The Wildlife Trusts

# The Wildlife Trusts' Greenhouse Gas Inventory

*Financial Year 2021*

# The Wildlife Trusts' Greenhouse Gas Inventory FY21

## Introduction

We are amidst two escalating and inextricably linked crises in nature and climate. We cannot solve one without addressing the other.

The world's response to the climate crisis, both on mitigation and adaptation, will define our ability to restore nature, both in the UK and internationally, and our efforts to restore nature are integral to addressing climate change and coping with the impacts already locked in.

### The Wildlife Trusts' approach

Climate action is embedded right across The Wildlife Trusts' strategic goals to bring nature back (Strategy 2030). A synthesis of The Wildlife Trusts' collective response to climate change can be found in our Position Statement.

One key tenet of this is our goal to work together towards net zero Greenhouse Gas (GHG) emissions by 2030 across our scope 1, 2 and 3 emissions, as well as putting in place robust adaptation measures across all our work areas.

As a grassroots movement working across every part of the UK, on Alderney and the Isle of Man, The Wildlife Trusts are major landowners, habitat managers, energy users, consumers of water, venue and event providers, educators, vehicle fleet operators, and employers (to name just a few). Whilst these elements all contribute to achieving our charitable objectives, we want to minimise their negative environmental impacts, and pursue more sustainable alternatives.

## About this Report

This mitigation report sits under one of two parts to the work on climate change we are undertaking, the other being our adaptation work programme, stemming from our 2022 'Changing Nature' report.

In working together towards net zero by 2030 across The Wildlife Trusts, our major priority is to cut GHG emissions right across the work we do, and free ourselves from fossil fuel use and dependencies.

This annual report presents the GHG emissions of The Wildlife Trusts in Financial Year (FY) 2021-22, covering the 46 individual Wildlife Trusts and the Royal Society of Wildlife Trusts. This marks our third year of GHG accounting, against a FY 2019-20 baseline. All year references herein relate to the FY.

We are taking an evidence-led approach to understand, reduce, and report our GHG emissions across our value chain, and measure progress towards our collective net zero 2030 target. As such, the scope and approach to this has and will continue to evolve, as we develop more efficient data collection systems and completeness of our activities and align to evolving best practice guidelines.

This publication also brings together some of the high-level highlights and challenges of decarbonisation progress across The Wildlife Trusts over the reporting period.

## The Wildlife Trusts in 2021

The Wildlife Trusts are a federation of 46 Wildlife Trusts across the UK, Isle of Man and Alderney, and the Royal Society of Wildlife Trusts.

In FY21, The Wildlife Trusts collectively:

- Owned and/or managed over 103,000 ha of land and coast.
- Managed 2,328 nature reserves.
- Provided advice to others on more than 300,000 ha of additional land.
- Employed 2,625 FTE staff.
- Were supported by nearly 35,000 volunteers providing over 1.2 million volunteer hours.
- Delivered almost 9,000 local events and over 1,000 formal training programmes and events.

## The Wildlife Trusts' Greenhouse Gas Emissions FY21

In FY21, The Wildlife Trusts were collectively responsible for 23,292 $tCO_2e$. See Table 1 and Figure 1 for a breakdown of GHG emissions by scope and activity. Detail of the methodology used can be found in Appendix 1.

Our direct scope 1 and indirect scope 2 GHG emissions accounted for 2,968 tCO2e – 12.7% of our total GHG emissions. Of these, diesel fuel remains the highest emissions source, contributing 6.1%. Wildlife Trusts use diesel fuels in multi-terrain vehicles/4x4s, agricultural vehicles and boats, to access more rural sites and aid habitat management; as well as occasional use to generate power for buildings.

Our scope 3 activities account for 87.3% of our GHG emissions. Grazing of both owned and third-party livestock, to deliver our nature conservation objectives, accounted for 65.4% of our total collective emissions. Staff commute also accounted for 7.4% of our total emissions. As we emerged from the COVID-19 pandemic, Wildlife Trusts typically adopted a hybrid working model, which saw staff commuting increase, but not return to pre-pandemic levels.

