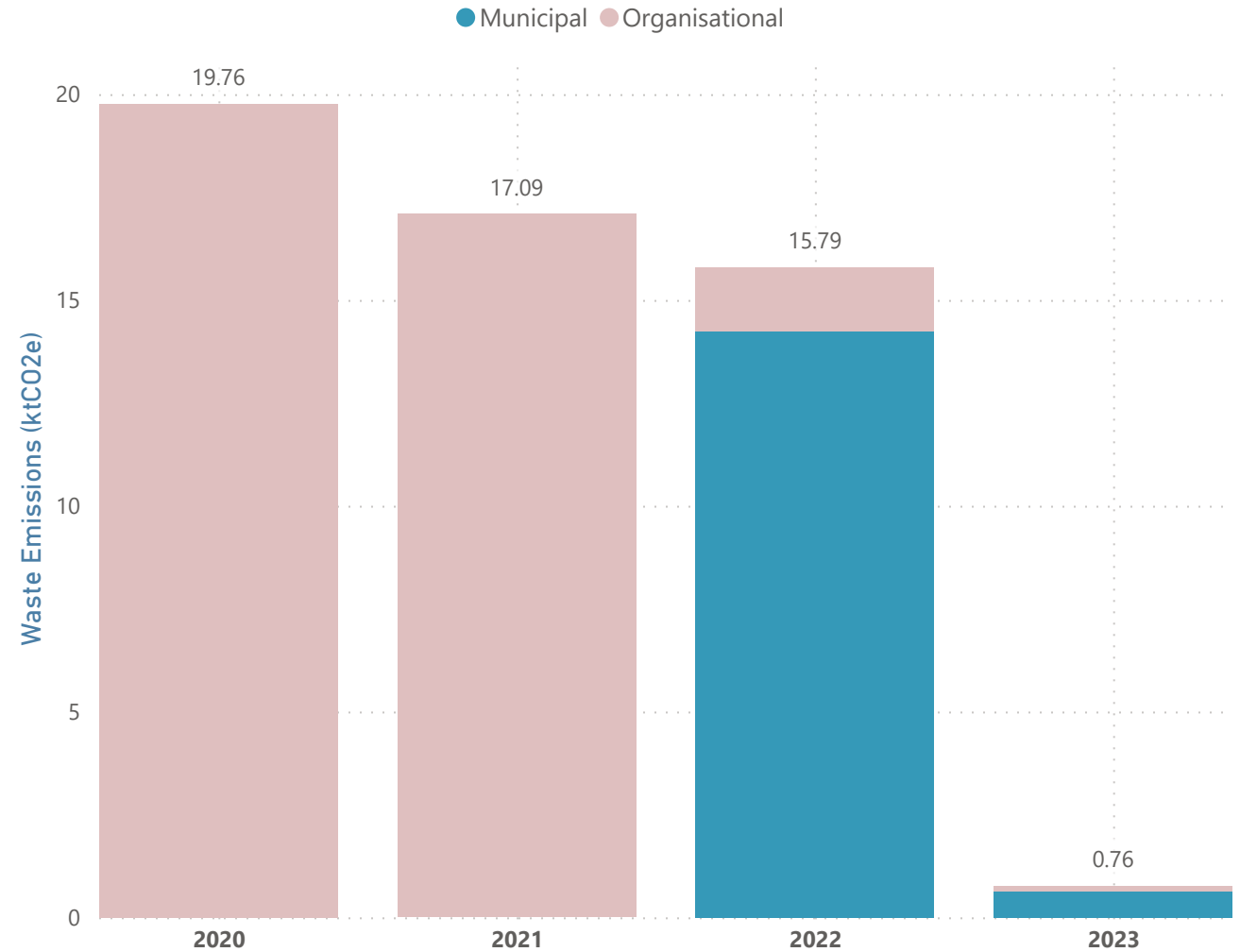
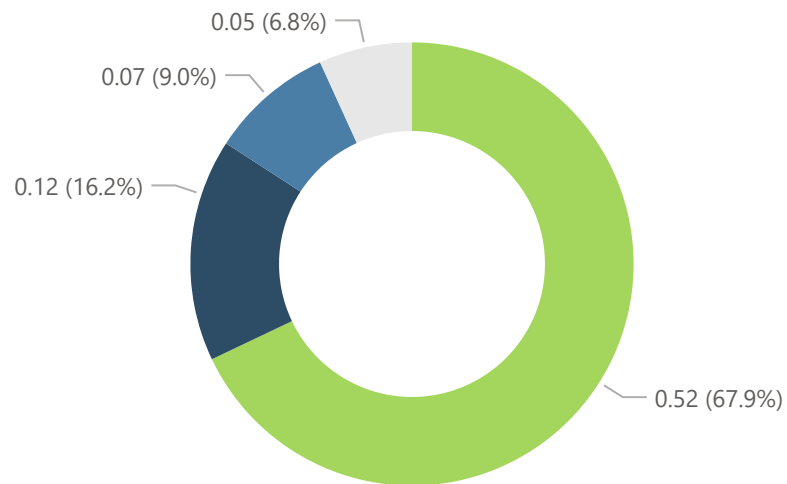


