One Carbon World
Carbon Footprint Report

Presented to:

Ribble Valley Borough Council
2023/24

Issued March 2025

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Registered Office: One Carbon World Ltd, B3 Kingfisher House, Kingsway, Team Valley Trading Estate, Gateshead, England, NE11 0JQ

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Think of the environment - print this report only if it is essential.

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 Greenhouse 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 Summary

Name: Ribble Valley Borough Council

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

Description: UK Local Authority - District Council

Footprint Boundary

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

Footprint Period

01/04/2023 to 31/03/2024

Emission Categories Included in Footprint

Business Travel (partial), Purchased Goods & Services (partial), Water, Fuel & Energy

Emissions Summary

Total carbon footprint of activities measured = 1,402.41 tonnes CO_2e

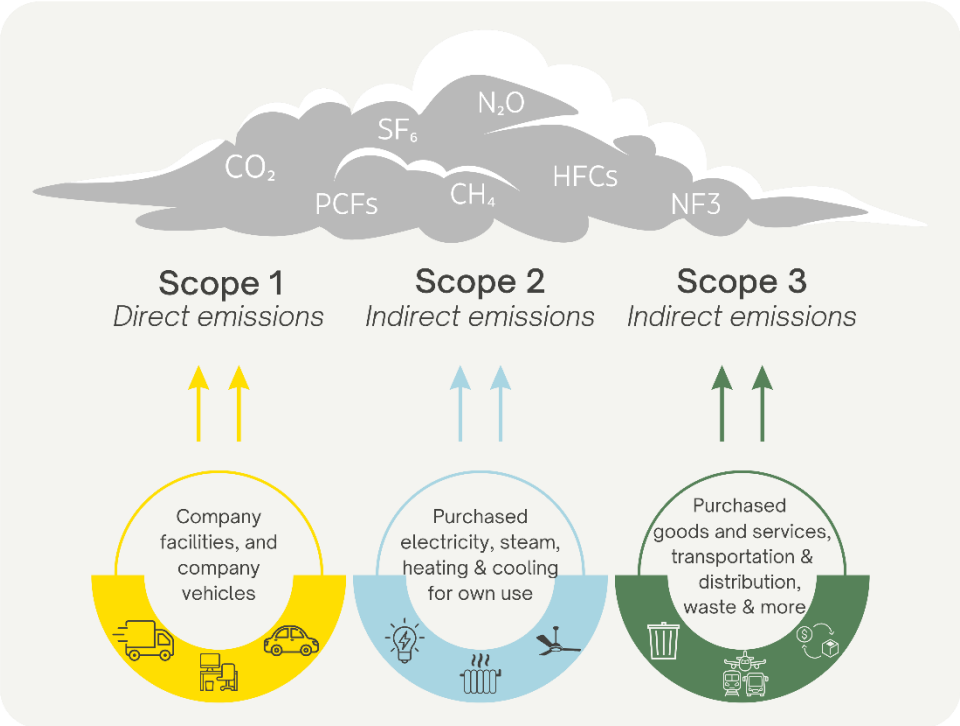
Scope 1 emissions = 689.53 tonnes CO_2e

Scope 2 emissions = 163.20 tonnes CO_2e

Scope 3 emissions = 549.68 tonnes CO_2e

Scope of Emissions

The GHG Protocol categorises GHG emissions into three 'scopes'. This enables organisations to distinguish between direct emissions from its own operations and indirect emissions from its value chain (upstream and downstream). The GHG Protocol Corporate Standard requires reporting a minimum of scope 1 and scope 2 emissions.



Scope 1 - Direct 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:

- Stationary combustion: emissions from the combustion of fuels in stationary sources, that the reporting organisation owns or controls. For example, the combustion of natural gas in boilers.

- Mobile combustion: emissions from the combustion of fuels in vehicles that the reporting organisation owns or controls. For example, the combustion of petrol in owned vehicles.

- 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 : Plug-in Hybrid Electric Vehicle
- Total Fuels : Liquid fuels : Diesel (average biofuel blend) litres :
- Total Fuels : Gaseous fuels : Natural gas kWh (Gross CV) :
- Total Bioenergy : Biofuel : Biodiesel HVO litres :

Scope 2 - Indirect GHG Emissions

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

Scope 2 Emissions data supplied and included in footprint

- Total UK electricity for Evs : Cars (by size) : Average car km : Plug-in Hybrid Electric Vehicle
- Total UK electricity : Electricity generated : Electricity: UK kWh :

Scope 3 - Indirect GHG Emissions

Scope 3 emissions are all indirect emissions (not included in scope 2) that occur in the reporting organisations value chain, including both upstream and downstream emissions. Examples of Scope 3 emissions include business travel (by means not owned or controlled by an organisation), waste disposal, and purchased goods and services. 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 : Plug-in Hybrid Electric Vehicle
- 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- pass vehs- land : WTT- cars (by size) : Average car km : Battery Electric Vehicle
- Total WTT- fuels : Liquid fuels : Diesel (average biofuel blend) litres :
- Total WTT- fuels : Gaseous fuels : Natural gas kWh (Gross CV) :
- Total WTT- bioenergy : WTT- biofuel : Biodiesel HVO litres :
- Total Water treatment : Water treatment : Water treatment cubic metres :
- Total Water supply : Water supply : Water supply cubic metres :
- Total UK electricity T&D for EVs : Cars (by size) : Average car km : Plug-in Hybrid Electric Vehicle
- Total Transmission and distribution : T&D- UK electricity : Electricity: UK kWh :
- 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 : Rail Transport : Rail Transport costs :
- Total Money Value to CO2e : Printing and recording services : Printing and recording service 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 manufactured goods : Other manufactured goods 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