## Biogenic emissions and removals from habitats

We have not yet formally incorporated land-based emissions and removals from our landholdings into our inventory.

We are working with the Greenhouse Gas Protocol in their development of international guidance on accounting for land-based emissions and removals.

We have calculated a baseline estimate of our land-based biogenic emissions and removals and are working to narrow the large uncertainty range of this estimate. Any calculation and reporting will remain separate to those of our operational GHG emissions reported here.

**Table 1. The Wildlife Trusts Greenhouse Gas Inventory FY21 by scope and emissions category**

| Scopes and categories[1] | Metric tons $CO_2e$ | % of total GHG emissions | Scope of % total GHG emissions |
|---|---|---|---|
| **Scope 1**: Direct emissions from owned/controlled operations | | | |
| Gas | 209.83 | 0.90 | 9.18 |
| Oil | 281.28 | 1.21 | |
| LPG | 87.39 | 0.38 | |
| Diesel (including red & marine diesel) | 1,431.07 | 6.14 | |
| Petrol | 128.63 | 0.55 | |
| **Scope 2**: Indirect emissions from the use of purchased electricity, steam, heating, and cooling | 829.95 | 3.56 | 3.56 |
| **Scope 3**: Indirect emissions | | | |
| Electricity transmission & distribution | 71.05 | 0.31 | 87.26 |
| Water & wastewater | 72.08 | 0.31 | |
| Staff/Business mileage | 434.28 | 1.86 | |
| Casual staff and volunteer mileage | 383.02 | 1.64 | |
| Staff commute | 1,722.01 | 7.39 | |
| Working from home | 745.20 | 3.20 | |
| Livestock | 15,242.17 | 65.44 | |
| Well-to-Tank (WTT) | 1,260.65 | 5.41 | |
| Material use* | 303.15 | 1.30 | |
| Waste* | 90.35 | 0.39 | |
| Total | **23,292.12** | 100.00 | |

**Out of Scopes**

Only scope 1 biogenic emissions are recorded.

| Scope and category | Metric tons CO2 emissions |
|---|---|
| Scope 1: Biomass | 18.46 |
| Scope 1: Biodiesel | - |

[1] Work is underway to align categories within our Inventory with Scope 3 categories under the GHG Protocol.

