

APPENDIX B TO REPORT RC/24/16

Greenhouse Gas Emissions Reporting (2023 / 2024)

The Service are reporting 5,652.3 tCO₂e greenhouse gas emissions for the year 2023 / 2024.

The following information supports the stated emissions value.

1	<p>Organisational Information</p> <p>Devon & Somerset Fire & Rescue Service is a public body.</p>
2	<p>Reporting Period</p> <p>The carbon footprint calculation relates to the reporting period: 1 April 2023 - 31 March 2024.</p>
3	<p>Reasons for Change in Emissions</p> <p>The main changes in emissions since 2022 / 2023 reporting are:</p> <p>Scope 1 emissions have decreased overall by 229.3 tCO₂e which is attributed to reductions in consumption of diesel (reduced by 147.8 tCO₂e), natural gas (reduced by 38.2 tCO₂e), burning oil and gas oil (reduced by 6.3 tCO₂e) and zero emissions of refrigerant gases (f-gases). Emissions have increased in respect of petrol consumption (increased by 0.5 tCO₂e).</p> <p>Scope 2 emissions have decreased marginally by 2 tCO₂e. Our consumption of electricity reduced by 173,496 kWh, however, in 2023 the UK Electricity CO₂e conversion factor increased by 7% (compared to the 2022 figure) due to an increase in natural gas use in electricity generation and a decrease in renewable generation. The conversion therefore meant our overall reduction in emissions were less.</p> <p>Scope 3 emissions have increased significantly by 3116.9 tCO₂e. The Service has broadened its scope 3 categories this year, building on previous years data inclusions. The new categories include emissions associated with transmission and distribution losses from purchased electricity and emissions associated with purchased goods and services. Emissions from purchased goods and services now account for the largest proportion of our emissions (an increase of 3142.8 tCO₂e). A change in approach to business travel in respect of use of hire cars saw a reduction in associated emissions of 46.6 tCO₂e, however a marginal increase was seen in both use of business travel – use of personal vehicles (expense claims) of 1.1 tCO₂e and business travel – air, rail and hotel stays of 1.8 tCO₂e.</p> <p>Our total emissions for the period 2023 / 2024 have <u>increased by 2886 tCO₂e</u> when compared with the 2022 / 2023 GHG emissions report due to inclusion of a wider scope 3 data on purchased goods and services.</p>
4	<p>Quantification and Reporting Methodology</p> <p>The Service has followed the UK Government environmental reporting guidance to report its scope 1, 2 and 3 emissions. Presently it is not feasible to report on all categories that may be relevant within scope 3. The Service continues to review annually areas for inclusion within scope 3 and improvement of data quality.</p>

5	<p>Organisational Boundary</p> <p>The Service has used the Financial Control boundary; reporting on sources of environmental impact over which it has financial control.</p>
6, 7, 8, 9	<p>GHG Scope inclusions</p> <p>The Service has measured its scope 1 and scope 2 emissions and a partial measure of our Scope 3 emissions.</p> <p>Refer to Annex A below for detailed breakdown of scope inclusions.</p>
10	<p>Conversion / emission factors used</p> <p>The Service has applied the UK Government Greenhouse Gas (GHG) conversion factors 2023: condensed set (for most users) – updated 28 June 2023, from the Department for Energy Security and Net Zero and the Department for Business Energy & Industrial Strategy.</p>
11, 12	<p>GHG emissions country breakdown</p> <p>The reported emissions are from the Services’ UK operations only; there are no operations in other countries.</p>
13	<p>Base year</p> <p>The Service’s base year is 2019 / 2020.</p> <p>The base year was selected as it represented the first year for which the organisation has reliable data that is typical of our operation.</p>
14, 15	<p>Base year recalculation policy</p> <p>The base year recalculation policy will be to recalculate the base year and the prior year emissions for relevant significant changes which meet the significance threshold of 5% of base year emissions.</p>
16	<p>Targets</p> <p>The Service has a green goal to be carbon net zero by 2030 and carbon positive by 2050. Targets will be set, however, at this time a tolerance of 50% reduction of gross scope 1, 2 and 3 emissions will be considered as a successful achievement towards our 2050 goal. Progress this year towards achieving reductions has been focused on;</p> <ul style="list-style-type: none"> • Identifying and including data for a broader set of scope 3 emissions • Annual review of the Environmental Aspects and Legislative registers • Annual review of the action plan aligned to ISO14001 standard • Review of the NFCC environmental and sustainability tool kit • Introduction of the first four electric vehicle charging sites and new electric vehicles • Successful application for the Low Carbon Skills Fund grant funding and a further application pending • Development of the Services first heat decarbonisation plan for 13 high-energy use sites