Methodology and Assumptions

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), sulphur 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 Omissions

- Biodiesel HVO: the quantity of HVO consumed has been estimated based on total HVO cost and an average unit cost of £1.69 per litre.
- Electric Vans: Ribble Valley Borough Council own two electric vans which are charged onsite. The associated emissions from electricity consumption is captured within building electricity consumption.
- Leased Electric Cars: leased electric cars are charged onsite, therefore emissions associated with electricity use are captured within building electricity consumption. Emissions associated with petrol consumption (for plug-in hybrid vehicles) and well-to-tank emissions are accounted for separately.
- Refrigerants: there were no reported refrigerant leakages during the measurement period.
- Water treatment: it is assumed that all supplied water enters the sewage system through the main drains.
- Business travel: it is assumed that employee-owned electric vehicles used for business travel are predominately charged offsite (e.g., employee homes).
- Business travel: data for travel on buses is not available.
- Purchased goods and services: spend on protective clothing has been allocated to 'other manufactured goods'.
- Purchased goods and services: spend on reference books and newspapers has been allocated to 'printing and recording services'.
- Purchased goods and services: spend data has been uplifted to account for VAT.
- 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

l 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

Location Based

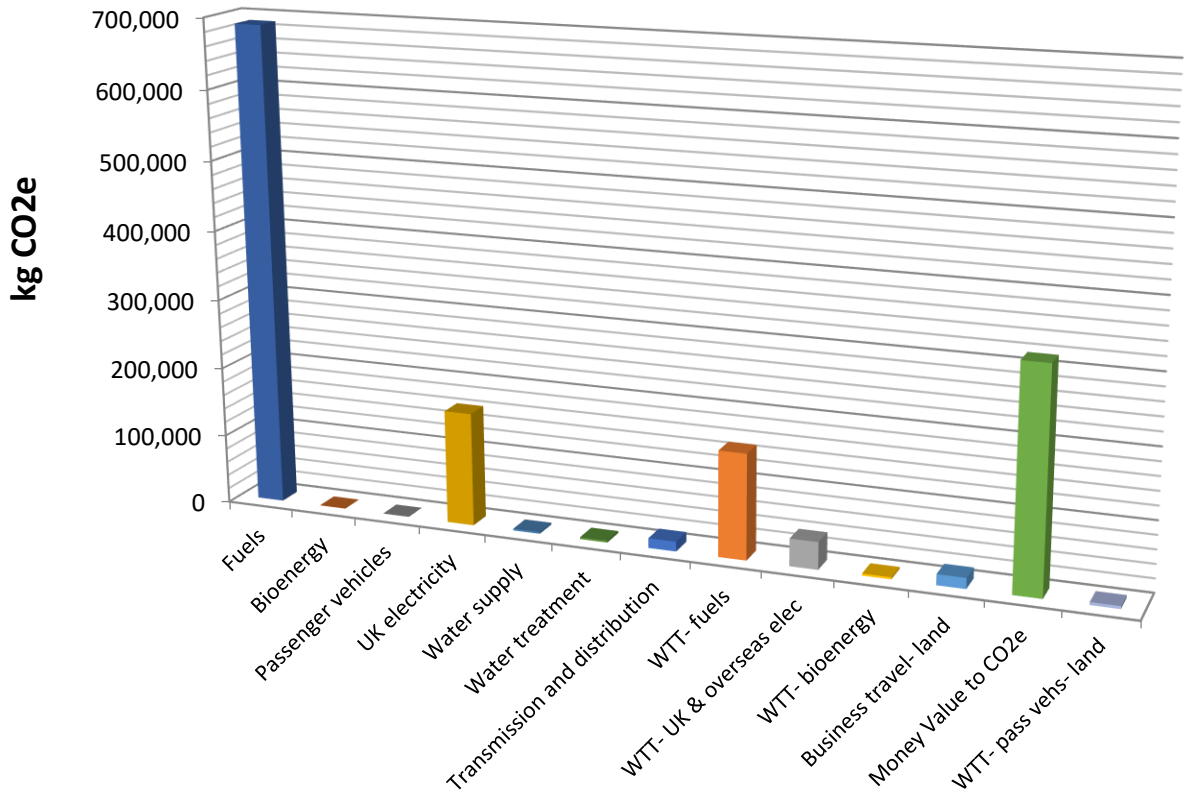
The Total Carbon Footprint of the activities measured = **1,402.41 tonnes CO_2e.**
This method reflects the average emissions intensity of grids on which energy consumption occurs. This method is reflected in the graphs and tables within this report.

Market Based

The Total Carbon Footprint of the activities measured = **1,600.16 tonnes CO_2e.**
This method reflects emissions from electricity that has purposefully been chosen (or the lack of choice). This has been calculated using a supplier specific emission factor from Npower (All Other Products tariff[1]).

