One Carbon World

Report

Presented to:

Ribble Valley Borough Council
2022/23

Issued August 2023

One Carbon World

Ribble Valley Borough Council CO_2e Report August 2023

Disclaimer:
All reasonable measures have been taken to ensure the accuracy of this report and any errors in data used for footprint calculations are the responsibility of the grant recipient named in this report.

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Introduction

Ribble Valley Borough Council have been awarded the One Carbon World Carbon Neutral International Standard grant.

This report details the carbon footprint of Ribble Valley Borough Council and provides recommendations to reduce and off-set its footprint.

The activities included in the carbon footprint measurement were agreed in consultation between One Carbon World and Ribble Valley Borough Council. The calculation of the footprint was undertaken by One Carbon World after a desk-top review of data provided by Ribble Valley Borough Council.

This report meets the reporting requirements of the Green House Gas (GHG) Protocol Corporate Standard and is compatible with international standards ISO 14064 and PAS 2060.

One Carbon World have taken all reasonable measures to ensure the accuracy of this report. Any omissions or errors in data are the responsibility of the grant recipient named in this report.

Carbon Footprint Report

Name: Ribble Valley Borough Council

Address: Council Offices, Church Walk, Clitheroe, Lancashire, BB7 2RA

Description: Borough Council

Footprint boundary: All activities under operational control, covered under Scopes 1, 2 and 3 of the Green House Gas (GHG) Protocol Corporate Standard as detailed within this report.

Footprint Period: 01/04/2022 to 31/03/2023

Activities/Emissions included in footprint:

Business Travel - Non-Owned Vehicles, Business Travel - Owned Vehicles, Purchased Goods & Services, Water, Fuel & Energy.

Emissions Summary:

Total carbon footprint of activities measured = 1,515.80 tonnes CO2e

Scope 1 emissions = 883.59 tonnes CO_2e

Scope 2 emissions = 174.06 tonnes CO_2e

Scope 3 emissions = 458.15 tonnes CO_2e

The GHG Protocol Corporate Standard requires reporting a minimum of scope 1 and scope 2 emissions.

Scope 1 - Direct Green House Gas (GHG) Emissions:

Scope 1 (direct emissions) emissions are those from activities owned or controlled by an organisation. Direct emissions are principally the result of the following types of activities:

- Generation of electricity, heat, or steam. These emissions result from combustion of fuels in stationary sources, e.g. boilers, furnaces, turbines

- Transportation of materials, products, waste, and employees. These emissions result from the combustion of fuels in company owned/controlled mobile combustion sources (e.g. trucks, trains, ships, airplanes, buses and cars)

- Fugitive emissions. These emissions result from intentional or unintentional releases, e.g., equipment leaks from joints, seals, packing, and gaskets; methane emissions from coal mines and venting; hydrofluorocarbon (HFC) emissions during the use of refrigeration and air conditioning equipment; and methane leakages from gas transport

- Physical or chemical processing. Most of these emissions result from manufacture or processing of chemicals and materials, e.g. cement, aluminium, and waste processing

Scope 1 Emissions data supplied and included in footprint:

- Total Passenger vehicles : Cars (by size) : Average car km : Petrol
- Total Passenger vehicles : Cars (by size) : Average car km : Hybrid
- Total Passenger vehicles : Cars (by size) : Average car km : Diesel
- Total Fuels : Liquid fuels : Gas oil litres :
- Total Fuels : Liquid fuels : Diesel (average biofuel blend) litres :
- Total Fuels : Gaseous fuels : Natural gas kWh (Gross CV) :

Scope 2 - Indirect GHG Emissions:

Scope 2 (indirect) emissions are those released into the atmosphere that are associated with the consumption of purchased electricity, heat, steam and cooling. These indirect emissions are a consequence of an organisation's energy use, but occur at sources not owned or controlled.

Scope 2 Emissions data supplied and included in footprint:

- Total UK electricity : Electricity generated : Electricity: UK kWh :

Scope 3 - Other Indirect GHG Emissions:

Scope 3 (other indirect) emissions are a consequence of actions that occur at sources not owned or controlled and not classed as Scope 2 emissions. Examples of Scope 3 emissions are business travel by means not owned or controlled by an organisation, waste disposal, or materials or fuels an organisation purchases. Deciding if emissions from a vehicle, office or factory are Scope 1 or Scope 3 may depend on how operational boundaries are defined.

Scope 3 Emissions data supplied and included in footprint:

- Total WTT- UK & overseas elec : WTT- UK electricity (T&D) : Electricity: UK kWh :
- Total WTT- UK & overseas elec : WTT- UK electricity (generation) : Electricity: UK kWh :
- Total WTT- pass vehs- land : WTT- cars (by size) : Average car km : Petrol
- Total WTT- pass vehs- land : WTT- cars (by size) : Average car km : Hybrid
- Total WTT- pass vehs- land : WTT- cars (by size) : Average car km : Diesel
- Total WTT- fuels : Liquid fuels : Gas oil litres :
- Total WTT- fuels : Liquid fuels : Diesel (average biofuel blend) litres :
- Total WTT- fuels : Gaseous fuels : Natural gas kWh (Gross CV) :
- Total WTT- business travel (land) : WTT- cars (by size) : Average car km : Petrol
- Total WTT- business travel (land) : WTT- cars (by size) : Average car km : Hybrid
- Total WTT- business travel (land) : WTT- cars (by size) : Average car km : Diesel

- Total WTT- business travel (land) : WTT- cars (by size) : Average car km : Battery Electric Vehicle
- Total Water treatment : Water treatment : Water treatment cubic metres :
- Total Water supply : Water supply : Water supply cubic metres :
- Total Transmission and distribution : T&D- UK electricity : Electricity: UK kWh :
- Total Money Value to CO2e : Wearing apparel : Wearing apparel costs :
- Total Money Value to CO2e : Soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations : Soap and detergents, cleaning and polishing preparations, perfumes and toilet preparation costs :
- Total Money Value to CO2e : Rubber and plastic products : Rubber and plastic product costs :
- Total Money Value to CO2e : Road Transport : Road Transport costs :
- Total Money Value to CO2e : Rail Transport : Rail Transport costs :
- Total Money Value to CO2e : Postal and courier services : Postal and courier service costs :
- Total Money Value to CO2e : Paper and paper products : Paper and paper product costs :
- Total Money Value to CO2e : Other food products : Other food product costs :
- Total Money Value to CO2e : Furniture : Furniture costs :
- Total Money Value to CO2e : Dairy products : Dairy product costs :
- Total Money Value to CO2e : Computer, electronic and optical products : Computer, electronic and optical product costs :
- Total Business travel- land : Cars (by size) : Average car km : Petrol
- Total Business travel- land : Cars (by size) : Average car km : Hybrid
- Total Business travel- land : Cars (by size) : Average car km : Diesel
- Total Business travel- land : Cars (by size) : Average car km : Battery Electric Vehicle

Footprint Calculation Method:

The most common approach for calculating GHG emissions is through the application of documented and approved GHG emissions conversion factors. These factors are calculated ratios that relate GHG emissions to a proxy measure of activity at an emissions source.

