



Place Panel

Meeting Date: 21 July 2022
Portfolio: Environment and Transport
Key Decision: No
Within Policy and Budget Framework: Yes
Public / Private: Public
Title: Local Environment (Climate Change) Strategy update
Report of: Jane Meek, Corporate Director of Economic Development
Report Number: PC 09/22

Purpose / Summary:

The purpose of this report is to update the Panel on the delivery of the Local Environment (Climate Change) Strategy.

Recommendations:

- Comment on the progress made against the updated action plan.

Tracking

Scrutiny:	Place Panel 21/7/22
Executive	
Council	

1. BACKGROUND

1.1 Introduction

1.1.1 This report is an update, requested by the Panel, on the Local Environment (Climate Change) Strategy and action plan. The last update to the Panel (June 2021) was 3 months after the Strategy was adopted, this report covers the period since, 15 months since the Strategy was adopted.

1.1.2 The report is set out in the following sections:

- National policies, strategies and reports
- Countywide partnership work
- Update on action plan and baseline
- Update on organisational actions
 - Assets
 - Finance
- Update on local actions
 - Local Plan
 - Housing
 - Movement
 - Round-up
- Communications and engagement

1.2 National policies, strategies and reports

1.2.1 The Government's 'Net Zero: Build Back Greener Strategy' was published in October 2021. A summary has been produced by the Local Authorities' Climate Coordinator (ZCCP) and the main points are included for context in Appendix A.

1.2.2 The Environment Act entered the statute book in November 2021, the act seeks to improve air and water quality, tackle waste, increase recycling, halt the decline of species, and improve the natural environment. A summary of the key points of the Act are presented in Appendix B.

1.2.3 The latest greenhouse emissions estimate data for local authority areas was published in June 2022, the data set includes estimates for 2020. The scope of the dataset now includes emissions data on methane and nitrous oxide. The addition of these gases is particularly important to local authorities with large rural areas, which may have significant emissions from agriculture and/or land use, land-used change and forestry (LULUCF), or local authorities with significant waste generation. This latter change - assigning emissions to the local authority responsible for generating the waste not where the waste is treated - allows for greater transparency in reporting as local authorities will now be able to report more accurately the emissions for which they are responsible.

A summary of the totals for the different categories, for Cumbria, is presented in Appendix C.

1.3 Countywide partnership work

1.3.1 The Zero Carbon Cumbria Partnership (ZCCP) has recently refreshed its governance by establishing a Strategic Oversight Board (SOB) to support the Co-Chairs, Working Group Chairs, and the whole Partnership. The SOB is being set up on an 'interim' basis and will be reviewed in a year, with input from all Partners. The following are the proposed, inaugural Members of the SOB:

- Angela Jones, Co-Chair ZCCP
- Karen Mitchell, Co-Chair ZCCP
- Cumbria's National Parks
- Cumbria Local Nature Partnership
- Cumbria Tourism
- Officer(s) of the two Shadow Councils
- A representative of Cumbria's young people.
- A representative of Cumbria's Community Group

1.3.2 The Local Authority Climate Policy Group has been meeting monthly, the policy group has grown to include the North West Energy Hub. The topics discussed at the recent meetings include:

- Zero Carbon Cumbria – Youth Engagement Project on Climate Change
- Cumbria Green Investment Plan
- Potential application to the Shared Prosperity Fund
- Cumbria Clean Energy Strategy Consultation

1.3.3 The Local Nature Recovery Strategy (LNRS) Pilot Scheme for Cumbria work concluded in May 2021 with the submission of a draft LNRS to Defra. The work completed can be viewed at:

<https://www.cumbria.gov.uk/planning-environment/lnrs/default.asp>

1.3.4 The Cumbria Local Nature Partnership (CLNP) exists as a unified voice for the natural environment in Cumbria, fostering the development of a strategic natural environment framework for the county. The CLNP Board has agreed the following priority work-streams:

- Nature Recovery: Developing and facilitating work on a Cumbria-wide Nature Recovery Network and Local Nature Recovery Strategy
- Natural Capital and Green Recovery: To include development of Natural Capital project pipeline and investment
- Knowledge Exchange: To include dissemination of information/evidence, training and development.

1.3.5 Cumbria County Council are the accountable body for the new Cumbria Coastal Community Forests. The delivery area is to start with the surrounding areas of Barrow, Whitehaven, Workington including up to Carlisle. More information is available at:

<https://www.cumbria.gov.uk/planning-environment/CCCF.asp>

1.3.6 A new Cumbria wide EV Charging Infrastructure Partnership has been formed through The One Public Estate (OPE) programme. The Electric Vehicle Charging Infrastructure Partnership is a group of organisations from across Cumbria, who are working together to deliver a co-ordinated approach to addressing the future Electric Vehicle charging needs of the county. The partnership has engaged with several Electric Vehicle Charging Infrastructure specialists to develop a strategy that will be the most effective for Cumbria and consider both residents' and visitors' needs going forward.