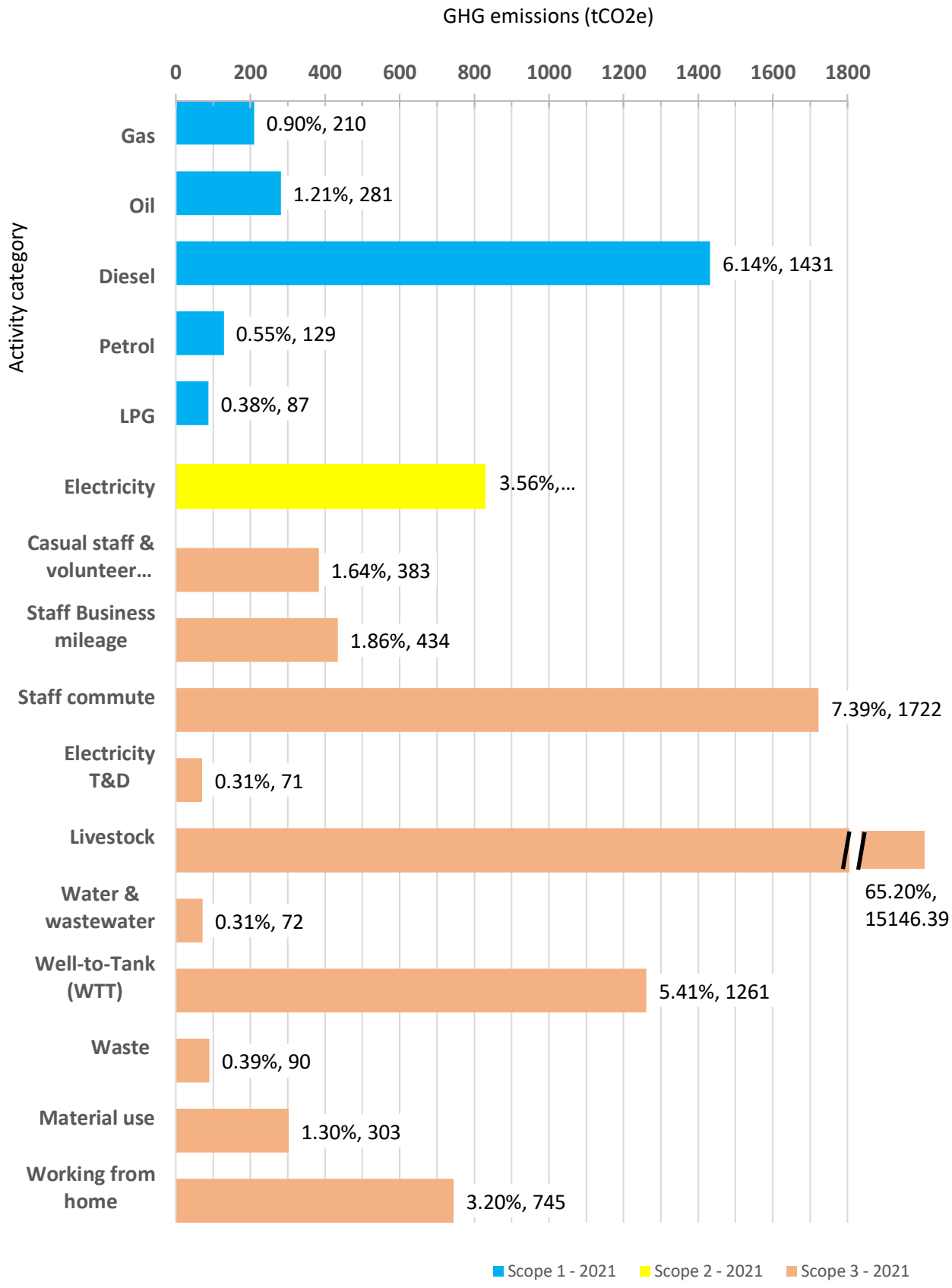


**Figure 1. The Wildlife Trusts GHG emissions FY21 by category and scope**

Note: FY20 was data used for four Trusts, and FY19 data for one Trust. This is due to these Trusts not being able to report in FY21.

## Progress against our baseline

The Wildlife Trusts first undertook a collective GHG account in 2019, which serves as our baseline year against which to compare progress towards our net zero target.

Over the three financial years to 2021 inclusive, the scope of our GHG account has expanded to include working from home, waste, material use, and Well-to-Tank factors. We have also made iterative improvements to data collection and accuracy. This period also covers the COVID-19 pandemic, and our emergence from it with shifted ways of working, which had ramifications for our GHG emissions.

Given such fluctuating circumstances, any time series trends need to be interpreted with caution. More reliable and meaningful analysis of progress will be forthcoming with subsequent year accounts, as both external circumstances around COVID-19, and our Federation-wide GHG accounting method settle.

Figure 2 shows the change in GHG emissions by category over the three years to 2021 inclusive. Absolute figures are shown and are not constrained to only like-for-like inventory boundary comparison.

Even with an expanded scope, our absolute emissions have reduced overall from 25,956 tCO2e in 2019 to 23,292 tCO2e in 2021, equivalent to a 10% reduction. Emissions (tCO2e) per Full-Time-Equivalent (FTE) employees and per £1 million income have also fallen. When GHG emissions excluding livestock are considered, our emissions have fallen by 6% overall, 525 tCO2e, relative to 2019 figures, with a year-on-year overall reduction observed.

There is a consistent pattern of emissions reduction across all categories except oil consumption in a like-for-like comparison between 2019 and 2021. These trends cannot be explained alone by indirect, external changes, such as decarbonisation of the electricity grid or other altered conversion factors.