Further detail on emissions factors and the methodology behind them can be found at https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting

The activity data or amount of 'resources' used are multiplied by the relevant emissions factors to calculate total Greenhouse Gas equivalent (CO_2e) emissions.

GHG emissions = activity data x emission conversion factor

There are seven main GHGs that contribute to climate change, as covered by the Kyoto Protocol: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). Different activities emit different gases and an organisation should report on the Kyoto Protocol GHG gases produced by its activities.

CO_2e is the universal unit of measurement to indicate the global warming potential (GWP) of GHGs, expressed in terms of the GWP of one unit of CO_2. The GWPs used in the calculation of CO_2e are based on the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4) over a 100-year period (this is a requirement for inventory/national reporting purposes).

All conversion factors used in this report are in units of kilograms of carbon dioxide equivalent (kg CO_2e).

Assumptions and/or Omissions:

- Data in Scope 3 - Business travel assumed as company car mileage.
- Data in Scope 3 - Commuting travel assumed as grey fleet car mileage.
- Purchased Goods & Services - Other publications GBP496, Reference Books GBP839 and Newspapers GBP3259 all allocated as Paper and Paper Products.
- Bus and Rail spend is new within scope in 2023 - impact is 0.08% of total CF.
- Well to Tank Scope 3 emissions associated with extraction, refining and transportation of raw fuels and Transmission and distribution (T&D) Scope 3 emissions associated with grid losses (the energy loss that occurs in getting the electricity from the power plant to the organisations that purchase it), are included in the footprint calculations.
- Outside of scopes emissions are also included in the footprint calculations. Outside of scopes emissions account for the direct carbon dioxide (CO2) impact of burning biomass and biofuels. The emissions are labelled 'outside of scopes' because the Scope 1 impact of these fuels has been determined to be a net '0' (since the fuel source itself absorbs an equivalent amount of CO2 during the growth phase as the amount of CO2 released through combustion). Full reporting of any fuel from a biogenic source should have the 'outside of scopes' CO2 value documented to ensure complete accounting for the emissions created.

Carbon Footprint:

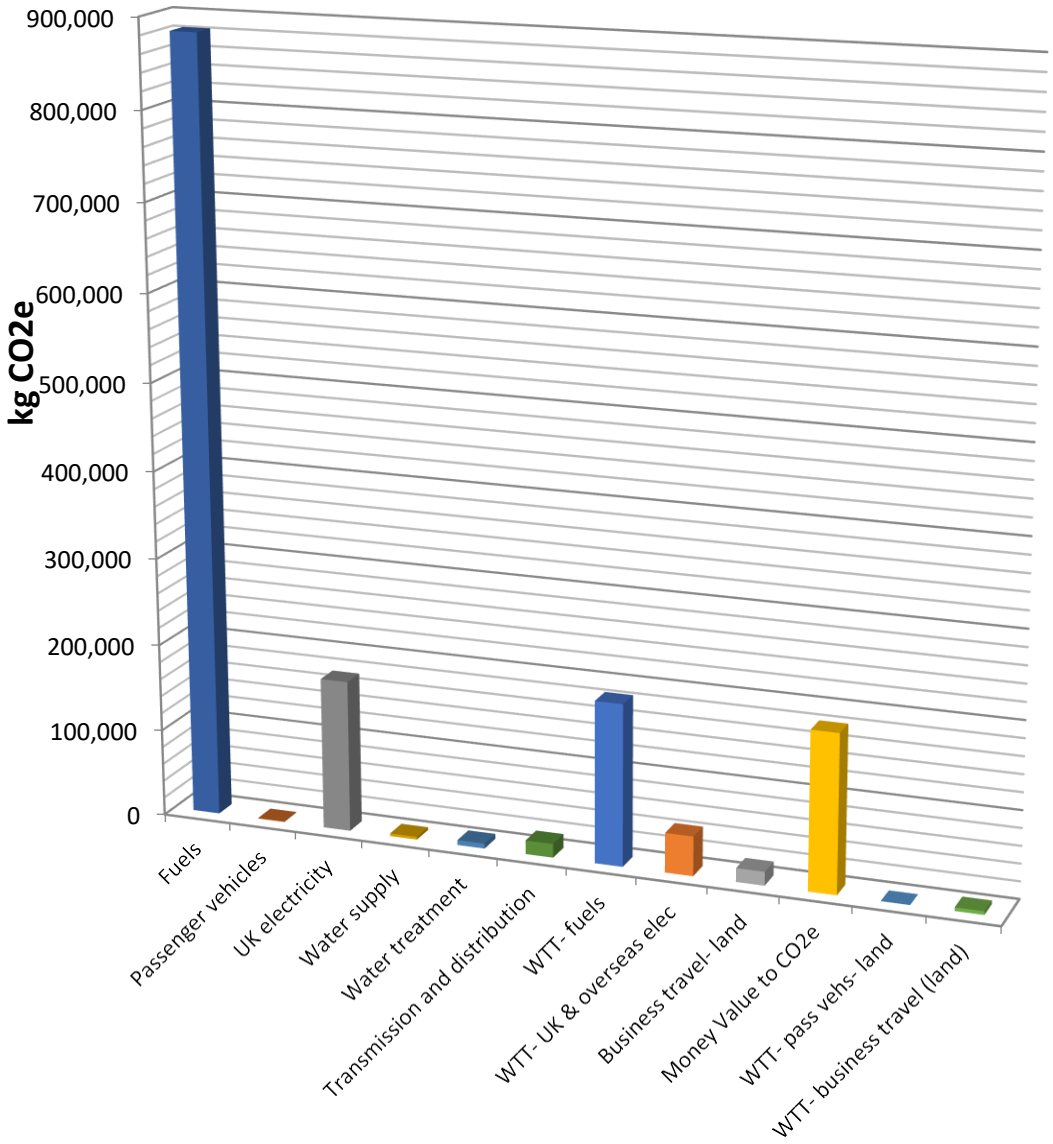
Market Based

The Total Carbon Footprint of the activities measured = 1,657.83 **tonnes CO_2e.**

