

REPORT REFERENCE NO.	RC/23/14
MEETING	RESOURCES COMMITTEE
DATE OF MEETING	5 SEPTEMBER 2023
SUBJECT OF REPORT	ENVIRONMENTAL STRATEGY UPDATE
LEAD OFFICER	ASSISTANT CHIEF FIRE OFFICER – SERVICE DELIVERY
RECOMMENDATIONS	<i>That the report be noted.</i>
EXECUTIVE SUMMARY	<p>The Service has calculated its annual greenhouse gas emissions (GHG) in accordance with the GHG protocols (Appendices A and B).</p> <p>Following reporting to the Resources Committee in September 2023, the 2022-2023 emissions statement will be published on the website. A summary statement is also included in the Statement of Accounts.</p> <p>An update on the progress of the Strategic Environmental Board and the action plan has been provided including plans for grant funding opportunities for consideration.</p>
RESOURCE IMPLICATIONS	To be defined following PSDS grant funding considerations
EQUALITY RISKS AND BENEFITS ANALYSIS	To be defined following PSDS grant funding considerations
APPENDICES	<p>A. Greenhouse Gas Emissions Statement</p> <p>B. Greenhouse Gas Emissions Calculations for 2022-2023.</p>
BACKGROUND PAPERS	Environmental Strategy

1. **INTRODUCTION**

- 1.1 In October 2020, the Authority resolved to declare a climate emergency and to endorse an Environmental Strategy whereby the Devon & Somerset Fire & Rescue Service (the Service) would, through adaptation and mitigation, seek to address climate change issues.

At its meeting on 29 September 2021 (Minute DSFRA/21/22 refers), the Authority approved the following additions to the Resources Committee's Terms of Reference regarding Environmental Strategy performance:

Advisory only

Acting as a Working Party, to consider with relevant officers the development of the Environmental Strategy and associated potential performance measures for forthcoming years for approval by the Authority;

Matters with Delegated Powers to Act

To scrutinise and monitor the effectiveness of the Service in meeting the Authority-approved Environmental Strategy objectives.

- 1.2. This paper provides the Committee with an update against the Environmental Strategy.

2. **STRATEGIC ENVIRONMENTAL BOARD AND ACTION PLAN – UPDATE**

- 2.1. The Service established a Strategic Environmental Board and dedicated working groups to develop, deliver and oversee progress of the Environmental Strategy and action plan. The action plan aligns to the goals and targets to be carbon net zero by 2030 and carbon positive by 2050, the environmental standards for ISO14001 and delivery of the recommendations in the Initial Environmental Review (IER).
- 2.2. The Strategic Environmental Board reviews progress of the plans and activities for the following working groups; Alternative Fuels, Estates and Energy, Behaviour Change, and now the Environmental Protection (Operations) which is newly formed. Board members are engaged in the NFCC and Emergency Services environmental and sustainability groups.
- 2.3. In the last year the working groups and environmental action plan has been focused on delivery of;
1. Environmental policy and procedures
 2. Environmental Aspects, Legislative registers annual review
 3. Action plan aligned to ISO14001 standard annual review
 4. UK Climate Risk Assessment (2023) review
 5. Implementation of electric vehicle charging points and electric vehicles
 6. Undertaking an energy efficiency review across 10 sites and implementing activities
 7. Establishing an environmental protection group (operations)

8. NFCC sustainability and environmental toolkit and group support
9. Small reductions in numbers of fleet and estates
10. Introducing fleet to latest Euro6 standards
11. Implementation of an electric vehicle salary sacrifice scheme
12. Delivering environmental awareness training to staff via e-learning.