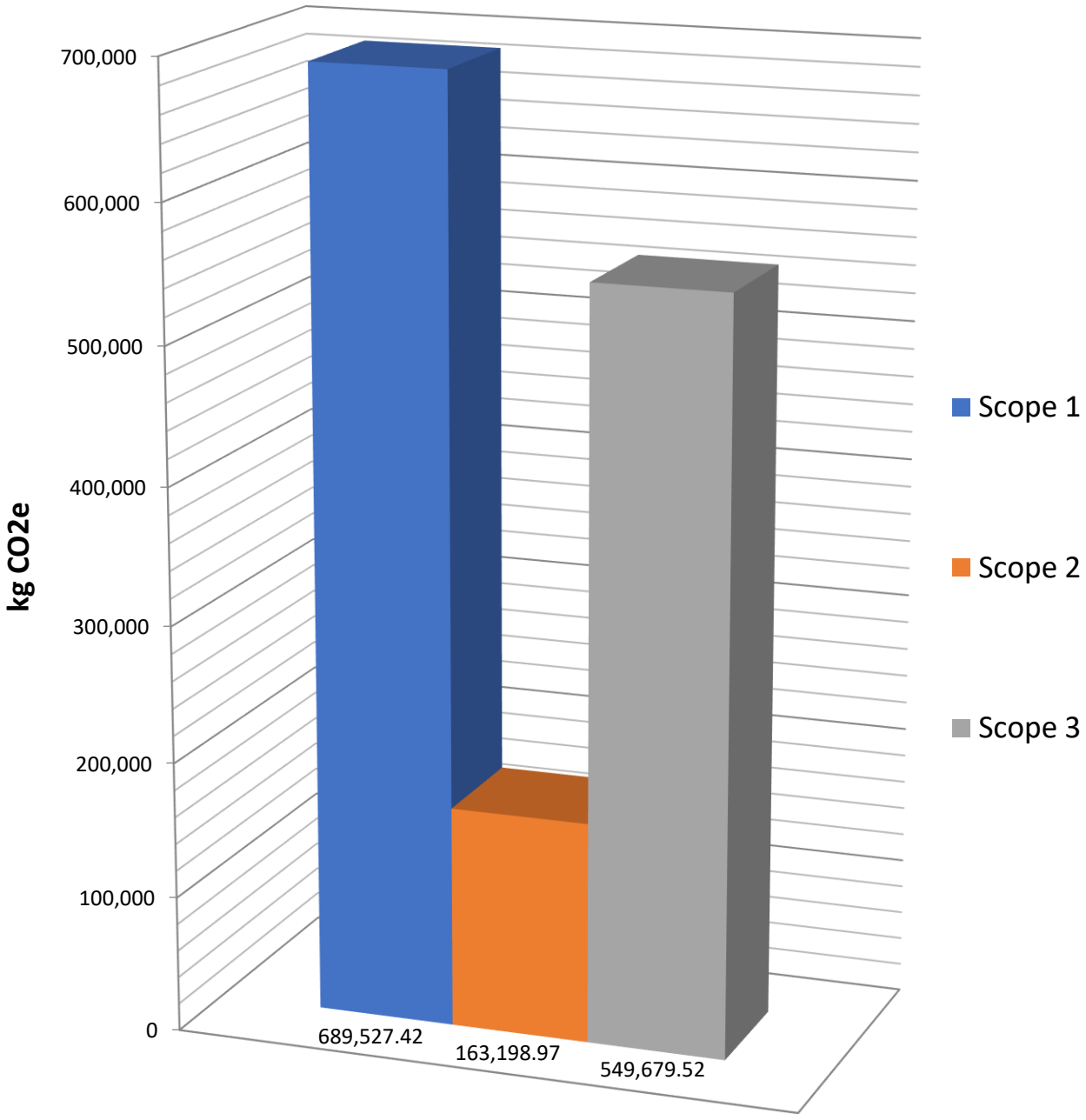
Total Outside of Scope emissions = 142.87 tonnes CO_2e
This includes outside of scope emissions from combustion of diesel, electricity consumption and biodiesel HVO.