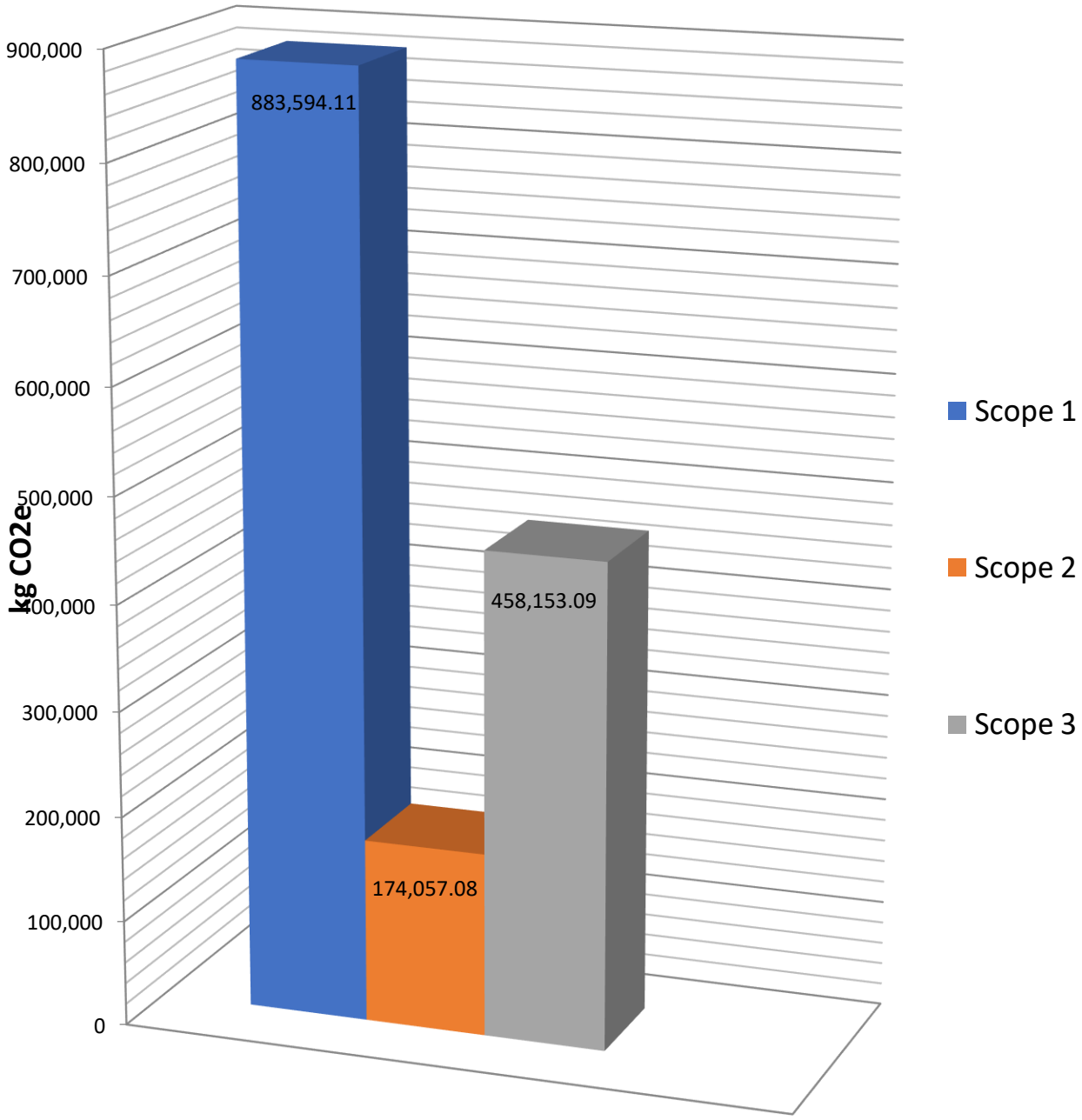
Location Based

The Total Carbon Footprint of the activities measured = 1,515.80 **tonnes CO_2e.**