1.4 Action planning and baseline

1.4.1 The action plan was audited in October 2021 and led to a review of the action plan, with more focus upon the actions that will decarbonise the Council's services. The updated action plan is available at:

<https://www.carlisle.gov.uk/Council/Council-and-Democracy/Climate-Change>

1.4.2 The Council's Carbon Baseline Data (Carbon Footprint) was audited in February 2021 and some minor changes were made to the 2018/19 Baseline figure, this has been updated in the latest action plan and can be summarised as follows:

The Council's gross¹ carbon footprint for 2018/19 was 3288² tonnes CO₂e.

We have used production accounting for the Council's carbon footprint. Production accounting only considers day-by-day emissions from sources such as buildings and vehicles. Production emissions are relatively straightforward to measure and account for, consumption emissions are much more difficult to quantify as most emissions are occurring elsewhere and produced by other parties.

This approach is the same as the National UK Baseline, for the Council we are measuring:

Scope 1: Emissions by authority owned vehicles and emissions from gas and oil boilers, the energy used for operational work such as collecting waste and maintaining our parks. **(1677t CO₂e.)**

Scope 2: Grid Electricity across the estate. **439t CO₂e.)**

Scope 3: Business travel, transmission & distribution losses¹, and selected leased out assets such as the leisure centre. **(1172t CO₂e.)**

¹ The Council's microgeneration of renewal energy is estimated at 47,000kwh, saving 13(t)co₂e. The Council's net carbon footprint is estimated at 3275 tonnes CO₂e.

² This is a working figure, and it will be updated as definitions and data are refined.