Sources of CO_2e by emission activity

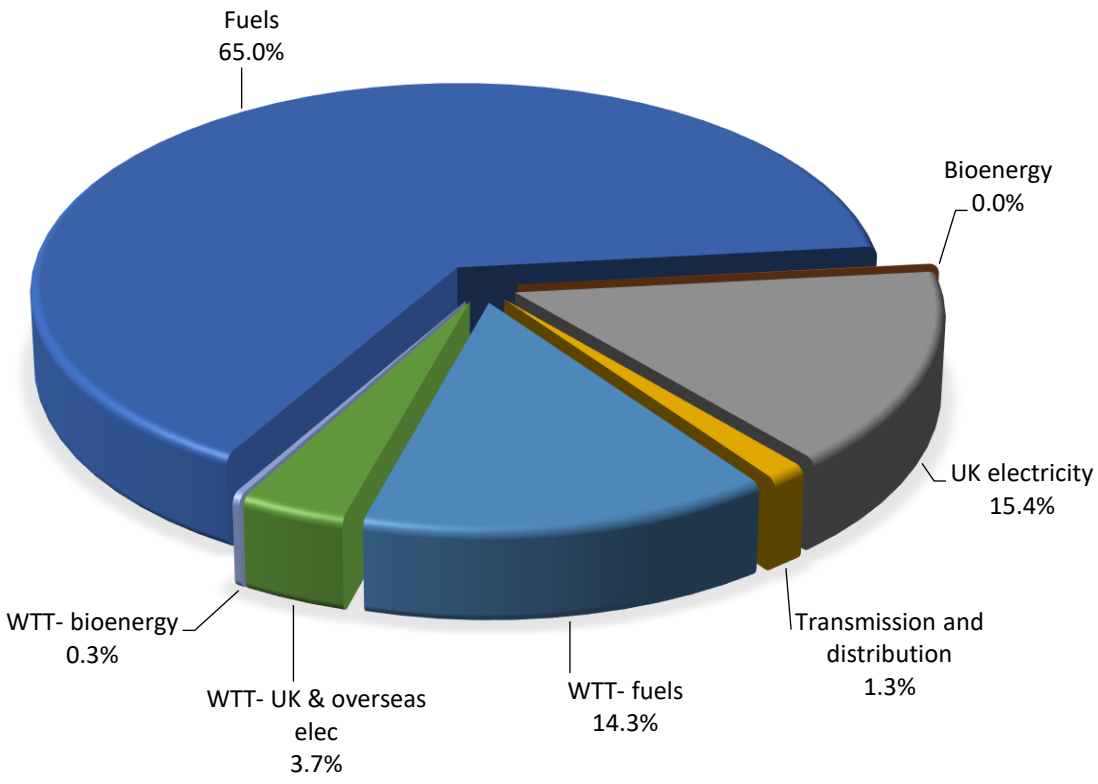


[1] Our fuel mix break down | npower Business Solutions

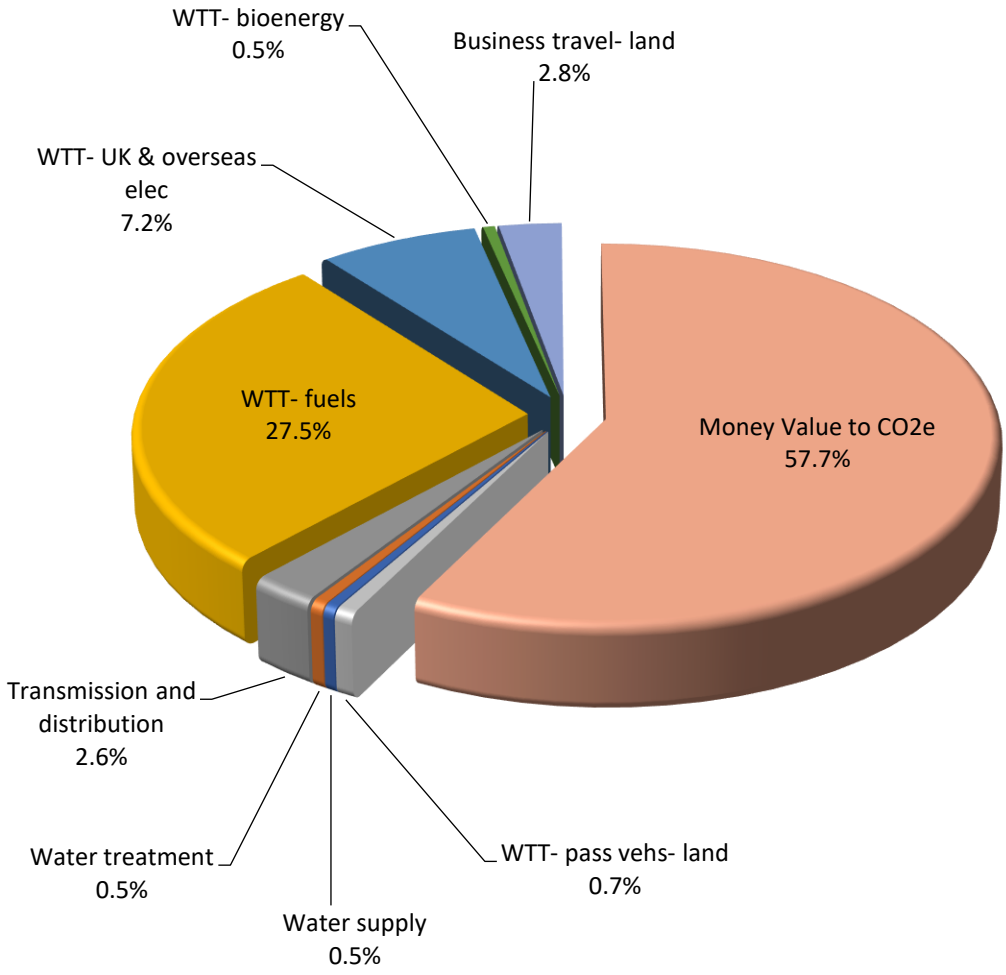
Sources of CO_2e emissions by GHG Protocol Scope



