

Cumbria Wildlife Trust Carbon Reduction Strategy 2021 - 2030



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Contents

- 1 Introduction and context: The Need for a Carbon Reduction Strategy
- 2 Carbon Reduction Strategy
 - 2.1 Strategic Aims
 - 2.2 Purpose of this Strategy
 - 2.3 Evidence for the approach
 - 2.4 Defining net zero
- 3 The Trust's strategic approach to reducing carbon emissions
 - 3.1 Base our actions on data and measurement
 - 3.2 Identify a Carbon Reduction Pathway (with an action plan)
 - 3.3 Prioritise and work to address the highest emissions
 - 3.4 Consider embedded carbon in our procurement practices and consider in decision-making
 - 3.5 Switch to renewable sources of energy for our operational activity
 - 3.6 Work together to reduce emissions
 - 3.7 Sustain and increase the scale of our investment in land management and restoration of habitats that supports carbon capture and sequestration
 3.8 Livestock
- 4 The Trust's baseline carbon footprint
- 5 The Trust's Carbon Reduction Pathway
- 6 Key priorities for action
- 7 Carbon Reduction Action Plan
- 8 Governance structure and accountability
- 9 Monitoring and Review process

1. Introduction and context: the need for a Carbon Reduction Strategy

Cumbria Wildlife Trust is the leading conservation body for Cumbria. It is responsible for around 45 wildlife sites and reserves - which cover an area of 10,000 acres. Cumbria Wildlife Trust forms part of a network of 46 independent wildlife trust in the UK which together manage 2,300 nature reserves across 98,500 hectares.

The Trust's core mission is to protect and restore biodiversity – and engage people with the natural environment. It does this by managing its existing estate for biodiversity and by increasing the area of land it manages (or can successfully influence). This mission therefore delivers a range of biodiversity and biodiversity 'net gain' benefits, but also provides important ecosystem services. Historic carbon storage, as well as ongoing carbon sequestration, is one such ecosystem service, and this aspect of the Trust's operation has become increasingly important recently due to the climate emergency, the 2015 Paris Agreement, and legally binding carbon reduction obligations included in the UK's carbon budgets.

Along with many other organisations, Cumbria Wildlife Trust has become more conscious of its own impact on the environment as it carries out its charitable work. This has been prompted most recently the UK Government's 'Net Zero 2050' law which requires the UK to bring greenhouse gas emissions to net zero by 2050.

Net Zero 2050 has therefore prompted all organisations to evaluate their carbon footprints and re-evaluate how they undertake their operations.

Cumbria Wildlife Trust is no exception. The Trust has completed its first carbon footprint (GHG inventory) and has now designed this Carbon Reduction Strategy to help it respond to the challenges required by Net Zero 2050. These activities can yield a range of benefits which contribute to the core mission of the Trust and make a contribution towards mitigating the climate emergency.

This report therefore provides Cumbria Wildlife Trust with the second component of its carbon reduction ambitions, and sets a baseline against and time-bound target for reaching 'net zero'.

It should be noted that the Trust is undertaking this exercise voluntarily as it is not required – by law or otherwise - to measure or report its GHG emissions or to provide a Carbon Reduction Strategy.

However, following a review of the current scientific evidence (see), the Trust does not believe that the goal of Net Zero by 2050 is ambitious enough and does not deliver a credible response to the climate emergency.

The Trust considers that a target of achieving net zero by 2030 is more in line with the science and hence will adopt this ambition for its own activities. We will continue to campaign for this timetable to be adopted by the conservation sector and wider business community although we are aware that currently (2021), others in Cumbria are working towards a 2037 net zero goal.

2. Carbon Reduction Strategy:

2.1 Strategic Aims

Cumbria Wildlife Trust is committed to reducing the level of the GHG emissions that currently arise directly from our organisational activity. We aim to achieve near zero C emissions by 2030.

Additionally, it is important to recognise that the main priorities for our charitable activity are focussed on:

- creating a nature recovery network;
- + delivering habitat restoration at scale; and,
- + implementing nature-based solutions to the climate and nature crises.

The outcomes of this work are already resulting in a significantly net carbon-positive balance i.e., the Trust's activities are preventing the release of carbon from stored reserves and promoting further sequestration of atmospheric carbon.

Another key priority for the Trust is to enable improved adaptation and greater resilience of both local communities and the natural environment to future climate extremes and instability.

2.2 Purpose of this Strategy

The purpose of this document is to set out, in broad terms, how Cumbria Wildlife Trust will achieve this strategic aim.