3. GREENHOUSE GAS (GHG) EMISSIONS REPORTING

- 3.1. The Service calculates its GHG emissions (Appendix A and B using the GHG protocols and DEFRA conversion factors. The GHG statements are published on the website and a summary included in the Statement of Accounts.
- 3.2. The 2022/23 statement presents a reduction in scope 1 (gas and fuels), and scope 2 (electricity) emissions compared to the previous year as 5.5% and 4.4% respectively. This is a 14% reduction in scope1 and 36% reduction in scope 2 from the baseline year of 2019-2020. These reductions have been from specific and targeted activities to reduce energy consumption in delivery of the strategy and action plan.
- 3.3. We have undertaken an energy and decarbonisation study across 10 sites and worked with a consultant to develop a high-level approach to decarbonisation and consumption use. We have made changes to the heating of drying rooms and appliance bays and introduced LED lighting. These changes have been supported by our environmental matters e-learning module which has been undertaken by over 85% of our staff.
- 3.4. A limited but broader set of scope 3 emissions including water, waste and business travel have been included in 2022-2023 compared with the previous reporting year and this will continue to be expanded year on year as further data becomes available. An increase in scope 3 emissions has occurred with the inclusion of business travel by staff in their own vehicle and from vehicle hire.

4. GRANT FUNDING (ENVIRONMENTAL)

- 4.1. To deliver the environmental strategy aims and action plan, the working groups have progressed schemes which can be supported by grant funding opportunities. The grant funding schemes secured and proposed are outlined below:

5. THE OFFICE FOR ZERO EMISSION VEHICLES (OZEV) FUNDING

- 5.1. The introduction of Electric Vehicle Charging infrastructure (EVCI) has been procured by incorporation of the OZEV funding of £350 per connection. The Service will have secured £14K of OZEV funding from the implementation of phases 1-2 during 2023-2024.

Low Carbon Skills Funding (LCSF)

- 5.2. Whilst the Service has made and is planning a small reduction in the number of buildings there remain a significant number of ageing buildings with fossil fuel heating systems.
- 5.3. The energy and decarbonisation study identifies that the building fabrication and heat decarbonisation plans at a site-specific level are required to make effective investment in the decarbonisation of our buildings. Due to the condition and age of some of our estate all projects will need significant 'fabric first' energy generation solutions to help mitigate increased electricity consumption from low-carbon heat solutions.
- 5.4. To support progress of the energy and decarbonisation aims in May 2023 the Service applied for Low Carbon Skills Funding (LCSF) of £95K to provide external consultancy support for the development of heat decarbonisation plans for 13 sites. The 13 sites account for approximately 50% of the electricity utilisation and 60% gas utilisation across the estate and decarbonisation of these sites would make a significant contribution towards the environmental and efficiency aims.
- 5.5. The LCSF funding will enable us to start preparing for a building-by-building approach to decarbonisation. With limited internal resources, including finance and expertise in low-carbon solutions, we recognise that the LCSF funding has enabled us to source external support and develop our heat decarbonisation plan(s) for our main and heavy-use sites where a known opportunity for carbon and heat reduction can be achieved and which will make the greatest contribution to carbon reductions. The aim is to use the HDPs to develop our detailed designs and make our first bid for Public Sector Decarbonisation Scheme (PSDS) funding in autumn 2023. In the Southwest the following blue light services also received LCSF; D&C Police (£55k), SWAST (£99.9k) and Avon FRS (£23.5k).
- 5.6. Public Sector Decarbonisation Scheme (PSDS) Funding
- 5.7. The PSDS Phase 3C has been announced as opening this Autumn 2023. There will be £230M available for projects to be completed in FY24/25 with additional budget yet to be announced for FY25/26 for projects that are to be delivered over 2 years. The Service is considering proposals for development of 2-5 schemes from the heat decarbonisation plans developed with a potential opportunity to secure over £1M investment. Further information on the plans for the PSDC will be provided as development of the project and plans progress.

GERALD TAYLOR
Director of Service Delivery

Greenhouse gas emissions Statement

Greenhouse Gas Emissions Reporting (2022 / 2023)

The Service are reporting 2,766.7 tCO₂e greenhouse gas emissions for the year 2022 / 2023.