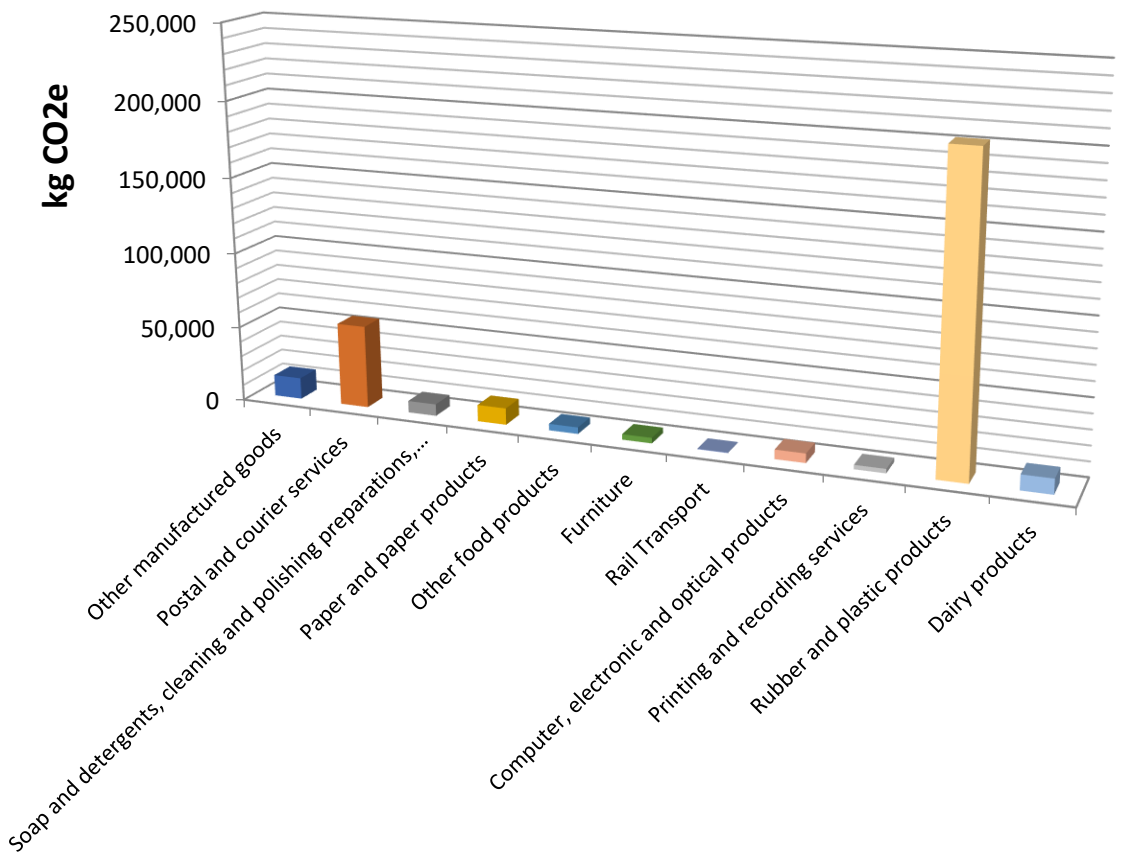
Sources of CO_2e emissions by Energy & Fuel Use



Sources of CO_2e by Indirect Emissions (Scope 3)



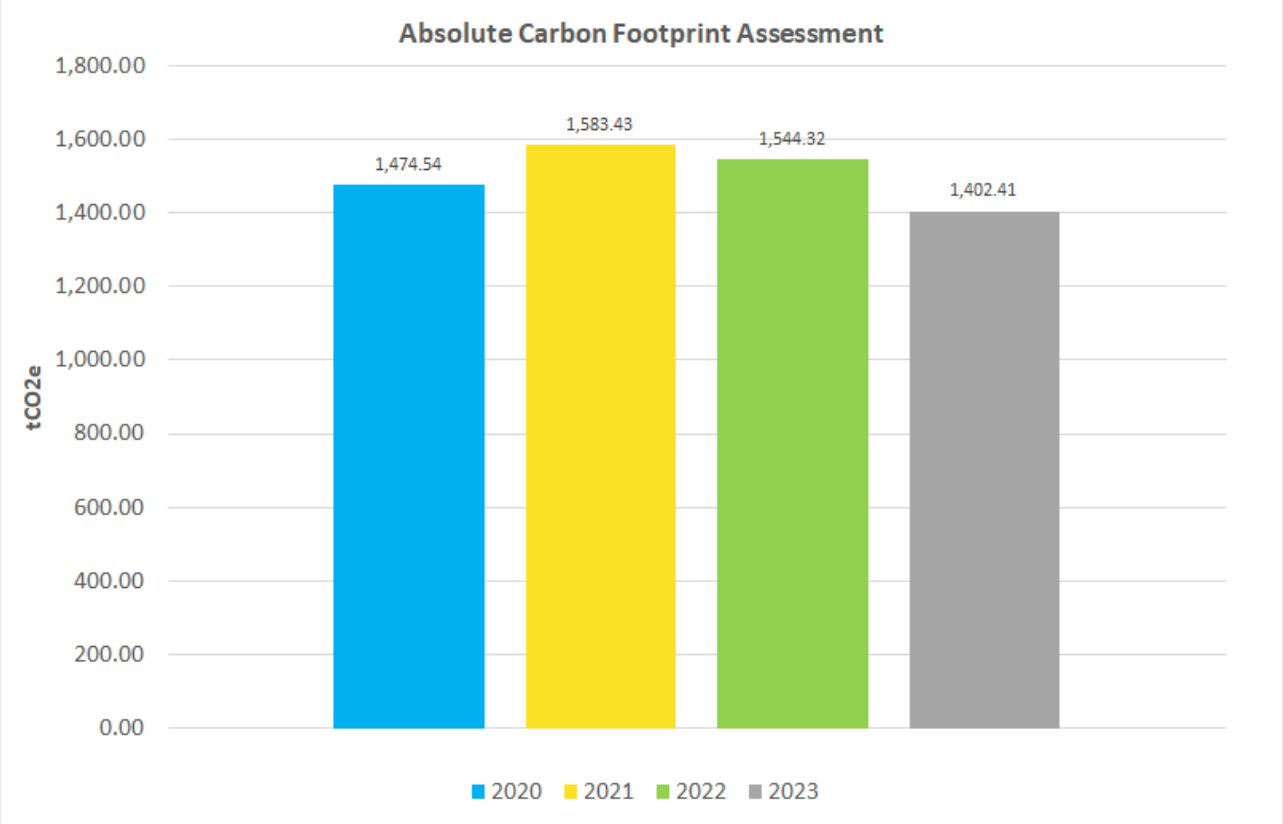
Sources of CO_2e from expenditure data provided (Scope 3)