The Carbon Reduction Strategy sets the level of ambition, the trajectory for carbon reduction and the strategy for how this will be delivered. It does not set out the precise details for how these reductions will be achieved due to the many uncertainties involved.

2.3 Evidence for the approach

The Carbon Reduction Strategy is based on two core pieces of information:

2.3.1 The baseline position of the Trust:

This is the total GHG emissions that are caused and generated by the Trust's activities and which are therefore theoretically under our direct control.

The baseline is recorded in the first iteration of the trust's carbon footprint (completed during 2021) and was based on data from 2019 - 2020.

2.3.2 Net Zero 2050 - the target date by which Net Zero will be achieved:

Net Zero 2050 includes all aspects of the UK economy and society and the UK Government therefore legislated for a maximum period of 30-years to achieve this goal.

The interim target for the UK Government is a 78% reduction on the 1990 baseline by 2035. For smaller organisations, which are responsible for a tiny fraction of total UK emissions, it is important that a shorter duration is adopted. Achieving net zero by 2030 has frequently been adopted by the wider UK conservation sector and The Wildlife Trusts has also set this as our ambition.

A target of 2030 allows the Trust to design and implement a sequence of annual action plans (a form of organisational 'carbon budgeting') that deliver the core objective of the CRS (i.e. achieving net zero).

2.4 Defining Net Zero

Net zero refers to the balance between the amount of greenhouse gas emissions produced by activity and the amount removed from the atmosphere by natural processes. Net zero is achieved when emissions are no more than the amount removed. There are two different routes to achieving net zero, which work in tandem:

2.4.1 Reducing existing emissions:

This involves making decisions about how a carbon footprint can be reduced. It is based on analysing an existing GHG inventory representing 'business as usual', and delivering new activities that lead to real/measurable reductions in GHG emissions.

Changes to 'business as usual' are therefore required, and these should be delivered *before* an organisation considers offsetting options (because offsetting too soon undermines the commitment to abate carbon emissions). Therefore, the point at which an organisation declares 'net zero' can be uncertain, and year-to-year variations in business activity can mean that the end-goal remains dynamic.

2.4.2 Actively removing greenhouse gases:

This involves undertaking new activities lead to 'negative' emissions through the capture and permanent sequestration of carbon dioxide. Such activities are intrinsic to Cumbria Wildlife Trust's core mission. This approach is often referred to as 'nature-based solutions', and these form a central part of Net Zero 2050.

However, this should not be relied on, and it is important that Cumbria Wildlife Trust also works to reduce its own carbon emissions rather than relying on existing habitats, some of which may not provide a credible carbon sink.

A *gross-zero* target would mean reducing all emissions to zero. This is not realistic, so instead the *net-zero* target recognises that there will be some emissions but that these need to be fully offset, predominantly via nature-based solutions.

2.4.3 Key Points:

- The effects of the climate emergency are being felt in the UK and abroad and this poses existential risks to wildlife and people.
- Cumbria Wildlife Trust has a responsibility to take action to reduce the emissions from our own activities in addition to taking action to help Cumbria mitigate and adapt across the county.
- The scope of the carbon reduction strategy is focused on our internal operations where we can have the greatest influence.

- As well as reducing our emissions, there are other benefits to be had such as lower energy bills, a reduced impact on the sourcing of energy, better air quality and improved health and safety where applicable.
- + This strategy and supporting action plans will be regularly reviewed to ensure that it is up to date, relevant and meets our long-term aims.

3 The Trust's strategic approach to reducing carbon emissions

Our strategic approach to reducing the Trust's carbon emissions is to:

3.1 Base our actions on data and measurement

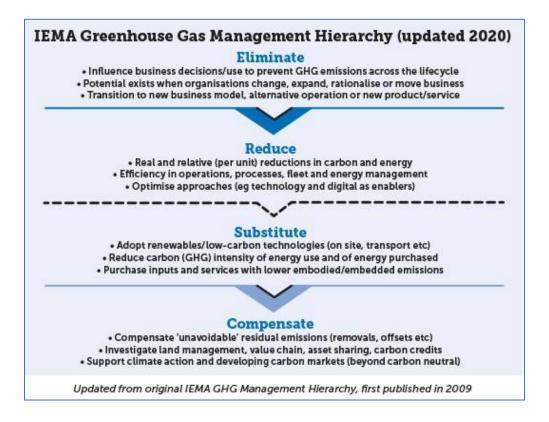
We will continuously use the carbon footprint tool (as amended) to measure, monitor and review our carbon performance as an organisation.

