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Carbon Reduction Plan 2025-2030

1. Introduction

1.1 The Yorkshire Dales National Park Authority (Authority) is one of many organisations to have declared a "climate emergency" and has set an ambitious carbon emissions reduction objective:

> "By 2030, reduce greenhouse gas emissions from our operations by at least 95% compared to 2005/06, and achieve annual carbon savings from woodland planting that we have funded of at least 30 times our residual annual emissions"

1.2 The purpose of the new Plan (2025-2030) is to set out what we intend to do over the next 5 years to continue to reduce our carbon emissions.

2. Scope

2.1 The Plan is predominantly concerned with emissions that are in our direct control (referred to as 'Scope 1' and 'Scope 2' emissions), i.e. the Authority's fleet vehicles, how we heat our buildings and how we provide our services.

2.2 The Authority's current reporting follows standard practice for local authorities and national park authorities. It, therefore, includes some Scope 3 emissions (business mileage for officers and Members, volunteers mileage, rail and air travel, water supply and treatment) but excludes others. The most significant of these are emissions associated with staff home working and commuting.

2.3 The Authority recognises that elements of our Scope 3 emissions are largely outside our control and are dependent on the actions of others e.g. decarbonisation of the power grid, and the availability of low carbon technology. Nonetheless, it is valuable to be aware of and monitor these emissions. Employee homeworking and commuting emissions have been collected since 2023 but are not included in our overall target. This data is reported annually to Defra, which collates greenhouse gas data from all Defra agencies and departments.

3. Assumptions and projections

3.1 Our overall objective is based on assumptions, which seem reasonable at this time, that by 2030:

- our future supply of electricity will be certifiable as zero carbon – either because the grid has been decarbonised or, we are able to purchase solely from certified zero carbon sources;
- an EV alternative to Land Rovers will become available and affordable; and
- more of our staff, Members and volunteers will have switched to electric vehicles, resulting in a further 20% reduction in carbon emissions arising from staff, Members and volunteers mileage.

3.2 By 2030 this would leave the Authority with a final residue of emissions comprising:

- **Wood pellet and wood chip biomass boilers**
  Our wood pellet biomass boilers replaced an oil system at the Dales Countryside Museum (DCM) and our wood chip biomass boiler replaced a gas system at the Colvend office. These were funded through the Renewable Heat Incentive (RHI) grant, which ends in 2032.
- **Grey Fleet (Scope 3), Members', officers' and volunteers' mileage**
  Whilst no new petrol/diesel cars will be sold after 2030, individuals will continue to operate diesel/petrol cars beyond 2030. There may come a time when we need to incentivize staff to move to the use of electric vehicles more quickly.
- **Rail travel**
  This is the carbon-efficient travel alternative to cars, so other than making sure all journeys are necessary, we don't plan to manage this down.
- **Air travel**
  The costs of alternative transport (international rail) and extra officer travel time to occasional international meetings outweigh the benefit of any carbon savings from our shifting to rail/boat. The number of air travel business journeys per year is very low. Longer term, carriers are committed to reducing the carbon footprints of their operations, so the net emissions from air travel should fall over time.

4. Premises

4.1 The new Southern area ranger base at Langcliffe Quarry will have a 6kw solar system with battery storage, an air source heat pump and two electric vehicle chargers. It will be built to modern building regulation standards so be very thermally efficient. Whilst it's not likely to be carbon neutral (given the type of open space building), it will be the most energy efficient building in our property portfolio, saving approximately 5,000 kwh a year compared to the current premises.

4.2 We will continue to reduce emissions from our premises by installing PV panels at Grassington Visitor Centre, Grassington toilets, the Dales Countryside Museum Ranger office building, Colvend office workshop, Horton toilets, Buckden toilets and Stainforth toilets. There is no more capacity at Yoredale for roof panels, but a ground array is possible on the green roof and this will be explored.

4.3 We will install solar battery storage at our premises where this is likely to be most beneficial. Initial investigations indicate that this would be at Yoredale office, Colvend office and the Dales Countryside Museum, where we have the most kwh usage. The batteries would be able to store solar energy we can't currently use, instead of it going back to the electricity grid. There is also the option to use the batteries for smart building management, charging them at off-peak rates, then discharging them at peak electricity rate times.

4.4 The only remaining potential use of 'Burning Oil' and for 'Natural Gas' will be in the back-up heating systems maintained in case our wood-fuelled boilers at DCM or Colvend fail. We will seek to manage maintenance and repair contracts as effectively as possible to limit the use of those back-ups, setting our target for emissions for 'Burning Oil' and 'Natural Gas' at zero.