Carbon Footprint Year on Year Comparison

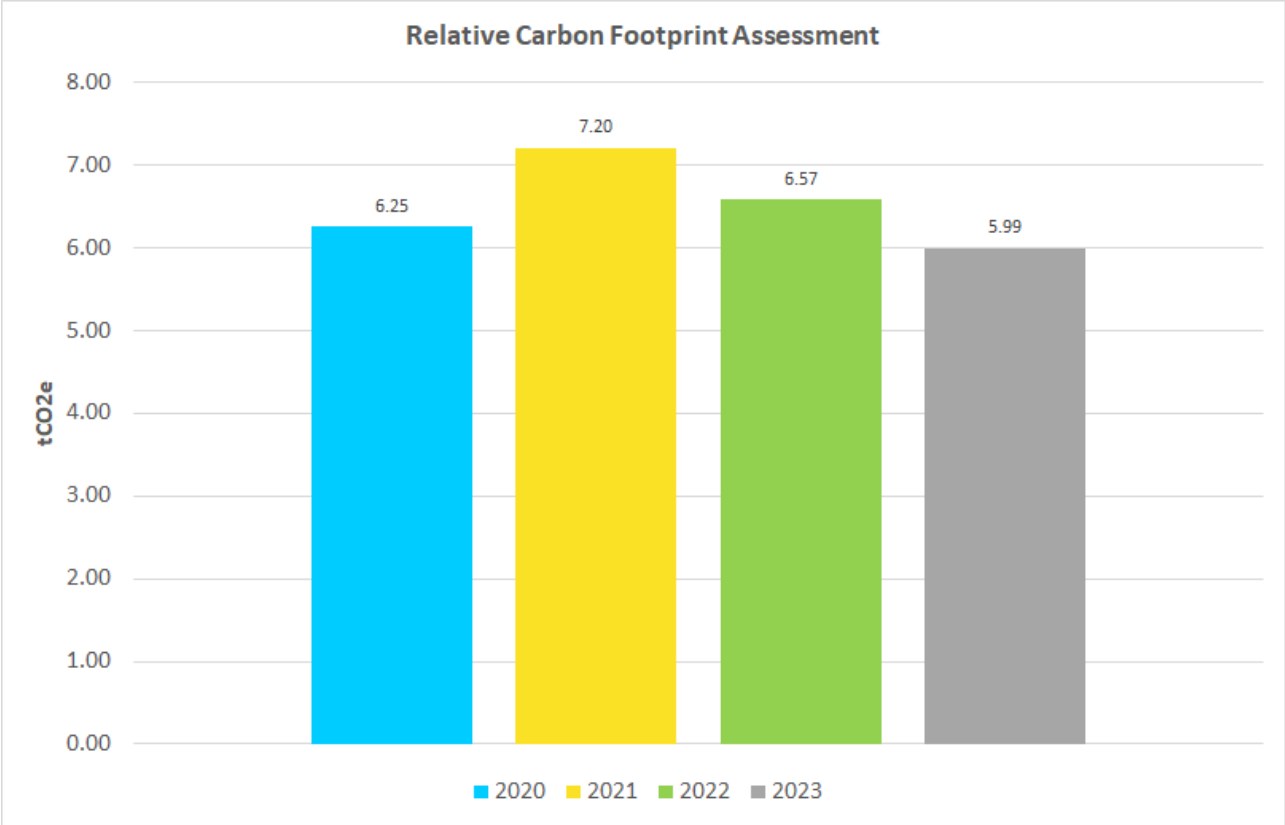
Recalculation

Emissions from 2020/21, 2021/22 and 2022/23 have been recalculated. This includes adjusting expenditure data to account for VAT and reallocating costs associated with protective clothing to the category of 'other manufactured goods'. Also, emissions from leased cars during the 2020/21 measurement period, initially allocated as scope 3, have been reallocated to scope 1 (0.08% impact).



Ribble Valley Borough Council Absolute Carbon Footprint Comparison Assessment

On an absolute basis, the total aggregated emissions in 2023/24 were stated as 1,402.41 tCO_2e (-9%) compared with 1,544.32 tCO_2e in 2022/23. This reduction in emissions is predominantly due to reduce gas and electricity consumption. Ribble Valley Borough Council also trialled biodiesel HVO in replace of diesel for some vehicles, which has contributed to a reduction in emissions.



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 2023/24 were stated as 5.99 tCO_2e per employee (-9%) compared with 6.57 tCO_2e in 2022/23.

High Impact Areas and Emissions Tracking

The most significant sources of CO_2e emissions identified are:

- Emissions arising from diesel use (42.6%)
- Emissions arising from natural gas use (17.3%)
- Emissions arising from electricity use (15.4%)
- Emissions arising from spend on rubber and plastic products (14.4%)

To build on this, Ribble Valley Borough Council could aim to provide data on all purchased goods and services. In doing so, a scope 3 screening exercise could be carried out to identify any high impact activities that are not currently accounted for. Data on all business travel could also be captured, with travel on buses currently not account for. Furthermore, Ribble Valley Borough Council could aim to capture data on additional scope 3 categories, such as operational waste and employee commuting.

Part 1 — Carbon Footprint Reduction Recommendations

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.
- Where relevant review the Ribble Valley Borough Council Energy Performance of Buildings Directive (EPBD) reports (DECs/EPCs/TM44). 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 heating 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.