Between 2019 and 2021, staff commute emissions halved, and business travel emissions fell by 42%, not returning to pre-pandemic levels. Emissions from purchased electricity and water services emissions also fell between 30 and 35% over the same time period. Purchased electricity consumption decreased year on year, including over the period when staff were returning to offices post-pandemic, which concurrently saw a reduction in emissions from working from home.

With respect to heating fuels, though gas use experienced a year-on-year reduction, both oil and LPG fuel emissions were more variable, with increases observed between 2020 and 2021. Oil use was the only category where an increase (60%) in 2021 emissions was recorded against the 2019 baseline year. It is considered likely that this trend is in part driven by how data on oil and LPG consumption is collected, currently sourced from invoice data, as opposed to actual consumption over time – meaning that the trend manifests as spikes in reporting year emissions when supplies were replenished, as opposed to ongoing consumption.

Diesel use remains our single greatest non-grazing contribution to our total emissions; it fell by 17% across the three reporting years, though between years is more variable. This is likely due, in part, to travel and social distancing requirements during the COVID-19 pandemic. Petrol use in tools and vehicles remains relatively consistent between 2019 and 2021, with a dip in 2020 when less on-site management work with volunteers was taking place.

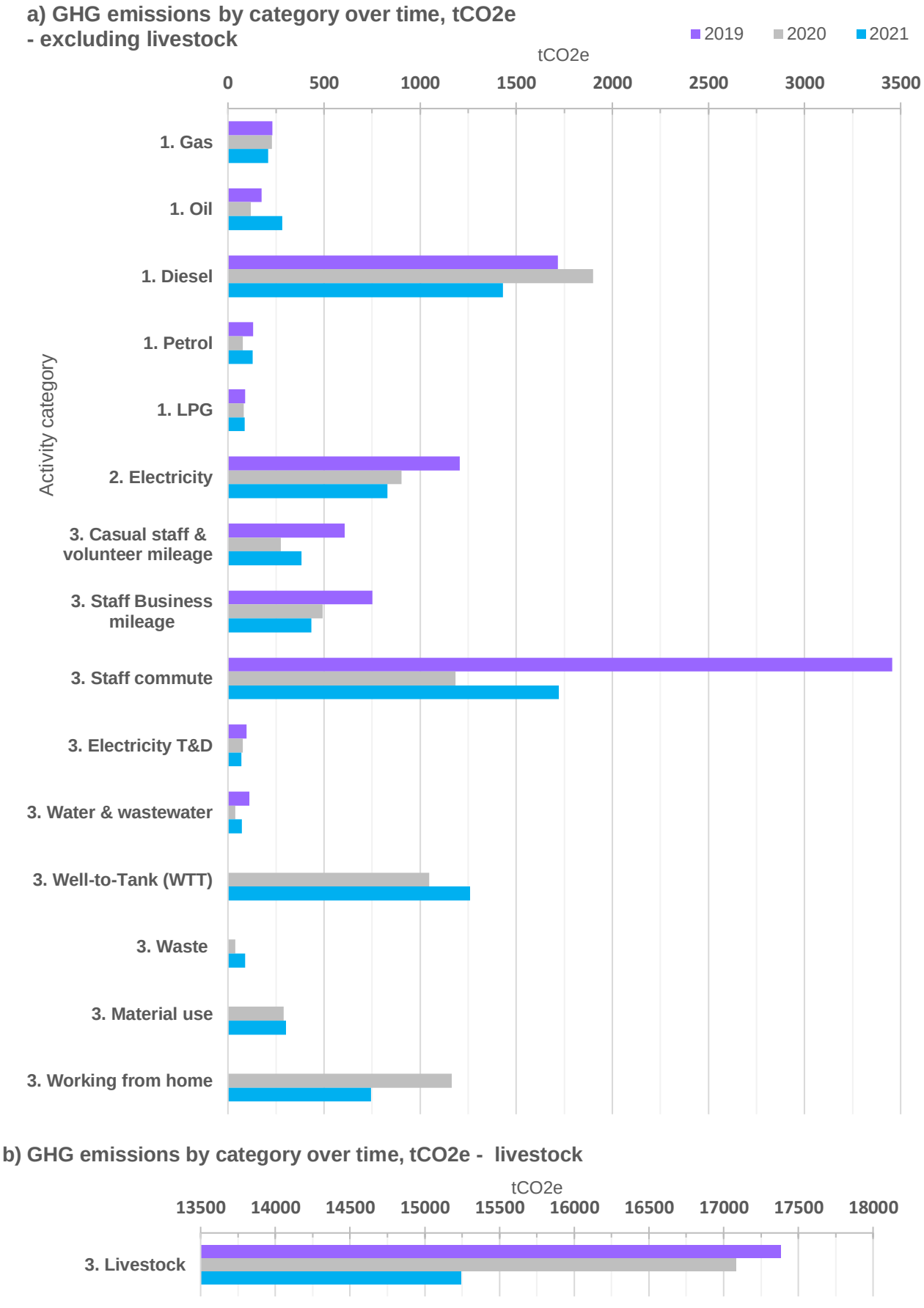


**Figure 2. The Wildlife Trusts' GHG emissions over time – FY19, FY20 and FY21**

Note: For FY21 reporting year, FY20 was data used for four Trusts, and FY19 data for one Trust. For FY20 reporting, FY19 data was used for two Trusts. This is due to these Trusts not being able to report in the relevant reporting year.

Further work is underway to understand the granular detail and drivers of these trends and accelerate our work to reduce emissions across these key areas.

Waste and material use data collection is included with low confidence and therefore observed trends are considered attributable to data collection methods as opposed to changes in activity.

### Livestock

Reduction in emissions from livestock grazing accounts for 2,139 tCO2e of the total 2,664 tCO2e (80%) absolute reduction recorded since 2019, though there is greater variation in this trend across Wildlife Trusts than this aggregated trend suggests. In 2021, livestock emissions were 2,139 tCO2e, 12%, less than in 2019. Again, further analysis of this trend, livestock types and grazing regimes is underway, and is complemented by work collectively to improve how we record, calculate, and reduce our GHG emissions from grazing livestock for conservation outcomes.