5. Electricity

5.1 There is potential to further improve energy efficiency and use throughout Authority buildings by the smart monitoring of our electricity usage, and heating systems. The largest efficiency left to us is mitigating wasted electricity usage when rooms or spaces in our buildings are empty or partially full.

6. Travel

Electric Vehicles and Electric Vehicle charging Points

6.1 Given central government's deadline for the withdrawal of sales of new petrol/diesel vehicles, the intention is to move to a completely EV fleet by 2030. This would remove all of our (Scope 1) fleet emissions. The move to EV pool and fleet vehicles is partially completed. The Authority, like a number of other organisations is dependent on the development of vehicles that could replace our Land Rovers and other off-road vehicles. The current market for low-carbon, heavy towing vehicles is in its infancy and therefore Authority operated Land Rovers may be one of the last things to decarbonise. The situation will be reviewed in 2028 or sooner if developments in this area progress more quickly. Our projected emission figures for 2029-30 assume that EV Land Rovers or an equivalent will be part of the Authority's fleet. Currently Authority emissions from the Land Rovers are 21t CO_2e.

Reducing petrol/diesel vehicle use for business travel

6.2 We are seeking to reduce 'grey' fleet (Scope 3) emissions by the adoption of better practices such as car sharing. While we have little control over what vehicles officers, volunteers and Members choose to drive, it is hoped that the introduction of EV charging points will encourage an early shift away from petrol/diesel vehicles. The Government's current intention is to end the sale of new petrol/diesel cars by 2030 and as those vehicles may last perhaps at least another 10 years, we may be left with some carbon emissions long after 2030.

7. Working from Home

7.1 The Authority operates a Home Working Policy which permits various ways that home working may operate, ranging from rare occasions through to formal arrangements that are identified in the contract of employment. Emissions associated with staff working from home (heating/electricity use) are largely outside the control of the Authority, however it is useful to track these to give a full picture of emissions associated with all Authority operations. These emissions are expected to fall in line with the decarbonisation of domestic properties and the grid.

8. Conclusion

8.1 The further actions to reduce the Authority's emissions as detailed in this Plan are set out in **Annex A** with timescales for completion.

8.2 The transition to EV Land Rovers represents the highest uncertainty of all Scope 1 and 2 emissions given the immaturity of this market.

8.3 The reduction of Scope 3 emissions relies on officers, volunteers and Members choosing private ownership of electric vehicles.

8.4 By 2029-30 the Authority hopes to have reduced its emissions to 39t CO_2e (-94%). Projected emissions for 2029-30 can be found in **Annex B**.

Future actions **Annex A**

	Action	Target Date	Responsible Officer
1.	Complete construction of Langcliffe Quarry Southern Area Ranger Base.	September 2025	Estates Manager
2.	Install additional PV panels at Authority premises.	March 2026	Estates Manager
3.	Install solar battery storage at Yoredale office, Colvend office and Dales Countryside Museum.	March 2026	Estates Manager
4.	Explore feasibility of installation of ground array of PV panels at Yoredale office.	March 2026	Estates Manager
5.	Explore electricity supply options including a move to a green electricity tariff.	March 2027	Director of Corporate Services
6.	Explore the smart monitoring of our electricity usage and heating systems to mitigate wasted electricity usage when rooms or spaces in our buildings are empty or partially full.	March 2027	Estates Manager
7.	Maintain a watching brief on the development of electric Land Rovers with a view to transitioning these to electric vehicles in the future.	March 2028	Head of Park Management

Projected Authority Greenhouse Gas Emissions ($KgCO_2e$) 2025-2030 Annex B

	2024-25	2029-30
Scope 1	KgCO2e	KgCO2e
1. Burning oil	13,336	0
2. Diesel (ad hoc use)	8,326	0
3. Gas Oil	0	0
4. LPG	282	250
5. Natural Gas	229	130
6. Woodchip	2,332	2,500
7. Petrol for hire car, plant and machinery	1,537	0
8. Pool cars (small petrol car) - leased	4,019	0
9. Pool cars (medium petrol car) - leased	6,918	0
10. Land Rovers (large diesel car) - leased	20,553	
11. Vans (small diesel van) - leased	3,985	0
12. Retail/Maintenance van (large diesel van) - leased	1,266	0
Total	62,782	2,880

Scope 2		
13. Electricity - Premises	50,600	0
14. Electricity – Electric Vehicles	0	0
Total	50,600	0

Scope 3		
15. Business Mileage - Officers	18,969	15,175
16. Business Mileage - Members	510	408
17. Volunteers Mileage	22,303	17,842
18. Rail Travel – Members + Staff	849	900
19. Air Travel	0	0
20. Water supply	949	900
21. Water treatment	954	900
Total	44,534	36,125

Total emissions	157,917	39,005
% reduction from 2005-06	-76%	-94%