Waste

Waste and recycling should be tracked closely on an annual basis. Focus on waste minimization in the first instance - divert waste from landfills through waste minimization, recycling, composting, donations, or reuse. Conduct at least one waste audit every two years and set targets to reduce, reuse and recycle. The audit may be performed by an internal team or a contracted third party. Opportunities for improvement may include increased recycling and other waste diversion methods.

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 continued 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 which 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.

Part 2 — Carbon Neutrality Achievement Support Scope 1 & 2

We are pleased to confirm that Ribble Valley Borough Council has been awarded the One Carbon World Carbon Neutral International Standard grant which includes the retirement of up to 100 tonnes equivalent of carbon credits from verified international projects and from United Nations clean development mechanism projects. With the retirement of these credits from 2023 - 2024 the Carbon Footprint from Ribble Valley Borough Council will be offset to a total of **1,303 tonnes.** The One Carbon World grant fund further supports the cost of carbon credits at £6.00 per ton for your Scope 1 and Scope 2 emissions.

The grant fund can support Ribble Valley Borough Council to rebalance all of their Scope 1 and Scope 2 emissions, on doing so we will issue you with a Carbon Neutrality Statement, empowering your teams to communicate to all stakeholders that they have measured and off-set all emissions arising from Scope 1 and Scope 2 activities.

Remaining Scope 1 & 2 emissions: 753.00 tCO_{2e}

Guide Typical Cost of Carbon Neutrality: £9,036 (753.00 x £12[2])

Guide Grant Fund Cost of Carbon Neutrality: £4,518 (753.00 x £6.00)

Carbon Neutrality Achievement Support Scope 1, Scope 2 and (partial) Scope 3

The One Carbon World customer services team will share a proposal with you to support you with the options in balancing your remaining emissions covering the period 01/04/2023-31/03/2024.

[2] This is based on a carbon credit market price of £12 per ton

Scope kg CO2e Summary Table

Activity	Total kg CO2e	Total Tons CO2e
Scope 1	689,527.42	689.53
Scope 2 (location-based)	163,198.97	163.20
Scope 3	549,679.52	549.68
Outside of Scopes	142,865.85	142.87
Total	**1,402,405.92**	**1,402.41**

Activity Type kg CO2e Summary Table

Activity Type	Total kg CO2e	Total Tons CO2e
Fuels	688,980.98	688.98
Bioenergy	371.60	0.37
Passenger vehicles	174.84	0.17
UK electricity	163,198.97	163.20
Water supply	2,526.77	2.53
Water treatment	2,879.05	2.88
Transmission and distribution	14,119.22	14.12
WTT- fuels	151,330.03	151.33
WTT- UK & overseas elec	39,303.44	39.30
WTT- bioenergy	2,908.03	2.91
Business travel- land	15,451.50	15.45
Money Value to CO2e	317,053.98	317.05
WTT- pass vehs- land	4,107.50	4.11
Total	**1,402,405.92**	**1,402.41**

Type kg CO2e Summary Table

Type	Total kg CO2e	Total Tons CO2e
Biofuel	371.60	0.37
Gaseous fuels	208,121.71	208.12
Liquid fuels	480,859.27	480.86
Cars (by size)	174.84	0.17
Electricity generated	163,198.97	163.20
Water supply	2,526.77	2.53
Water treatment	2,879.05	2.88
Other manufactured goods - Money Value	14,163.97	14.16
Postal and courier services - Money Value	54,870.38	54.87
Soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations - Money Value	7,764.83	7.76
Paper and paper products - Money Value	10,985.20	10.99
Other food products - Money Value	4,330.77	4.33
Furniture - Money Value	3,628.10	3.63
Rail Transport - Money Value	285.38	0.29
Computer, electronic and optical products - Money Value	6,159.99	6.16
Printing and recording services - Money Value	2,823.92	2.82
Rubber and plastic products - Money Value	202,040.57	202.04
Dairy products - Money Value	10,000.88	10.00
T&D- UK electricity	14,119.22	14.12
Cars (by size)	15,451.50	15.45
Gaseous fuels	34,370.49	34.37
Liquid fuels	116,959.53	116.96
WTT- UK electricity (generation)	36,174.62	36.17
WTT- UK electricity (T&D)	3,128.83	3.13
WTT- cars (by size)	4,107.50	4.11
WTT- biofuel	2,908.03	2.91
Total	**1,402,405.92**	**1,402.41**

Class & UOM kg CO2e Summary Table

Class & UOM	Total kg CO2e	Total Tons CO2e
Natural gas kWh (Gross CV)	208,121.71	208.12
Diesel (average biofuel blend) litres	480,859.27	480.86
Biodiesel HVO litres	371.60	0.37
Average car km	174.84	0.17
Electricity: UK kWh	163,198.97	163.20
Biodiesel HVO litres	2,908.03	2.91
Water supply cubic metres	2,526.77	2.53
Water treatment cubic metres	2,879.05	2.88
Postal and courier service costs - Money Value	54,870.38	54.87
Other manufactured goods costs - Money Value	14,163.97	14.16
Soap and detergents, cleaning and polishing preparations, perfumes and toilet preparation costs - Money Value	7,764.83	7.76
Paper and paper product costs - Money Value	10,985.20	10.99
Other food product costs - Money Value	4,330.77	4.33
Furniture costs - Money Value	3,628.10	3.63
Rail Transport costs - Money Value	285.38	0.29
Computer, electronic and optical product costs - Money Value	6,159.99	6.16
Printing and recording service costs - Money Value	2,823.92	2.82
Rubber and plastic product costs - Money Value	202,040.57	202.04
Dairy product costs - Money Value	10,000.88	10.00
Electricity: UK kWh	53,422.67	53.42
Average car km	19,559.00	19.56
Natural Gas kWh (Gross CV)	34,370.49	34.37
Diesel (average biofuel blend) litres	116,959.53	116.96
Total	**1,402,405.92**	**1,402.41**