Sources of CO_2e by emission activity

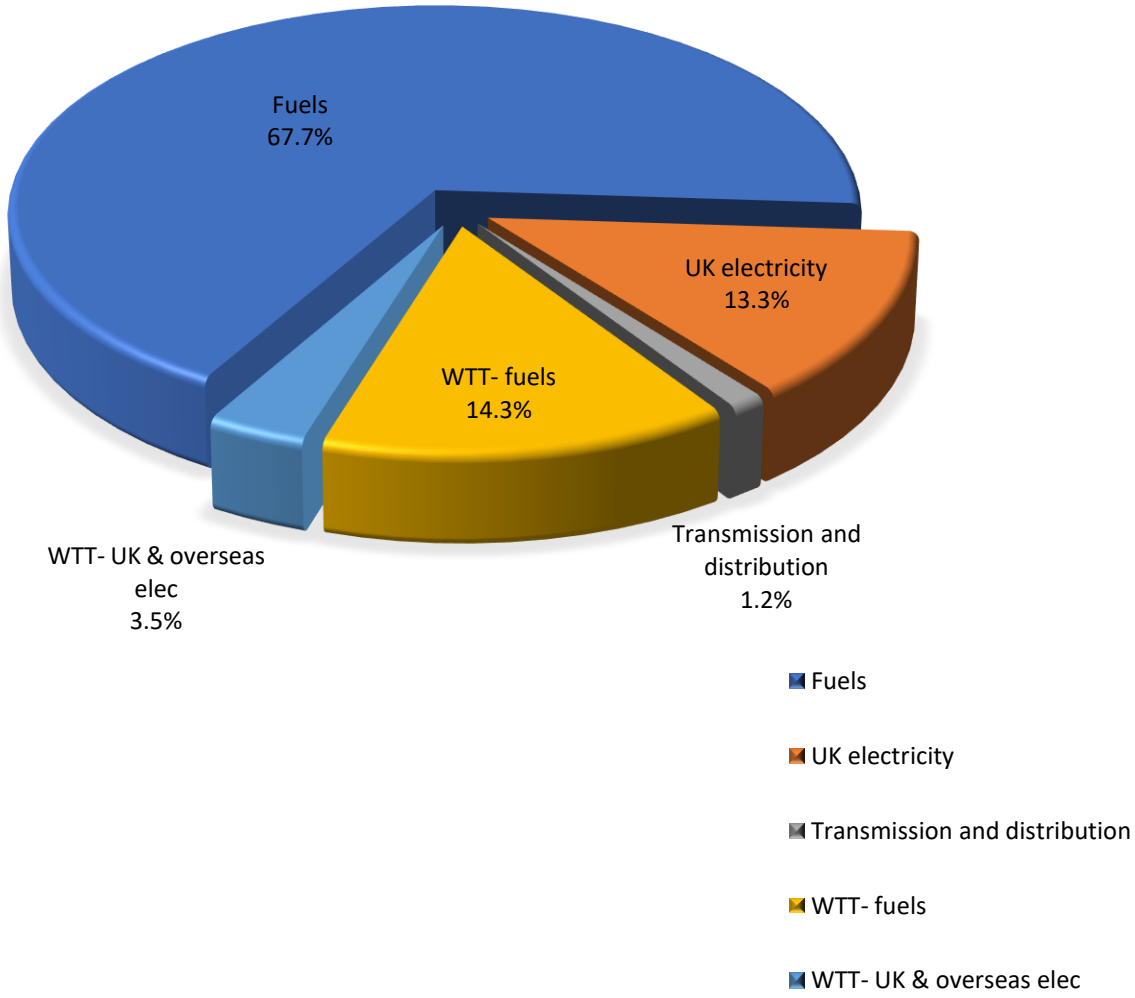


Sources of CO_2e emissions by GHG Protocol Scope

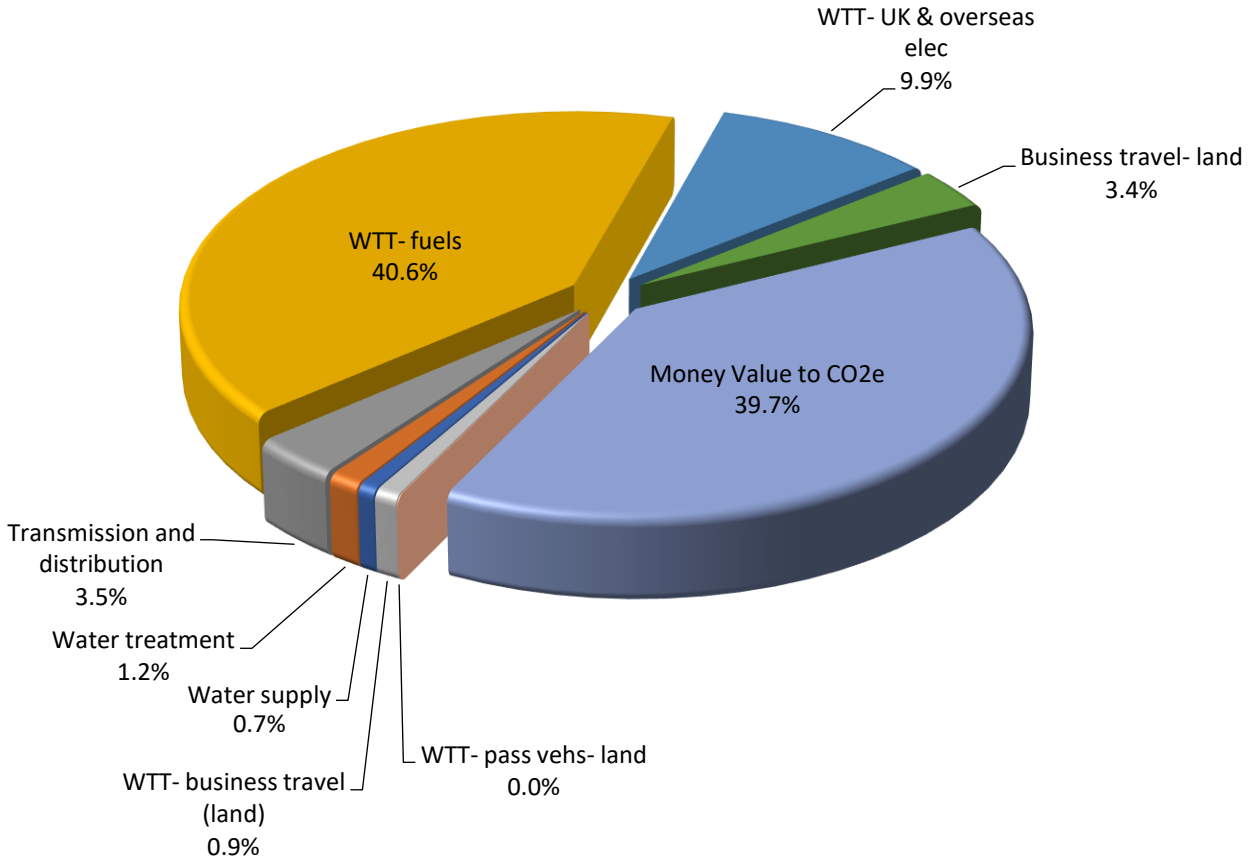


Footprint detail

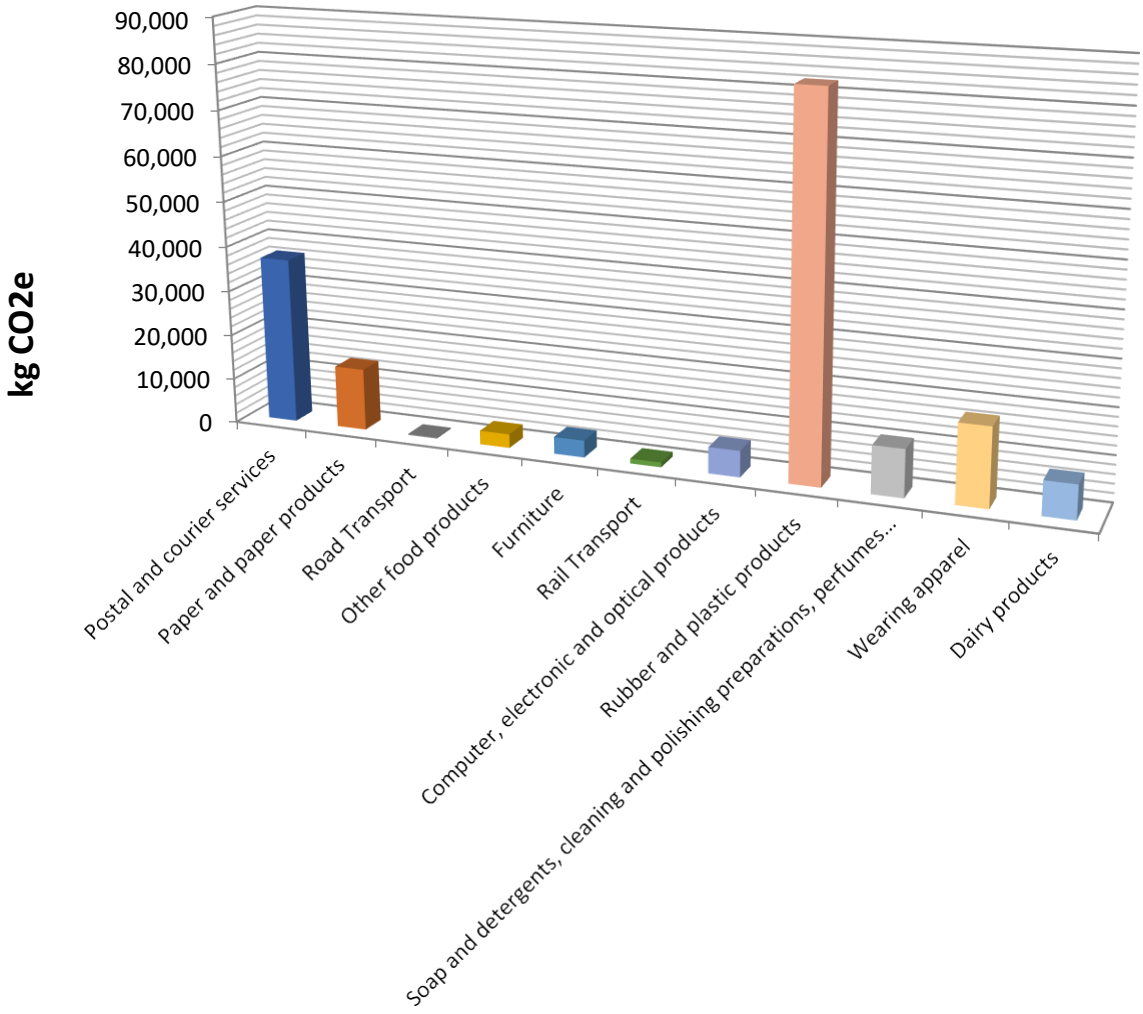