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 2022 - 31 March 2023.</p>
3	<p>Reasons for Change in Emissions</p> <p>The main changes in emissions are:</p> <p>Scope 1 emissions have decreased by 122 tCO₂e which is attributed to changes in set points and clock times on our gas systems (reduction by 119.2 tCO₂e), reduced consumption of burning oil and gas oil (reduced by 26.8 tCO₂e) and clearer reporting on petrol consumption with hire car refuelling moving to scope 3 emissions. Emissions have increased in respect of diesel (increased by 35.5 tCO₂e) and refrigerant gas (increased by 27.5 tCO₂e).</p> <p>Scope 2 emissions have decreased by 22.6 tCO₂e which is attributed to the decarbonisation of the national grid as opposed to our own direct consumption of electricity, which has increased.</p> <p>Scope 3 emissions have increased by 153 tCO₂e which is attributed to inclusion of a wider scope 3 data this year. The emissions data now includes business miles travelled by our staff in their own vehicles (92.5 tCO₂e), and business travel through use of hire cars (48.8 tCO₂e). Improvements have been made in emissions from business travel by air, rail and hotel stays which has reduced by 9.3 tCO₂e.</p> <p>Our total emissions for the period 2022 / 2023 have increased by 8 tCO₂e when compared with the 2021 / 2022 GHG emissions report due to inclusion of a wider scope 3 data on business miles and hire vehicles.</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.</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, 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 2022: condensed set (for most users) 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 scope 3 emissions • Implementing an Environmental policy and procedures • Annual review of the Environmental Aspects, Legislative registers • Annual review of the action plan aligned to ISO14001 standard • Review of the UK Climate Risk Assessment • Preparations for implementation of Electric vehicle charging points and introduction of Electric vehicles • Undertaking an energy efficiency review across 10 sites (mixed use) • Establishing an environmental protection group (operations) • Supporting the NFCC (National Fire Chiefs Council) sustainability and environmental toolkit and group • Planning small reductions in fleet and estates • Introducing HGV (Heavy Goods Vehicle) fleet to latest Euro6 standards • Implementation of the electric vehicle salary sacrifice scheme • Delivering environmental awareness training to all staff via e-learning • Applications of grant funding opportunities and reviewing future schemes
17	<p>Person(s) responsible for achieving target(s) and position in organisation</p> <p>Gerald Taylor, Director of Service Delivery, 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 2023, there were 1553 FTE's. The intensity measurement for this period is 1.8 <u>tCO2e per FTE</u>.</p> <p>The intensity ratio has increased since the 2021 /2022 GHG emissions report. The increase is attributed to an overall reduction of 72 FTE's and the increase of 8 tCO2e in our emissions.</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: 2,476.71 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>
29	<p>Heat Generation</p> <p>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.</p> <p>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.</p> <p>The Service does not currently export heat generation.</p>

ANNEX A BREAKDOWN OF OPERATIONAL SCOPES

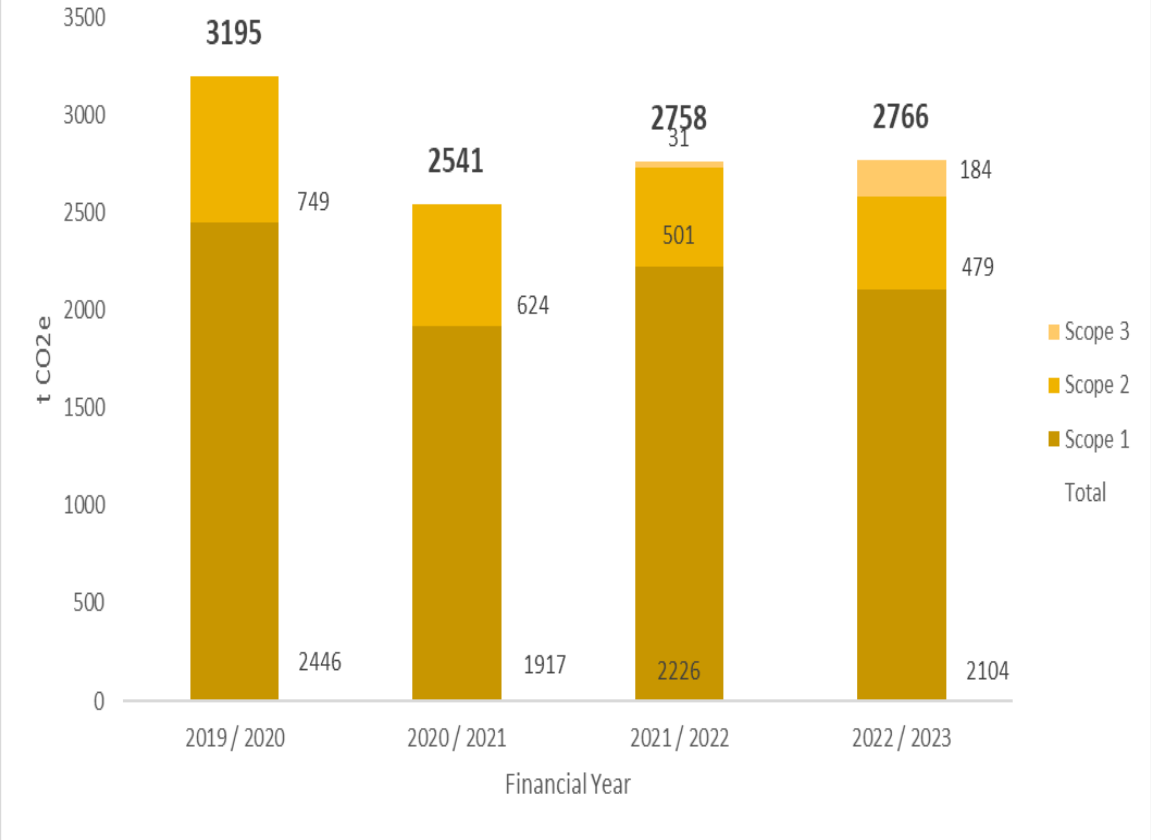
A breakdown is provided below of the inclusions made within each scope for the calculation of the greenhouse gas emissions for the reporting year.