3.2 Identify a Carbon Reduction Pathway (with an action plan)

We will use this information to inform and maintain a Carbon Reduction Pathway – and this will guide and form our action plan to keep to our intended trajectory for reaching near zero carbon emissions as an organisation by 2030, as outlined in this document.

3.3 Prioritise and work to address the highest emissions

We will work hardest to avoid and/or reduce emissions from those activities which result in the highest (or 'unnecessary' emissions in terms of delivering our purposes) emissions as our top priorities ... using the IEMA model (see below) and by changing our individual behaviours and working practices whilst maintaining our vital activity and business needs. Teams and individual staff will be allocated their own personal targets for carbon reduction as part of the annual appraisal process.



3.4 Consider embedded carbon in our procurement practices and consider in decision-making

We will critically assess and keep under review our procurement practices to ensure we use the best available carbon and energy efficient technologies to deliver our work.

3.5 Switch to renewable sources of energy for our operational activity

As and when they become available and affordable, we will move as quickly as possible to renewable forms of energy and invest in systems to generate clean energy from our own assets, where practicable.

We will stop activities which result in unnecessary (i.e. unrelated to our charitable purposes) unacceptably high levels of emissions and find alternative ways of achieving the same ends. For example, the Trust will not refund travel expenses for air travel or individual car journeys (where there is an on-line meeting or lower carbon public transport option).

3.6 Work together to reduce emissions

We will work closely with our members, supporters and partners to influence and change how they interact with Cumbria Wildlife Trust to avoid, minimise and reduce carbon emissions that arise from their relationship with us.

3.7 Sustain and increase the scale of our investment in land management and restoration of habitats that supports carbon capture and sequestration

We will continue to invest in, and increase the scale of our activity to protect habitats with existing carbon stores *in situ* on our nature reserves and across Cumbria. We will work directly and with and through others in partnership to achieve this transformation. The Trust has been a partner in developing a Net Zero plan for Cumbria which identifies the need to boost the contribution that land management makes by 4 - 5 fold.

The Trust is a comparatively small local organisation, generating relatively low emissions but we undertake a significant amount of habitat restoration which results in the protection of existing habitat-based carbon stores (e.g. carbon in peatland, soils, woodland and wetland) and/or enabling future active carbon capture and sequestration by natural habitats. A controlled and limited level of carbon emissions from Trust activity is justified **where** this supports the protection of a greater amount existing carbon stores in *situ* and/or has a high probability of promoting future carbon capture and sequestration.

NB Through the work of the Trust's peatland restoration team since 2005, our activity protects and saves the release of an estimated 8500 tCO2e annually across 5000ha.

3.8 Livestock

We will **exclude** (until such time as further relevant evidence becomes available) from the Trust's current baseline carbon account. This is justified on the following grounds:

- The carbon emissions from animals in extensive systems closely mimic 'rewilded' natural ecosystems – and this is the purpose of much of our land management activity.
- The Trust has reviewed the grazing levels on its nature reserves and concluded that they are at a lower level than would result from *rewilding* these areas fully with large wild herbivores. The animals are entirely grass-fed and we consider that the application of emissions estimates from industrial mainstream agricultural systems are not comparable to our conservation grazing systems. This position is open to review if further data comes to light but with the current evidence the Trust considers that the emissions from livestock should be viewed as being largely part of the current 'livestock' cycle rather than emitting carbon from fossil sources, especially as we intend to avoid / reduce vehicle emissions associated with this activity.
- These no-input, low disturbance extensive grassland / wood pasture systems have been shown to accumulate stable soil organic matter in the soil profile, especially in wet / humic / gley conditions – which are often a particular feature of our sites.
- Species-rich wild flower grassland livestock systems, like those on Trust reserves, are able to accumulate carbon more quickly than woodland. There is evidence (Wilson, 2021) which suggests that such systems under extensive cattle grazing can hold 9.8% more total carbon in the upper 7.5cm of soil profile than other managed grasslands (extensive sheep grazing 8.6% more; mixed livestock 10.125% higher).
- It would be counter-productive for the Trust to remove livestock on these conservation grazing systems because they would lose species (including carbon fixing fungi) and become less diverse. Succession to scrub and woodland may release stored carbon (e.g. through drying and respiration) and may not necessarily result in carbon emission reductions.