Client Reference kg CO2e Summary Table

Scope	Reference	Total kg CO2e	Total Tons CO2e
Scope 1	Mobile Combustion - Diesel	480,859.27	480.86
Scope 1	Mobile Combustion - HVO	371.60	0.37
Scope 1	Mobile Combustion - Lease Car - Plug-in Hybrid	174.84	0.17
Scope 1	Stationary Combustion - Natural Gas	208,121.71	208.12
Scope 2	Purchased Energy - Electricity	163,198.97	163.20
Scope 2	Purchased Energy - Lease Car - Plug-in Hybrid	0.00	0.00
Scope 3	Business Travel - Battery Electric Car	25.84	0.03
Scope 3	Business Travel - Diesel Car	8,033.36	8.03
Scope 3	Business Travel - Hybrid Car	2,268.59	2.27
Scope 3	Business Travel - Petrol Car	9,166.46	9.17
Scope 3	Business Travel - Rail	285.38	0.29
Scope 3	FERA - Electricity	53,422.67	53.42
Scope 3	FERA - Lease Car - Plug-in Hybrid	64.75	0.06
Scope 3	FERA - Mobile Combustion - Diesel	116,959.53	116.96
Scope 3	FERA - Mobile Combustion - HVO	2,908.03	2.91
Scope 3	FERA - Stationary Combustion - Natural Gas	34,370.49	34.37
Scope 3	Purchased Goods and Services	316,768.60	316.77
Scope 3	Water Supply	2,526.77	2.53
Scope 3	Water Treatment	2,879.05	2.88
	Total	**1,402,405.92**	**1,402.41**

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 2023
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 2023
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 2023
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 2023
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 2023
WTT- pass vehs- land	Total WTT- pass vehs- land : WTT- cars (by size) : Average car km : Battery Electric Vehicle	DEFRA Conversion Factors Full Set for Advanced Users 2023
WTT- pass vehs- land	Total WTT- pass vehs- land : WTT- cars (by size) : Average car km : Plug-in Hybrid Electric Vehicle	DEFRA Conversion Factors Full Set for Advanced Users 2023
WTT- fuels	Total WTT- fuels : Gaseous fuels : Natural gas kWh (Gross CV) :	DEFRA Conversion Factors Full Set for Advanced Users 2023
WTT- fuels	Total WTT- fuels : Liquid fuels : Diesel (average biofuel blend) litres :	DEFRA Conversion Factors Full Set for Advanced Users 2023
WTT- bioenergy	Total WTT- bioenergy : WTT- biofuel : Biodiesel HVO litres :	DEFRA Conversion Factors Full Set for Advanced Users 2023
Water treatment	Total Water treatment : Water treatment : Water treatment cubic metres :	DEFRA Conversion Factors Full Set for Advanced Users 2023
Water supply	Total Water supply : Water supply : Water supply cubic metres :	DEFRA Conversion Factors Full Set for Advanced Users 2023
UK electricity T&D for EVs	Total UK electricity T&D for EVs : Cars (by size) : Average car km : Plug-in Hybrid Electric Vehicle	DEFRA Conversion Factors Full Set for Advanced Users 2023
UK electricity for Evs	Total UK electricity for Evs : Cars (by size) : Average car km : Plug-in Hybrid Electric Vehicle	DEFRA Conversion Factors Full Set for Advanced Users 2023
UK electricity	Total UK electricity : Electricity generated : Electricity: UK kWh :	DEFRA Conversion Factors Full Set for Advanced Users 2023
Transmission and distribution	Total Transmission and distribution : T&D- UK electricity : Electricity: UK kWh :	DEFRA Conversion Factors Full Set for Advanced Users 2023
Passenger vehicles	Total Passenger vehicles : Cars (by size) : Average car km : Plug-in Hybrid Electric Vehicle	DEFRA Conversion Factors Full Set for Advanced Users 2023
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 : 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 : Other manufactured goods : Other manufactured goods 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 : Printing and recording services : Printing and recording service 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
Fuels	Total Fuels : Gaseous fuels : Natural gas kWh (Gross CV) :	DEFRA Conversion Factors Full Set for Advanced Users 2023
Fuels	Total Fuels : Liquid fuels : Diesel (average biofuel blend) litres :	DEFRA Conversion Factors Full Set for Advanced Users 2023
Business travel- land	Total Business travel- land : Cars (by size) : Average car km : Petrol	DEFRA Conversion Factors Full Set for Advanced Users 2023
Business travel- land	Total Business travel- land : Cars (by size) : Average car km : Diesel	DEFRA Conversion Factors Full Set for Advanced Users 2023
Business travel- land	Total Business travel- land : Cars (by size) : Average car km : Hybrid	DEFRA Conversion Factors Full Set for Advanced Users 2023
Business travel- land	Total Business travel- land : Cars (by size) : Average car km : Battery Electric Vehicle	DEFRA Conversion Factors Full Set for Advanced Users 2023
Bioenergy	Total Bioenergy : Biofuel : Biodiesel HVO litres :	DEFRA Conversion Factors Full Set for Advanced Users 2023