We are using this initial time series data to inform key priorities and challenges for decarbonisation on our journey to net zero.

## Decarbonisation highlights and challenges, FY21

In 2021, Wildlife Trusts continued their programme of decarbonisation, including:

- Undertaking energy audits of buildings to inform and prioritise decarbonisation actions suited to each building.
- Continuing or embarking on energy efficiency programmes, including LED lighting installations, draught-proofing, replacing inefficient, older appliances, thermal insulation, and continuing to promote energy saving behaviours.
- Reviewing fleet use to reduce unnecessary journeys and establishing internal systems to share journeys.
- Undertaking a project with Siemens to support site appraisal and planning for electric vehicle charging.
- Gradually increasing the electric vehicle proportion of fleets and installing associated electric vehicle charging infrastructure to support business, staff and visitor travel using electric vehicles.
- Continuing the shift to battery-powered tools for habitat management work.
- At a federation-level, we recruited a permanent Director of Climate and Evidence at the Royal Society of Wildlife Trusts to lead our work on climate change. We also established a community of practice to learn, share, and connect-up action across Wildlife Trusts. During this reporting year, we were also active around COP26 on the role of nature and the need for absolute emissions cuts.
- Whilst biogenic emissions from land are not presented or reported on here, it should be noted that alongside these decarbonisation efforts, Wildlife Trusts continued to deliver a vast suite of high-quality nature-based solutions that are reducing emissions from degraded lowland and uplands peatlands, and capturing and storing carbon from a diversity of habitats, including saltmarsh and woodlands.

Challenges for The Wildlife Trusts on our journey to net zero by 2030 continue to include capacity and resources – financial, people and expertise. In particular, upfront capital expenditure is a substantial barrier to the pace of our decarbonisation efforts. Additional challenges have been encountered with listed building retrofits, of which we have many within our portfolio, both owned and leased. This brings added complexity, cost and also challenge in the differing approaches employed across different planning authorities.