4 The Trust's baseline carbon footprint

The first footprint iteration for the Trust's baseline has been calculated for the financial year 2019 -2020 (April to March) and the summary is provided in Table 1(including livestock) and Table 2 (excluding livestock) below.

	Scope*	tCO2e	% of total
Livestock	3	323.3	72.1
Staff commute	3	72.2	16.1
Fleet diesel	1	11.8	2.6
Electricity	2	10.6	2.4
Staff mileage	3	15.7	3.5
Gas	1	3.7	0.8
Oil	1	0	0
Biodiesel	1	0	0
Biomass	1	1.3	0.3
Volunteer mileage	3	4	0.9
Fleet fuel premium petrol	1	0.3	0.1
Fleet fuel premium diesel	1	0.3	0.1
Fleet fuel petrol	1	4.1	0.9
Fleet fuel red diesel	1	0.3	0.1
Electricity transmission & distribution	3	0.9	0.2
Water and wastewater	3	0.3	0.1
TOTAL		448.7	

Table 1: Total Cumbria Wildlife Trust CO2 emissions (including livestock)

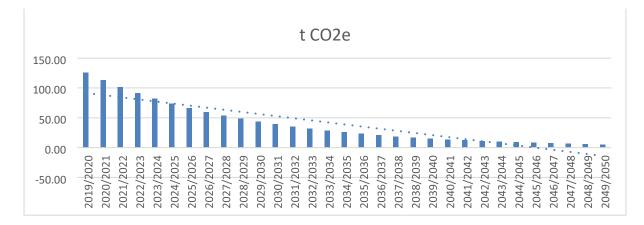
*Scope is defined by the Carbon Accounting Tool

Table 2: Total Cumbria Wildlife Trust CO2 emissions (excluding livestock)

	Scope	tCO2e	% of total
Staff commute	3	72.2	57.6
Fleet diesel	1	11.8	9.4
Electricity	2	10.6	8.5
Staff mileage	3	15.7	12.5
Gas	1	3.7	2.9
Oil	1	0	0
Biodiesel	1	0	0
Biomass	1	1.3	1
Volunteer mileage	3	4	3.2
Fleet fuel premium petrol	1	0.3	0.2
Fleet fuel premium diesel	1	0.3	0.2
Fleet fuel petrol	1	4.1	3.3
Fleet fuel red diesel	1	0.3	0.2
Electricity transmission & distribution	3	0.9	0.7
Water and wastewater	3	0.3	0.2
TOTAL		125.4	

5 The Trust's Carbon Reduction Pathway

We will start with the high-level emission areas and we aim to reduce our total emissions by around 10% (i.e. c10 - 15 tonnes each year). This produces a Carbon Reduction Pathway as illustrated in Figure 1 below.



6 Priority Areas for Action

The Trust's key sources of emissions have been identified in Table 3 and these are ranked in Table 4.

,	tCO2e	%
Staff commute	72.2	57.5
Fleet diesel	11.8	9.4
Electricity	10.6	8.4
Staff mileage	15.7	12.5
Gas	3.7	2.9
Oil	0	0
biodiesel	0	0
Biomass	1.3	1
Volunteer mileage	4	3.2
Fleet fuel premium petrol	0.3	0.2
Fleet diesel	0.3	0.2
Fleet fuel petrol	4.1	3.3
Fleet fuel red diesel	0.3	0.2
Electricity transmission &	0.9	0.7
distribution		
Water and wastewater	0.3	0.2
TOTAL	125.5	

Table 3: Key emission sources (e	excluding livestock)
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Table 4: Ranked priority sources and areas for action

Priority		tCO ₂ e	%
1	Staff commute	72.2	57.5
2	Staff mileage	15.7	12.5
3	Fleet diesel	11.8	9.4
4	Electricity	10.6	8.4
5	Fleet fuel petrol	4.1	3.3
6	Volunteer mileage	4	3.2
7	Gas	3.7	2.9
8	Biomass	1.3	1
9	Electricity transmission & distribution	0.9	0.7
10	Fleet fuel premium petrol	0.3	0.2
11	Fleet diesel	0.3	0.2
12	Fleet fuel red diesel	0.3	0.2
13	Water and wastewater	0.3	0.2
TOTAL		125.5	