Waste emissions

Waste related emissions totalled 0.76 ktCO₂e in 2023. This represents a -95.2 % change from the previous reporting year. There are two charts on this page:

- **Below** - This shows the treatment type of all the waste generated by Swansea Council. The data labels provide the emissions associated with each type of treatment in ktCO₂e and the proportion of the total waste emissions (%).
- **Right** - This shows the annual change of emissions arising from treatment of waste and the breakdown by waste category (municipal, project, organisational) represented by the different coloured areas of the stack. The data labels present the total waste emissions for each year at the top of each stack.

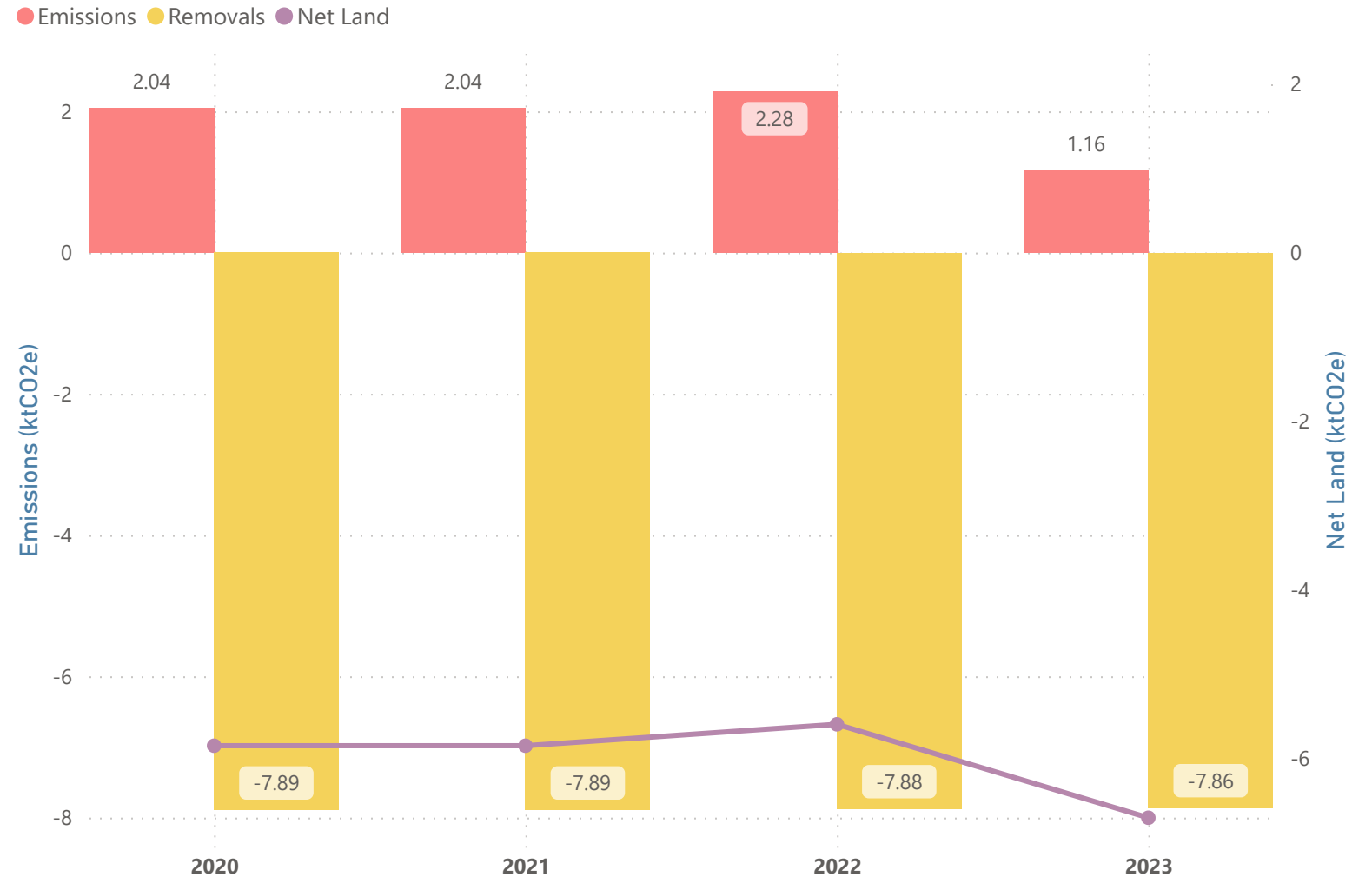
- Recycling
- Combustion
- Anaerobic digestion
- Composting