Sources of CO2e emissions by Energy & Fuel Use



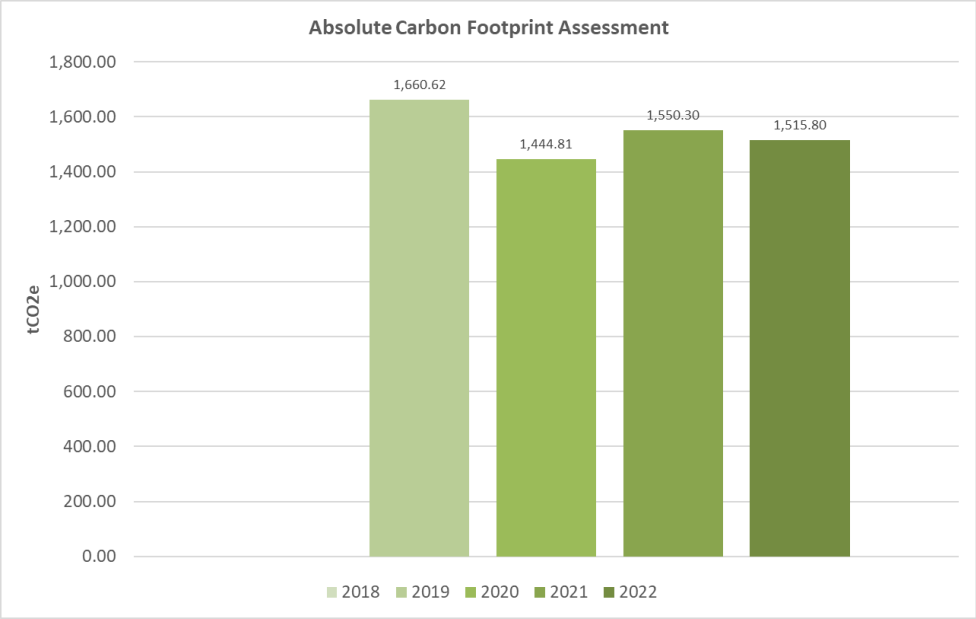
Sources of CO2e by Indirect Emissions (Scope 3)



Sources of CO_2e from expenditure data provided (Scope 3)