## Appendix 1. Description of methodologies and data used

The Wildlife Trusts are working towards calculating our GHG Inventory in accordance with best practice set out by the Greenhouse Gas Protocol.[2]

For FY 2021, all Wildlife Trusts and the Royal Society of Wildlife Trusts (RSWT) used a consistent operational control boundary and tool to do this. Our operational boundary includes both Wildlife Trust activities and those of our subsidiaries such as our consultancies.

The categories included within the scope of The Wildlife Trusts' GHG Inventory for FY 2021, and indicative data sources can be found in Table 2 below. Where primary data was not available to calculate emissions, sensible estimates were employed (see Table 3).

**Table 2. Descriptive information about The Wildlife Trusts' GHG Inventory**

| Information | Response |
|---|---|
| Chosen consolidation approach (equity share, operational control or financial control) | Operational control |
| Description of the businesses and operations included in the company's organizational boundary | Material activities of the main charities and their subsidiaries including trading arms. |
| The reporting period covered | Financial year 6th April 2021 – 5th April 2022 |
| A list of scope 3 activities included in the report | See Table 3 below |
| A list of scope 1, scope 2, and scope 3 activities excluded from the report with justification for their exclusion | See Table 4 below |
| The year chosen as base year and rationale for choosing the base year | 2019 – first year GHG inventory undertaken and pre-COVID baseline |
| Once a base year has been established, the chosen base year emissions recalculation policy. If base year emissions have been recalculated, the context for any significant emissions changes that triggered the recalculation. | TBD |

[2] In 2022, an external audit of our accounting method was undertaken, and we are now acting on its recommendations to meet best practice.

**Table 3. Activities included in The Wildlife Trusts' Greenhouse Gas Inventory**

| Category and activity | Description | Methodology and data source | Data Quality |
|---|---|---|---|
| Scope 1 | | | |
| Gas | Use for heating and cooking in kWh. | Supplier invoices | H |
| Oil | Use for heating and cooking in litres. | Supplier invoices | H |
| LPG | Use for heating and cooking in litres. | Supplier invoices | H |
| Diesel (including red & marine diesel) | In Wildlife Trust vehicles and equipment, including agricultural vehicles and boats, recorded in litres. | Fuel card payment details | H |
| Petrol | In Wildlife Trust vehicles and equipment, in litres. | Fuel card payment details | H |
| Out of Scope biogenic emissions^:<br>1. Biomass<br>2. Biodiesel | Logs, chips, pellets, grass/straw for heating, in tonnes.<br>Biodiesel ME or HVO fuel for vehicles, litres. | Supplier invoices | H |
| Scope 2 | | | |
| Purchased electricity | Used for energy and heating in kWh | Supplier invoices, location-only method. | H |
| Scope 3 | | | |
| Electricity transmission & distribution | Indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the reporting company, kWh. | Proportion of purchased electricity | H |
| Water & wastewater | Mains or private water supply and wastewater treatment, in cubic meters (m3). | Supplier invoices | M |
| Staff/ Business mileage | Mileage incurred by employees to deliver organisation's operations. | Expense system | H |
| Casual staff and volunteer mileage | Mileage incurred by casual staff (non-permanent, contract) and volunteers deployed to deliver Wildlife Trust activities. | Variable – Expense system/volunteer survey/estimate based on national volunteer travel average | M |
| Staff commute | Mileage incurred by employees' commuting from their homes to their registered place of work. | Staff survey | M |
| Working from home | Fuel and energy emissions associated with staff working from home. | Staff survey, Included from FY20 | M |

| Category and activity | Description | Methodology and data source | Data Quality |
|---|---|---|---|
| Livestock | All animals, both owned and third-party, that are used to deliver The Wildlife Trusts' objectives. | Reserves Team management records, Nitrate Vulnerable Zone data records | H |
| Well-to-Tank (WTT) | Production and distribution of resources and products (Well-to-tank), covering heat, travel, bioenergy, travel mileage and public transport emissions covered by the Inventory. | Proportion of fuel use, From FY20 | H |
| Material use | Construction materials, compost, plastics, wood, paper and board. | Variable, estimates of weight based on supplier invoice data From FY20 | L |
| Waste | Waste generated from The Wildlife Trusts' operations. General and residual, landfill (from FY21), commercial (mixed recyclables), metals, plastic, paper and cardboard recycled, and composted organics (food & green). | Variable, waste services supplier reports or estimates based on size of bins and frequency of removal service, included from FY20 | L |