Land emissions

This page summarises emissions associated with land use change. Within this category, emissions are treated as generated (Emissions) or Removals. This is dependent on the land use change data that was submitted. These emissions have not been reported in the organisation or Public Sector totals unless specified. This is to avoid total values being skewed by organisations with significant land holdings, and the nature of the methods used.

Land related emissions totalled -6.70 ktCO₂e for Swansea Council in 2023.



Renewables

Beyond emissions reporting, the purchase and generation of renewable energy has been captured (both heat and electricity). Shown here are only the energy values (kWh), no emissions values are shown. Emissions for electricity are currently calculated using a grid average factor regardless of the purchasing mechanism.

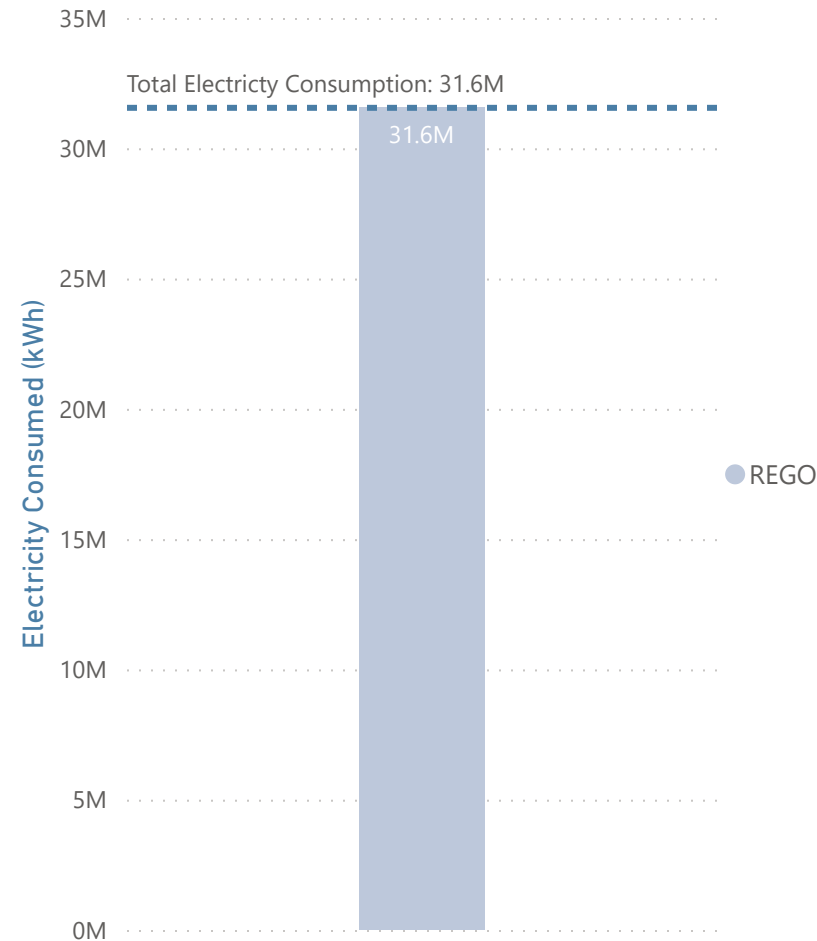
This page shows two charts:

Left - shows the proportion of renewable energy purchased by Swansea Council in 2023 broken down by purchasing mechanism as bars, a dashed line shows the total electricity consumed.

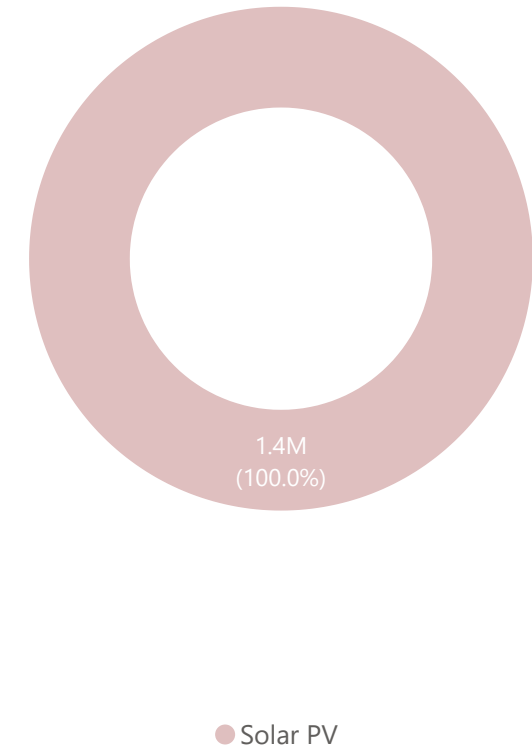
Right - shows the proportion of renewable energy generated by Swansea Council in 2023 broken down by technology.

The treatment of renewable energy is currently undergoing a review to understand how reporting can better align procurement and generation with evolving best practice.

Consumption (kWh)



Generation (kWh)





Gwasanaeth Ynni Energy Service

The Welsh Government Energy Service (“**WGES**”) is funded by the Welsh Government with the aim of developing energy efficiency and renewable energy projects that contribute to public sector decarbonisation and national energy targets. The WGES is delivered by the Carbon Trust, Energy Saving Trust and Local Partnerships (the “**Delivery Partners**”). This report (the “**Report**”) has been produced by the Delivery Partners and, whilst the views expressed in it are given in good faith based on information available at the date of this Report:- (i) these views do not necessarily reflect the views of the Welsh Government, which accepts no liability for any statement or opinion expressed in the Report; (ii) the Report is intended to provide general guidance only, rather than financial, legal or technical advice for the purposes of any particular project or other matter, and no-one in receipt of the Report should place any reliance on it in substitution for obtaining their own advice from an appropriate third party advisor; and (iii) any person in receipt of this Report should therefore obtain their own financial, legal, technical and/or other relevant professional advice insofar as they require specific guidance on what action (if any) to take, or refrain from taking, in respect of any project, initiative, proposal, involvement with any partnership or other matter to which information contained in the Report may be relevant; and (iv) the Delivery Partners accept no liability in respect of the Report, or for any statement in the Report and/or any error or omission relating to the Report.

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