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	566.1
1	Diesel	Fuel used in our owned transport	Litres		None	1,396.8
1	Petrol	Fuel used in our owned transport	Litres		None	12.1
1	Burning Oil	Kerosine purchased for use in our premises.	Litres		None	11.0
1	Gas Oil	Red diesel used in diesel engines and heating systems	Litres		None	80.2
1	F-gas	Refrigerant top-ups to our air conditioning systems	kg		None	37.5
Total Scope 1 tCO₂e						2,103.7

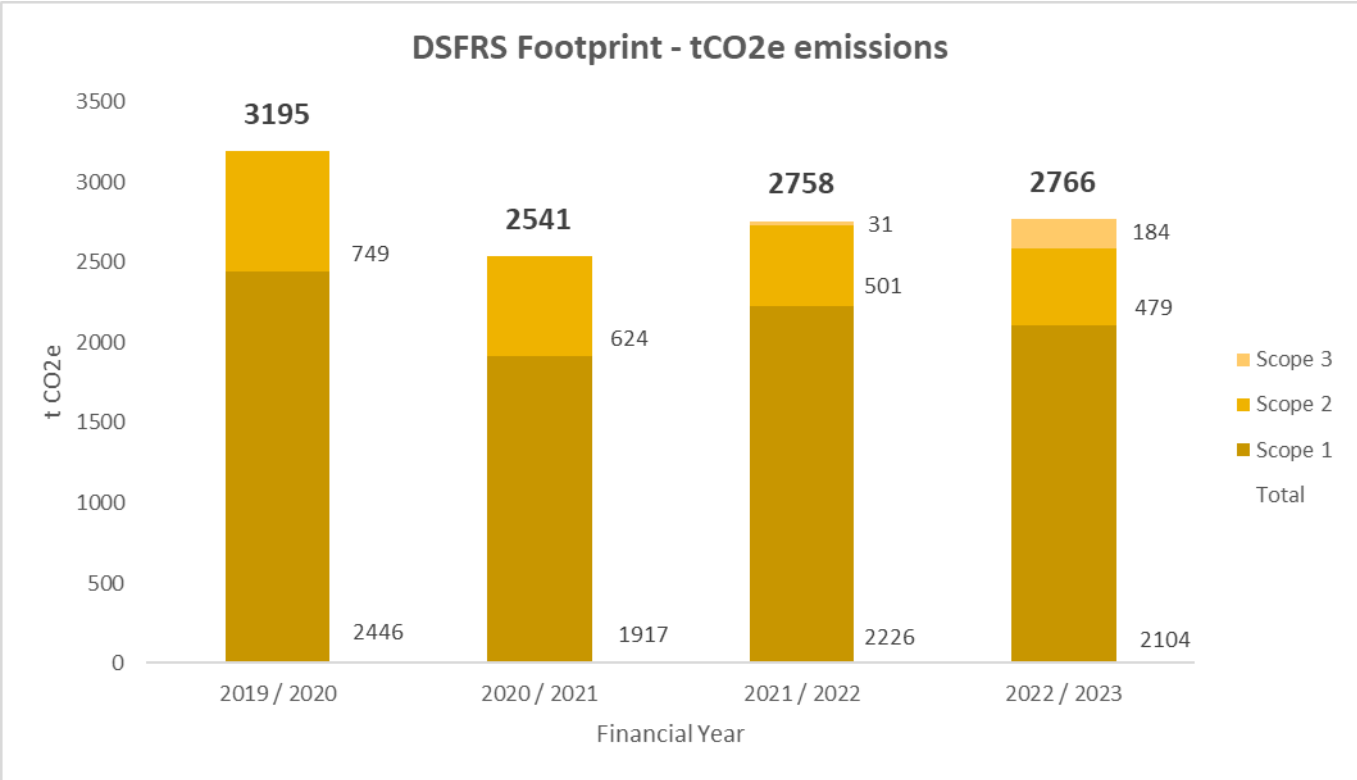
Scope	Item incl.	Description	Calculation approach	% of data estimated	Exclusions	Metric tonnes of CO₂e
2	Electricity	Electricity purchased and used at our premises.	kWh (gross CV)		Minor fluctuations anticipated to March 2022 consumption figures due to pending invoices.	478.9
Total Scope 2 tCO₂e						478.9