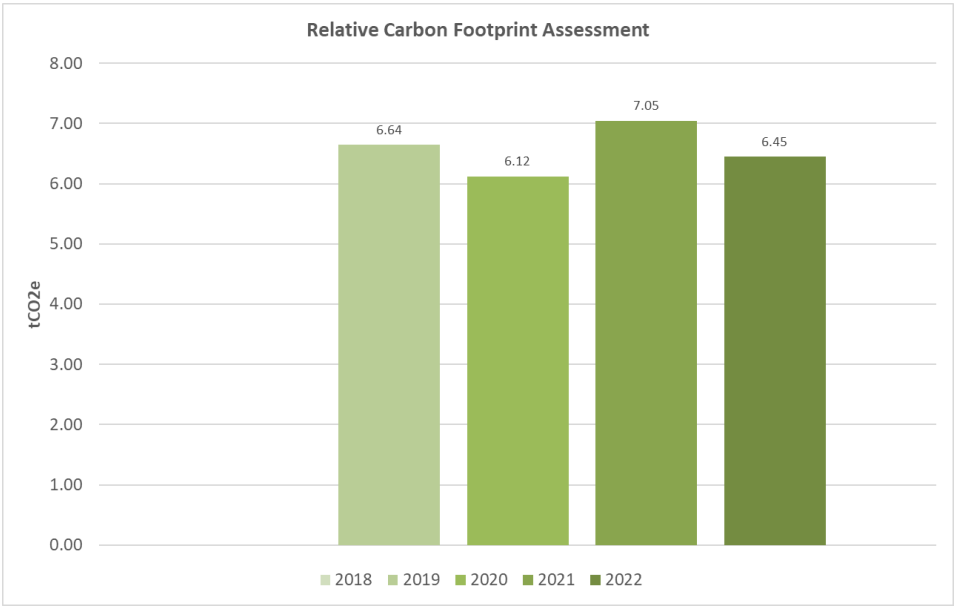


Carbon Footprint Year on Year Comparison



Ribble Valley Borough Council Absolute Carbon Footprint Comparison Assessment

On an absolute basis, the total aggregated emissions in 2022/23 were stated as 1,515.80 tCO_2e (-2%) compared with 1,550.30 tCO_2e in 2021/22.



Ribble Valley Borough Council Relative Carbon Footprint Comparison Assessment

On a relative basis, using the performance indicator for Ribble Valley Borough Council the relative total emissions in 2022/23 were stated as 6.45 tCO_2e per employee (-8%) compared with 7.05 tCO_2e in 2021/22.

Part 1 – Carbon Footprint Reduction Recommendations

The most significant sources of CO_2e emissions identified are:

- Emissions arising from diesel in company cars, including WTT (43%)
- Emissions arising from natural gas use, including WTT (28%)
- Emissions arising from electricity use, including T&D and WTT (16%)

The Ribble Valley Borough Council carbon footprint is very robust in terms of methodologies and data applied. To build on this Ribble Valley Borough Council could discuss with their core suppliers if carbon footprint data specific to their products is available. This is generally available from transportation providers but could start with suppliers of products with the highest carbon footprint/revenue (e.g., rubber and plastic products), such requirements could be built into contract specifications.

Emissions Reduction Targets and Strategy Development

Following the 2022 carbon footprint, next steps could include the development of reduction targets and strategy in line with UN recommendations. Under the UN Climate Neutral Now framework the following are recommended to ensure organisations align with global goals of limiting temperature increases to 1.5°C above pre-industrial levels:

- Set a Net Zero target by 2050 or earlier.
- Set interim reduction targets aligning with the science - for example, reduce emissions by 50% of your baseline by 2030 meaning **at least 5% per year target**.
- Develop and implement a strategy to achieve short – mid- and long-term targets.
- On-going review of emissions against targets to track progress and ensure continued alignment with the climate science.
- It is accepted that reduction targets can be set against the Ribble Valley Borough Council relative emissions e.g., tonnes CO_2e/employee.

To reduce these emissions, it is recommended that:

Energy and Fuels

- Improve consumption visibility by setting up a central platform for monitoring and targeting of building energy use.
- Ensure out of hours energy consumption is minimised where possible.
- Develop and implement a staff energy and environmental awareness programme, consider introducing a web based tailored staff awareness training solution.
- Where relevant review the Ribble Valley Borough Council Energy Performance of Buildings Directive (EPBD) reports (DECs/EPCs/TM44) covering the Councils buildings. Assess and roll out recommendations where appropriate.
- Opportunities may include improvements to building fabric, higher efficiency heating systems, use of alternative/renewable energy sources for example Air Source Heat Pumps (ASHPs) Ground Source Heat Pumps (GSHPs), solar thermal, solar PV or biomass capacity.
- Ensure roll out of high efficiency LED lighting with integrated lighting sensors and controls where appropriate.
- Ensure all PCs and ancillary equipment is switched off out of hours, consider introducing a site wide script to isolate all equipment outside of business hours.

Transport

- Improvements to fuel and mileage monitoring and management and development of a transport policy and objectives.
- As more electric vehicles are available in the marketplace, a transition to low/no carbon vehicles should be planned and will mean that Ribble Valley Borough Council will be able to further reduce the carbon footprint of its operations as well as costs.
- It is understood that staff are required to travel during day-to-day activities however a travel hierarchy could be implemented that applies the following principles:
  - Is the travel necessary - can the meeting be undertaken virtually (zero emissions)?
  - If the travel is necessary - can 'active travel' be used (zero or very low emissions)?
  - If the travel is necessary and not local - can public transport be used (low emissions)?
  - If the above are not practical consider pool cars/hire cars, making sure they are low emission and hire cars used for +100-mile trips only (prioritise low emission vehicles).
  - If the above are not practical, grey fleet expenses policies could reward use of low emission vehicles where relevant (encourage low emission vehicles).
  - Only use air travel where this is necessary (high emissions).

Purchasing of Goods and Services

Procurement of products used in the operation is an important support mechanism in delivering the Ribble Valley Borough Council decarbonisation objectives. This can be achieved through further engagement with key stakeholders as early as possible to identify the outcome required and determining, in conjunction with the market, the best way of delivering this. This may involve challenging the norm and capturing and embracing innovative solutions. Agreed sustainability objectives and requirements can then be embedded through the procurement processes (specification, tender, evaluation criteria & contract management).

If Ribble Valley Borough Council have an extensive supply chain a prioritisation exercise could highlight services providers which represent the highest balance of, empirically assessed, categories according to spend or carbon impact as relevant to Ribble Valley Borough Council.

The outcome of this exercise can then ensure effort is focused where needed and prioritises market engagement requirements as well as who internally needs to be engaged and aware of key issues. This then helps the prioritisation of expenditure on sustainability resource, which in turn informs the focus on priority suppliers and categories and internal stakeholders.

Support, tools and other resources will be required over the coming years to help organisations such as Ribble Valley Borough Council drive change across their supply chain including from UK Government. Some sustainable procurement tools and guidance are already in place:

- https://www.gov.uk/guidance/sustainable-procurement-tools

These are written for the public sector, but principles can be applied by any organisation and reviewed so that useful specifications can be identified and applied for Ribble Valley Borough Council. The most important stage within the procurement process is always to undertake a review of the need for procurement in the first instance and to question if alternative procurement routes should be considered.

These recommendations are non-exhaustive and are designed to provide guidance only.

To effectively monitor the Carbon Footprint of Ribble Valley Borough Council over time, it is also recommended that a relevant performance indicator is chosen e.g. tonnes CO_2e per Employee.