**Table 4. Exclusions from The Wildlife Trusts' Greenhouse Gas Inventory FY21**

| Scope 3 category | Comment |
|---|---|
| **2: Capital Assets** | Will be included in future expansion of Inventory boundary |
| **4: Upstream transport and distribution** | Will be included in future expansion of Inventory boundary |
| **8: Upstream leased assets** e.g., office spaces, vehicles and infrastructure | Energy use of these leased assets covered sufficiently within the existing boundary of The Wildlife Trusts inventory |
| **9: Downstream transport and distribution** emissions associated with the distribution of publications and retail products from retailer to consumer | Intended evolution of tool and data collection methods to include areas of this category of relative significance to Wildlife Trusts – including online and shop retail, catering and our publications |
| **10: Processing, use and end-of-life treatment of sold products** e.g., emissions associated with the assumed post-sale third-party processing of publications and retail products sold by The Wildlife Trusts or a Wildlife Trust | Intended evolution of tool and data collection methods to include areas of this category of relative significance to Wildlife Trusts – including online and shop retail, catering and our publications |
| **11: Use of sold products** | Unlikely to be material to Wildlife Trusts GHG inventory |
| **12: End-of-life treatment of sold products** | Unlikely to be material to Wildlife Trusts GHG inventory |

| Scope 3 category | Comment |
|---|---|
| **13: Downstream leased assets** | The Wildlife Trusts activity not considered to be of scale for this to be sufficiently relevant. |
| **14: Franchises** | Not applicable, though subsidiary companies of Wildlife Trusts are included within the inventory boundary. |
| **15: Investments**<br>emissions associated with the business activities of the companies in which The Wildlife Trusts or Wildlife Trust has invested. | Will be included in future expansion of Inventory boundary |

### Emissions Factors

The majority of emissions factors used in our GHG Inventory calculations are taken from the publicly available list produced by the Department for Energy Security and Net Zero (DESNZ) each year.

For livestock emissions, the tool relies on the conversion factors used in the Farm Carbon Toolkit. This Toolkit uses conversion factors available for commercial livestock grazing regimes and breeds, rather than conservation grazing regimes and traditional breeds. We'd like to improve on this in future. In using this Toolkit, we have defaulted to the lowest conversion factor for all animal types regardless of the manure management system employed. The Wildlife Trusts have commissioned research, underway, to review livestock emissions and explore the implications of conservation grazing for livestock GHG emissions, as opposed to more commercial systems which the Farm Carbon Toolkit covers.

A basic function is also included in the tool to calculate emissions generated from staff working at home. There was a rapid shift to this working pattern in 2020-2021 owing to the COVID-19 pandemic. It was estimated using EcoAct's methodology.

### Further Research and Development

The Wildlife Trusts are still in the early stages of calculating and reporting our GHG Inventory. We are committed to continue the development and evolution of our operational boundary, data collection methods and reporting tool to ensure our GHG Inventory is comprehensive, robust, transparent and upholds best practice standards. In turn this will enable us to accurately measure and have confidence in our progress to reduce our GHG emissions in line with our net zero 2030 target.

This includes splitting out our reporting by each GHG, expanding and aligning our scope 3 activities with Greenhouse Gas Protocol Scope 3 categories, and improving our approach to calculating emissions from conservation grazing of livestock.

It is possible that these additional scope 3 additions will increase our reported emissions in the short term, as the inventory more comprehensively encapsulates our wider value chain GHG emissions. Once the operational boundary of our inventory is stabilised, we will re-baseline our progress as necessary.

We will review the calculation methods and emissions factors annually to ensure we are holding ourselves to account against best practice standards.