Scope	Item incl.	Description	Calculation approach	% of data estimated	Exclusions	Metric tonnes of CO2e
3	Water	Supply of water and wastewater treatment from our premises.	Cubic metres (m3)		None	28.9
3	Refuse	General & recycling waste collected and disposed from our premises.	Tonnes		Other waste streams yet to be identified and included.	2.6
3	Business Travel	Flights, rail, and overnight accommodation by our staff in support of their operations.	Bookings made		None	11.3
4	Business Travel	Our staff travelling on business purposes in their own vehicles.	Miles travelled (expense claims)		None	92.5
5	Business Travel	Our staff travelling on business purposes in hired vehicles.	Miles travelled		None	48.8
Total Scope 3 tCO2e						184.0
Total reported tCO2e (Scope 1, 2 and 3)						2,766.7

DSFRS Footprint - tCO2e emissions



Greenhouse gas (GHG) emissions calculations 2022-2023



GHG scopes as published FY 2022-2023 (summary within statement of accounts)

Scope	Item incl.	Description	Calculation approach	Metric tonnes of CO2e
1	Natural Gas	Gas purchased and used at our premises.	kWh (gross CV)	566.1
1	Diesel	Fuel used in our owned transport	Litres	1,396.8
1	Petrol	Fuel used in our owned transport	Litres	12.1
1	Burning Oil	Kerosine purchased for use in our premises.	Litres	11.0
1	Gas Oil	Red diesel used in diesel engines and heating systems	Litres	80.2
1	F-gas	Refrigerant top-ups to our air conditioning systems	kg	37.5
			Total Scope 1 tCO2e	2,103.7

Scope	Item incl.	Description	Calculation approach	Metric tonnes of CO2e
2	Electricity	Electricity purchased and used at our premises.	kWh (gross CV)	478.9
			Total Scope 2 tCO2e	478.9

Scope	Item incl.	Description	Calculation approach	Exclusions	Metric tonnes of CO2e
3	Water	Supply of water and wastewater treatment from our premises.	Cubic metres (m3)	None	28.9
3	Refuse	General & recycling waste collected and disposed from our premises.	Tonnes	Other waste streams yet to be identified and included.	2.6
3	Business Travel	Flights, rail, and overnight accommodation by our staff in support of their operations.	Bookings made	Land travel	11.3

3	Business Travel	Business travel by staff using their own vehicles in support of their operations.	Miles travelled	None	92.5
3	Business Travel	Vehicle hire by our staff in support of their operations.	Miles travelled	None	48.8
				Total Scope 3 tCO2e	184.0

Total reported tCO2e (Scope 1, 2 and 3)					2,766.7
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