Footprint Period: 2022 Assessment

1,515.80 tonnes CO_2e / 235 employees = 6.45 tonnes of CO_2e per Employee per year.

Footprint Period: 2021 Assessment

1,550.30 tonnes CO_2e / 220 employees = 7.05 tonnes of CO_2e per Employee per year.

Footprint Period: 2020 Assessment

1,444.81 tonnes CO_2e / 236 employees = 6.12 tonnes of CO_2e per Employee per year.

Footprint Period: 2019 Assessment

1,660.62 tonnes CO_2e / 250 employees = 6.64 tonnes of CO_2e per Employee per year.

Other performance indicators could also be used, such as those based on business metrics (e.g., floor area).

Part 2 – Carbon Neutrality Achievement Support Scope 1 – 2

OCW work with organisations to support verified GHG emission projects around the world that reduce global GHG emissions. The OCW GHG offsetting program ensures that all the emissions offset within the Carbon Neutral International Standard coincide to real, quantifiable, and permanent project-based emission reductions, providing integrity to the voluntary carbon market.

Ribble Valley Borough Council Projected Cost of Achieving Carbon Neutrality

In addition to reducing its own emissions through action targeted reduction strategies, Ribble Valley Borough Council can off-set its unavoidable CO_2e emissions now. This can be achieved through investing in verified projects that support reduction of CO_2e emissions even further. In doing so, Ribble Valley Borough Council will be provided with time to develop effective emissions reduction strategies. Based on a recent report submitted by University College London (UCL) it has been projected that the average price of carbon credits should rise from $3-5 to $20-50/$tCO_2e$ by 2030 driving real investment in new projects to reduce emissions. Based on this to offset the balance of its 01/04/2022-31/03/2023 Scope 1 and 2 Carbon Footprint of 1,100 tCO_2e would equate to 1,100 x £30 = £31,740.00

The One Carbon World customer services team will be happy to share a proposal with you to support you with the options in offsetting your Scope 1 and 2 emissions covering the period 01/04/2022 - 31/03/2023.


CARBON NEUTRAL
TM
INTERNATIONAL STANDARD

Scope kg CO2e Summary Table

Activity	Total kg CO2e	Total Tons CO2e
Scope 1	883,594.11	883.59
Scope 2	174,057.08	174.06
Scope 3	458,153.09	458.15
Outside of Scopes	0.00	0.00
Total	**1,515,804.29**	**1,515.80**

Activity Type kg CO2e Summary Table

Activity Type	Total kg CO2e	Total Tons CO2e
Fuels	882,951.06	882.95
Passenger vehicles	643.06	0.64
UK electricity	174,057.08	174.06
Water supply	3,111.12	3.11
Water treatment	5,679.36	5.68
Transmission and distribution	15,922.38	15.92
WTT- fuels	185,941.80	185.94
WTT- UK & overseas elec	45,435.94	45.44
Business travel- land	15,794.33	15.79
Money Value to CO2e	181,955.74	181.96
WTT- pass vehs- land	170.00	0.17
WTT- business travel (land)	4,142.42	4.14
Total	**1,515,804.29**	**1,515.80**

Type kg CO2e Summary Table

Type	Total kg CO2e	Total Tons CO2e
Gaseous fuels	360,933.06	360.93
Liquid fuels	522,018.00	522.02
Cars (by size)	643.06	0.64
Electricity generated	174,057.08	174.06
Water supply	3,111.12	3.11
Water treatment	5,679.36	5.68
Postal and courier services - Money Value	36,825.39	36.83
Paper and paper products - Money Value	13,729.55	13.73
Road Transport - Money Value	216.88	0.22
Other food products - Money Value	3,047.59	3.05
Furniture - Money Value	3,745.04	3.75
Rail Transport - Money Value	1,048.58	1.05
Computer, electronic and optical products - Money Value	5,766.61	5.77
Rubber and plastic products - Money Value	82,343.12	82.34
Soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations - Money Value	10,464.28	10.46
Wearing apparel - Money Value	17,289.97	17.29
Dairy products - Money Value	7,478.72	7.48
T&D- UK electricity	15,922.38	15.92
Cars (by size)	15,794.33	15.79
Gaseous fuels	61,493.47	61.49
Liquid fuels	124,448.33	124.45
WTT- UK electricity (generation)	41,628.61	41.63
WTT- UK electricity (T&D)	3,807.33	3.81
WTT- cars (by size)	4,312.42	4.31
Total	**1,515,804.29**	1,515.80

Class & UOM kg CO2e Summary Table

Class & UOM	Total kg CO2e	Total Tons CO2e
Natural gas kWh (Gross CV)	360,933.06	360.93
Diesel (average biofuel blend) litres	520,349.06	520.35
Gas oil litres	1,668.93	1.67
Average car km	643.06	0.64
Electricity: UK kWh	174,057.08	174.06
Water supply cubic metres	3,111.12	3.11
Water treatment cubic metres	5,679.36	5.68
Postal and courier service costs - Money Value	36,825.39	36.83
Soap and detergents, cleaning and polishing preparations, perfumes and toilet preparation costs - Money Value	10,464.28	10.46
Paper and paper product costs - Money Value	13,729.55	13.73
Road Transport costs - Money Value	216.88	0.22
Other food product costs - Money Value	3,047.59	3.05
Furniture costs - Money Value	3,745.04	3.75
Rail Transport costs - Money Value	1,048.58	1.05
Computer, electronic and optical product costs - Money Value	5,766.61	5.77
Rubber and plastic product costs - Money Value	82,343.12	82.34
Wearing apparel costs - Money Value	17,289.97	17.29
Dairy product costs - Money Value	7,478.72	7.48
Electricity: UK kWh	61,358.32	61.36
Average car km	20,106.75	20.11
Natural Gas kWh (Gross CV)	61,493.47	61.49
Diesel (average biofuel blend) litres	124,065.65	124.07
Gas Oil litres	382.68	0.38
Total	**1,515,804.29**	**1,515.80**