7 Carbon Reduction Action Plan:

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Annual Action	Planned Outcome/ Impact	Who?	Timeframe	Total Est. Cost/ Resource Requirement	Additional benefits	Est. CO ₂ e reduction
2022/23	Sustained reduction in emissions by approx.50% through move to flexible home / remote working instead of office working	95% of staff	By March 2023	Additional IT costs of c£2500	 Reduced travel time & increase in productivity Better work-life balance for many staff Reduced fuel costs 	Reduce by c50% to 36.1 tCO ₂ e
2022/23	Raise the issue with staff and resume encouraging staff to car share and/or cycle to work	All staff	April 2022	Nil	Reduce costs for staff	2 tCO ₂ e
2022/23	Introduce revised arrangements for paying travel expenses which incentivise reducing travel to sites	All staff	April 2023	Need new claims approach - £2000 initially		2 tCO ₂ e
2023/24	Require newly appointed staff to locate close to their place of work in contracts. TBC.	New staff	In place by April 2024	Nil		2 tCO ₂ e
By 2030	Phase out the payment of travel expenses for petrol/diesel vehicles Details tbc	All staff	Introduce proposals and consult by 2025	Nil		A further 30 tCO ₂ e by 2030

					Total	72.1 tCO e
Priority Area 2:	Staff mileage (baseline = 15	.7 tCO ₂ e)		<u> </u>		2
Annual Action	Planned Outcome/ Impact	Who?	Timeframe	Total Est. Cost/ Resource Requirement	Additional benefits	Est. CO ₂ e reduction
2022/23	Behavioural change to ensure more use of digital connectivity to avoid the need for regular and long journeys AND encourage staff to rationalise journeys Introduce a carbon reduction target for individuals in their personal objectives. Details tbc	All staff	In place by March 2023	£2500	Increased productivity through less travelling time in the work day Reduced fuel costs for CWT	Reduce by 50% to 8 tCO ₂ e
2023/24	Move to a pool fleet of electric vehicles (e.g. 2-3) and require staff to use them first before using their own petrol vehicles	All staff	In place by end March 2024			Reduce by a further 7 tCO ₂ e
					TOTAL	15 tCO ₂ e

Annual Action	Planned Outcome/ Impact	Who?	Timeframe	Total Est. Cost/ Resource Requirement	Additional benefits	Est. CO ₂ e reduction
2022/23	Replace current diesel vehicles with electric pool cars	Facilities	By March 2023	£50,000		Reduce by 50% to 5 tCO ₂ e
	Install charging points at Plumgarths and Gosling Sike			£30,000 (est)	Can charge for use of the points to third parties	
2022/23	Investigate alternative solutions to use of vans and estate vehicles and plan replacement	Facilities	By March 2027		NB. Cut use of vehicles but until hydrogen vehicles developed not feasible	Reduce by a further 5 tCO ₂ e
					TOTAL	10 tCO ₂ e

Annual Action	Planned Outcome/ Impact	Who?	Timeframe	Total Est. Cost/ Resource Requirement	Additional benefits	Est. CO ₂ e reduction
2022/23	Move fully to LED lighting	Facilities	By March 2023 (subject to grant funds)	£5000	Reduced costs and better lighting	?
2022/23	Purchase electricity only from renewable suppliers on our sites / reduced office working / depends on National Powergrid	Facilities	Done			Reduce by 100% to 10.6 tCO ₂ e
2022/23	Install solar panels on the roof at Gosling Sike	Facilities	Done	£10,000		Should provide 12KW electricity for all on site needs reduce by 3 tCO ₂ e
2022/23	Investigate solar panels at South Walney	Facilities	End March 2024	£15,000		Should provide electricity for all on site needs reduce by 3 tCO₂e
2023/24	Investigate other roof installations on Trust buildings (e.g. other parts of GS)	Facilities	End March 2025	£25,000		Should provide electricity for all on site needs reduce by 4 tCO₂e
					TOTAL	Approx. 20 tCO ₂ e

Annual Action	Planned Outcome/ Impact	Who?	Timeframe	Total Estimated Cost/ Resource Requirement	Additional benefits	Est. CO₂e reduction
2022/23 (see Priority Area 3)	vehicles with electric pool cars	Facilities	By March 2023	£50,000		Reduce by 90% to 1 tCO ₂ e
	Install charging points at Plumgarths and Gosling Sike			£30,000 (est)	Can charge for use of the points to third parties	
2024/25	Investigate a switch to electric quad bikes	Facilities	By March 2027	£10,000		Reduce to 0.1 tCO ₂ e
					TOTAL	4.0 tCO ₂ e