	<ul style="list-style-type: none"> • Successful application of the Public Sector Decarbonisation Scheme grant funding to decarbonise two sites • Environmental survey undertaken on our purchasing practices and behaviours • Introducing HGVs and LGVs (Heavy and Light Goods Vehicles) fleet to latest Euro6 standards • Progressing introduction of a grant funding officer to support implementation of schemes
17	<p>Person(s) responsible for achieving target(s) and position in organisation</p> <p>Nicola Bottomley, Assistant Chief Fire Officer (ACFO) Service Delivery Support, is responsible for the achievement of the target, supported by the Strategic Environmental Board and associated working groups.</p>
18, 19	<p>Intensity Measurement</p> <p>The Service will use <u>tonnes of CO2e per Full Time Equivalent (FTE)</u> as its chosen intensity measurement for scope 1, 2 and 3 emissions. As of 31 March 2024, there were 1505.34 FTE's. The intensity measurement for this period is 3.8 <u>tCO2e per FTE</u>.</p> <p>The intensity ratio has increased since the 2022 / 2023 GHG emissions report. The increase is attributed to an overall increase in emissions based on the broader set of Scope 3 emissions now being reported.</p>
20	<p>External assurance statement</p> <p>The Service has not received independent external assurance.</p>
21, 22	<p>Carbon credits / offsets</p> <p>None applied this year.</p>
23	<p>Electricity</p> <p>Electricity purchased for the Service's own use or consumption: 2,303.22 MWh</p>
24, 25, 26	<p>Green tariffs</p> <p>Electricity purchased is not linked to any green tariffs.</p>
27, 28	<p>Renewable Electricity Generation</p> <p>The Service currently has eighteen (18) on-site solar arrays which can generate and export electricity. This export is not backed by REGOs (Renewable Energy Guarantee of Origin).</p> <p>There is one (1) CHP (Combined Heat and Power) unit which is gas fired that is primarily used for heat generation but also generates electricity which is exported.</p> <p>Renewable electricity generated from owned or controlled sources (MWh): generation figure not currently available.</p> <p>Electricity exported to the grid (MWh): export figure not currently available.</p>

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Heat Generation

The Service has one (1) Combined Heat and Power unit (CHP) which is a gas fired unit that is primarily used for heat generation but also generates electricity which is exported.

The Service has four (4) solar thermal systems installed which can generate heat (for hot water) and twelve (12) air source heat pumps which can generate heat and hot water.

The Service does not currently export heat generation.

Annex A breakdown of operational scopes

A breakdown is provided below of the inclusions made within each scope for the calculation of the greenhouse gas emissions for the reporting year.

Scope	Item incl.	Description	Calculation approach	% of data estimated	Exclusions	Metric tonnes of CO2e
1	Natural Gas	Gas purchased and used at our premises.	kWh (gross CV)		None	527.9
1	Diesel	Fuel used in our owned transport	Litres		None	1249.0
1	Petrol	Fuel used in our owned transport	Litres		None	12.6
1	Burning Oil	Kerosine purchased for use in our premises.	Litres		None	18.7
1	Gas Oil	Red diesel used in diesel engines and heating systems.	Litres		None	66.2
Total Scope 1 tCO2e						1,874.4

Scope	Item incl.	Description	Calculation approach	% of data estimated	Exclusions	Metric tonnes of CO2e
2	Electricity	Electricity purchased and used at our premises.	kWh (gross CV)		Minor fluctuations anticipated to consumption figures due to pending invoices.	476.9
Total Scope 2 tCO2e						476.9

Scope	Item incl.	Description	Calculation approach	% of data estimated	Exclusions	Metric tonnes of CO2e
3	Transmission & Distribution	Emissions impact of the efficiency losses experienced in getting electricity from the power plant to the end user.	kWh (gross CV)		Minor fluctuations anticipated to consumption figures due to pending invoices.	41.3
3	Purchased Goods and Services	Goods, Services and Works purchased by the Service.	Spend Data		Calculation is based on published transparency spend data (purchase orders above £500). Potential duplications have been identified and	3,142.8

					removed. It does not account for spend below £500.	
3	Water	Supply of water and wastewater treatment from our premises.	Cubic metres (m3)		None	5.6
3	Refuse	General & recycling waste collected and disposed from our premises.	Tonnes		Other waste streams yet to be identified and included.	2.4
3	Business Travel	Flights, rail, and overnight accommodation by our staff in support of their operations.	Bookings made		None	13.1
3	Business Travel	Our staff travelling on business purposes in their own vehicles.	Miles travelled (expense claims)		None	93.6
3	Business Travel	Our staff travelling on business purposes in hired vehicles.	Miles travelled		None	2.2
Total Scope 3 tCO2e						3,300.9
Total reported tCO2e (Scope 1, 2 and 3)						5,652.3

DSFRS Annual Carbon Footprint - tCO2e emissions