Client Reference kg CO2e Summary Table

Scope	Reference	Total kg CO2e	Total Tons CO2e
Scope 1	Company Cars - Diesel	0.00	0.00
Scope 1	Company Cars - Fuel	520,349.06	520.35
Scope 1	Company Cars - Hybrid	556.63	0.56
Scope 1	Company Cars - Petrol	86.43	0.09
Scope 1	Gas	360,933.06	360.93
Scope 1	Gas Oil	1,668.93	1.67
Scope 2	Electricity	174,057.08	174.06
Scope 3	Company Cars - Diesel	0.00	0.00
Scope 3	Company Cars - Fuel	124,065.65	124.07
Scope 3	Company Cars - Hybrid	145.23	0.15
Scope 3	Company Cars - Petrol	24.77	0.02
Scope 3	Electricity	61,358.32	61.36
Scope 3	Gas	61,493.47	61.49
Scope 3	Gas Oil	382.68	0.38
Scope 3	Grey Fleet Cars - Diesel	9,123.72	9.12
Scope 3	Grey Fleet Cars - Electric	38.21	0.04
Scope 3	Grey Fleet Cars - Hybrid	2,090.89	2.09
Scope 3	Grey Fleet Cars - Petrol	8,683.93	8.68
Scope 3	Purchased Goods and Services	181,955.74	181.96
Scope 3	Water Supply	3,111.12	3.11
Scope 3	Water Treatment	5,679.36	5.68
	Total	**1,515,804.29**	**1,515.80**

Emissions factors used in footprint calculation:

Activity Type	Emissions Factor	Source
WTT- UK & overseas elec	Total WTT- UK & overseas elec : WTT- UK electricity (generation) : Electricity: UK kWh :	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- UK & overseas elec	Total WTT- UK & overseas elec : WTT- UK electricity (T&D) : Electricity: UK kWh :	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- pass vehs- land	Total WTT- pass vehs- land : WTT- cars (by size) : Average car km : Petrol	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- pass vehs- land	Total WTT- pass vehs- land : WTT- cars (by size) : Average car km : Diesel	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- pass vehs- land	Total WTT- pass vehs- land : WTT- cars (by size) : Average car km : Hybrid	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- fuels	Total WTT- fuels : Gaseous fuels : Natural gas kWh (Gross CV) :	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- fuels	Total WTT- fuels : Liquid fuels : Gas oil litres :	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- fuels	Total WTT- fuels : Liquid fuels : Diesel (average biofuel blend) litres :	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- business travel (land)	Total WTT- business travel (land) : WTT- cars (by size) : Average car km : Petrol	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- business travel (land)	Total WTT- business travel (land) : WTT- cars (by size) : Average car km : Diesel	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- business travel (land)	Total WTT- business travel (land) : WTT- cars (by size) : Average car km : Hybrid	DEFRA Conversion Factors Full Set for Advanced Users 2022
WTT- business travel (land)	Total WTT- business travel (land) : WTT- cars (by size) : Average car km : Battery Electric Vehicle	DEFRA Conversion Factors Full Set for Advanced Users 2022
Water treatment	Total Water treatment : Water treatment : Water treatment cubic metres :	DEFRA Conversion Factors Full Set for Advanced Users 2022
Water supply	Total Water supply : Water supply : Water supply cubic metres :	DEFRA Conversion Factors Full Set for Advanced Users 2022
UK electricity	Total UK electricity : Electricity generated : Electricity: UK kWh :	DEFRA Conversion Factors Full Set for Advanced Users 2022
Transmission and distribution	Total Transmission and distribution : T&D- UK electricity : Electricity: UK kWh :	DEFRA Conversion Factors Full Set for Advanced Users 2022
Passenger vehicles	Total Passenger vehicles : Cars (by size) : Average car km : Petrol	DEFRA Conversion Factors Full Set for Advanced Users 2022
Passenger vehicles	Total Passenger vehicles : Cars (by size) : Average car km : Diesel	DEFRA Conversion Factors Full Set for Advanced Users 2022
Passenger vehicles	Total Passenger vehicles : Cars (by size) : Average car km : Hybrid	DEFRA Conversion Factors Full Set for Advanced Users 2022
Money Value to CO2e	Total Money Value to CO2e : Dairy products : Dairy product costs :	Defra / OCW
Money Value to CO2e	Total Money Value to CO2e : Other food products : Other food product costs :	Defra / OCW
Money Value to CO2e	Total Money Value to CO2e : Wearing apparel : Wearing apparel costs :	Defra / OCW

Money Value to CO2e	Total Money Value to CO2e : Paper and paper products : Paper and paper product costs :	Defra / OCW
Money Value to CO2e	Total Money Value to CO2e : Soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations : Soap and detergents, cleaning and polishing preparations, perfumes and toilet preparation costs :	Defra / OCW
Money Value to CO2e	Total Money Value to CO2e : Rubber and plastic products : Rubber and plastic product costs :	Defra / OCW
Money Value to CO2e	Total Money Value to CO2e : Computer, electronic and optical products : Computer, electronic and optical product costs :	Defra / OCW
Money Value to CO2e	Total Money Value to CO2e : Furniture : Furniture costs :	Defra / OCW
Money Value to CO2e	Total Money Value to CO2e : Postal and courier services : Postal and courier service costs :	Defra / OCW
Money Value to CO2e	Total Money Value to CO2e : Rail Transport : Rail Transport costs :	Defra / OCW
Money Value to CO2e	Total Money Value to CO2e : Road Transport : Road Transport costs :	Defra / OCW
Fuels	Total Fuels : Gaseous fuels : Natural gas kWh (Gross CV) :	DEFRA Conversion Factors Full Set for Advanced Users 2022
Fuels	Total Fuels : Liquid fuels : Gas oil litres :	DEFRA Conversion Factors Full Set for Advanced Users 2022
Fuels	Total Fuels : Liquid fuels : Diesel (average biofuel blend) litres :	DEFRA Conversion Factors Full Set for Advanced Users 2022
Business travel- land	Total Business travel- land : Cars (by size) : Average car km : Petrol	DEFRA Conversion Factors Full Set for Advanced Users 2022
Business travel- land	Total Business travel- land : Cars (by size) : Average car km : Diesel	DEFRA Conversion Factors Full Set for Advanced Users 2022
Business travel- land	Total Business travel- land : Cars (by size) : Average car km : Hybrid	DEFRA Conversion Factors Full Set for Advanced Users 2022
Business travel- land	Total Business travel- land : Cars (by size) : Average car km : Battery Electric Vehicle	DEFRA Conversion Factors Full Set for Advanced Users 2022