Priority Area 6: Volunteer mileage (Baseline = 4 tCO ₂ e)							
Annual Action	Planned Outcome/ Impact	Who?	Timeframe	Total Est. Cost/ Resource Requirement	Additional benefits	Est. CO ₂ e reduction	
2022/23	Encourage greater use of car sharing	Facilities	End March 2023			? 0.5 tCO ₂ e	
By 2030	Phase out the payment of travel expenses for petrol/diesel vehicles Details tbc	All volunteers	Introduce proposals and consult by 2028	Nil		A further 2 tCO ₂ e by 2030	
					TOTAL	2.5 tCO ₂ e	

Priority Area 7: Gas (Baseline = 3.7 tCO ₂ e)								
Annual Action	Planned Outcome/ Impact	Who?	Timeframe	Total Estimated Cost/ Resource Requirement	Additional benefits	Est. CO ₂ e reduction		
2022/23	Investigate alternative renewable heating system options and costs at Gosling Sike	Facilities	End March 2025	£1000				
2024/23	Plan to implement new system	Facilities	End March 2026	£15,000		Reduce by 3.7 tCO ₂ e		
					TOTAL	3.7 tCO ₂ e		

Priority Area 8: Biomass (Baseline = 1.3 tCO ₂ e)							
Annual Action	Planned Outcome/ Impact	Who?	Timeframe	Total Est. Cost/ Resource Requirement	Additional benefits	Est. CO ₂ e reduction	
2023/24	Implement further opportunities for small scale insulation	Facilities	By end March 2024	£5000		Reduction of 25% to approx. 1 tCO ₂ e	
					TOTAL	0.3 tCO ₂ e	

Priority Area 9: Electricity transmission (Baseline = $0.9 \text{ tCO}_2 \text{e}$)

Annual Action	Planned Outcome/ Impact	Who?	Timeframe	Total Est. Resource Requirement	Est. CO ₂ e reduction
	Depends on actions by Electricity North West				

Annual Action	Planned Outcome/ Impact	Who?	Timeframe	Total Est. Cost/ Resource Requirement	Additional benefits	Est. CO ₂ e reduction
2022/23 (see Priority Area 3)	Replace current petrol vehicles with electric pool cars Install charging points at Plumgarths and Gosling Sike	Facilities	By March 2023	£50,000 £30,000 (est)	Can charge for use of the points to third parties	Reduce by to 0 tCO₂e

Annual Action	Planned Outcome/ Impact	Who?	Timeframe	Total Est. Cost/ Resource Requirement	Additional benefits	Est. CO ₂ e reduction
2022/23 (see Priority Area 3)	Investigate alternative solutions to use of estate vehicles and plan replacement	Facilities	By March 2027		NB. Cut use of vehicles but until hydrogen vehicles developed not feasible	Reduce by a further 0.3 tCO ₂ e

					TOTAL	0.3 tCO ₂ e
Priority Area 12	: Fleet fuel red diesel (Bas	eline = 0.3 <i>t</i>	°CO₂e)			
Annual Action	Planned Outcome/ Impact	Who?	Timeframe	Total Est. Cost/ Resource Requirement	Additional benefits	Est. CO ₂ e reduction
	Softrak – very low use and has an important function related to protecting peatland management and			£10000 in maintenance to 2030		
Priority Area 13:	Water and wastewate (Ba ^{wildfires}	erseline = 0.3	tCO2e)			
Annual Action	Planned Outcome/	Who?	Timeframe	Total Est .	Additional TOTAL	Est. CO ^{?0} e
	Impact			Cost/ Resource Requirement	benefits	reduction
	Depends on actions by United Utilities					
					TOTAL	?0

8 Governance structure and accountability

The delivery of this strategy will be overseen by the Trust's Audit and Resources Committee on behalf of the Board of Trustees. One trustee will take the lead as the Board's carbon reduction champion / sponsor (Professor Graham Hooley).

The Chief Executive and leadership team is accountable to the Board for delivery of the strategy and for providing reports to the Board on a quarterly basis to cover monitoring, progress and reaching near net zero by the 2030 target. Reporting will be a standard agenda item for the Board on a quarterly basis.

Tasks will be delegated through the Trust's line management structure involving all teams and departments. Key participating roles will include the Facilities Manager, Finance and Administration Manager, Nature Recovery Network Manager and Senior Nature Reserves Manager.

9 Monitoring and Review process

The Finance and Administration Team will be responsible for measuring, monitoring, collating information and reporting on the Trust's performance to the Leadership Team and Board of Trustees.

Reviews will be led by the Trust's Senior Management and Leadership Teams on a quarterly basis with challenge, scrutiny and strategic overview from the Board.