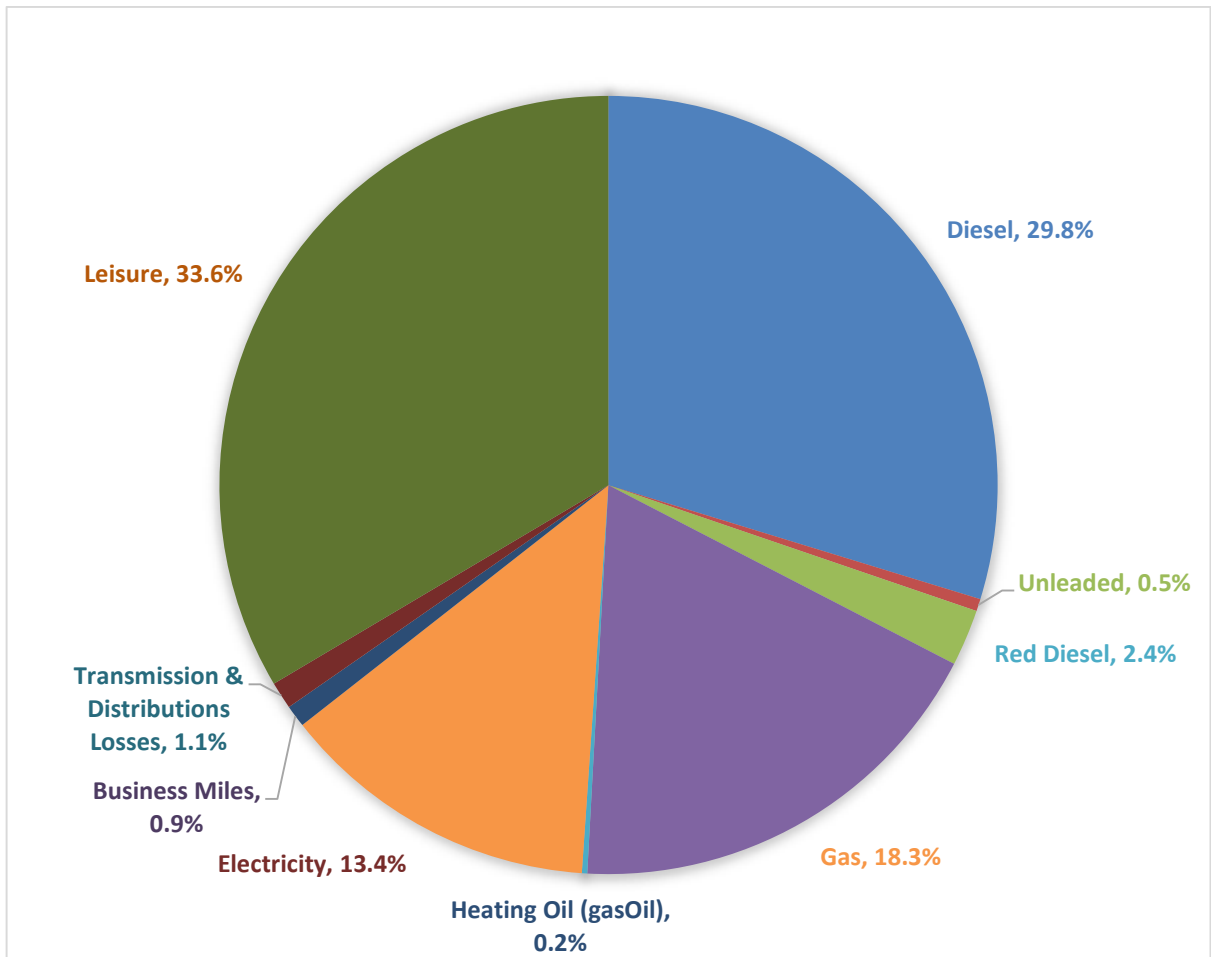


Figure 1: Main sources of the Council's carbon footprint

1.4.3 The audit recommended further development around regular reporting on actual carbon reduction impact. This is done on a project by project basis, where we have separate data to track. An annual figure for 2022/23 will be collated to compare with the baseline (2018/19), this will show the actual carbon reduction impact for the three financial year period.

1.5 Update on Organisational Actions

Assets

1.5.1 The Sands Centre, Pools and Victorian Health Suite (Turkish Baths) forms part of the Council's carbon footprint, under scope 3 (Leisure). This means that the Sands Centre Redevelopment will have a significant impact on reducing the organisations carbon footprint. Initial calculations, based on the Consequential Improvements Report, estimate a reduction in production Green House Gas

(GHG) emissions of 96 tonnes per annum. This would be an 8% reduction on our Scope 3 emissions. The improved facilities will include a range of sustainable features which will support plans for reducing carbon emissions, improving energy efficiency and providing sustainable, healthy transport options.

1.5.2 The Civic Centre Reinstatement Project included Public Realm improvements and EV charging points in the extended Civic Centre car park.

1.5.3 The Council has a total of 1421 footway lights, approximately 50% in the rural area and 50% in the main urban area. The Footway Lighting (LED) Project ended, leaving only 150 lamps which still need to be upgraded. We are now getting information on the power consumption of our Footway Lights each month, covering the last year (since May 2021). The annual power consumption has dropped from 368,824 kWh to an estimated 110,180 kWh, a 70% reduction because of fitting LED lamps to most of our lights. This is better than expected. It is a 17% reduction in overall electricity usage by the Council which equates to a 2% drop in our overall carbon footprint (reported in Scope 2). The remaining 150 lamps are not easy to convert due to several reasons related to the columns to which they are attached. A survey is currently underway to assess what needs to be done to convert these lamps.

1.5.4 The Heat Decarbonisation Plan (cross-reference 1.5.11) was presented to Executive in February 2022. The Executive Summary of the report states:

'Analysis of options has identified projects and targets with the potential to save at least 40% of the City Council's baseline emissions through energy efficiency and renewable technologies. This is based on current technologies and conservative estimates of potential for conversion to electric heating and onsite renewable generation; actual potential may be higher. Any remaining emissions may need to be offset through carbon compensation or fuel switching. Overall, this will allow the City Council to reach a net-zero position by 2037.'

1.5.5 Through the Fleet Strategy vehicle replacement reviews for each service area are underway. The challenge is to continually reduce the fleet and mileage. 2 e-bikes were purchased in 2021. One session of bike ability training has taken place a second session is planned for July. The pool bike page on the intranet will be refreshed to manage bookings and the usage of these bikes.

1.5.6 We have received two reports from the Energy Saving Trust Consultancy (EST) based on the two objectives we set:

- Objective 1, Van Fleet from the perspective of current and expected needs for EVs, and the likely load on the electricity supply, and number of charge points required.
- Objective 2, Grey Fleet & Pool Cars.

1.5.7 The EST Transport Decarbonisation Report 'Executive Summary' and 'Summary of Recommendations' are included in Appendix C. The report clearly identifies that the focus on decarbonisation should be on the Refuse Collection Vehicles

(RCV) and Heavy Commercial Vehicles (HCV). The associated Green House Gas emissions (GHG) are presented in the graph 4.1 and table 4.3, extracted from the report:

Figure 4-1 shows the percentage distribution of GHG emissions by vehicle fleet. The RCV fleet is clearly the most GHG intensive, producing 75% of Carlisle CC's fleet emissions for 2019/20. A focus on the RCV fleet for decarbonisation would therefore deliver greater emissions reductions.

Figure 4-1: GHG emissions by fleet (including grey fleet)

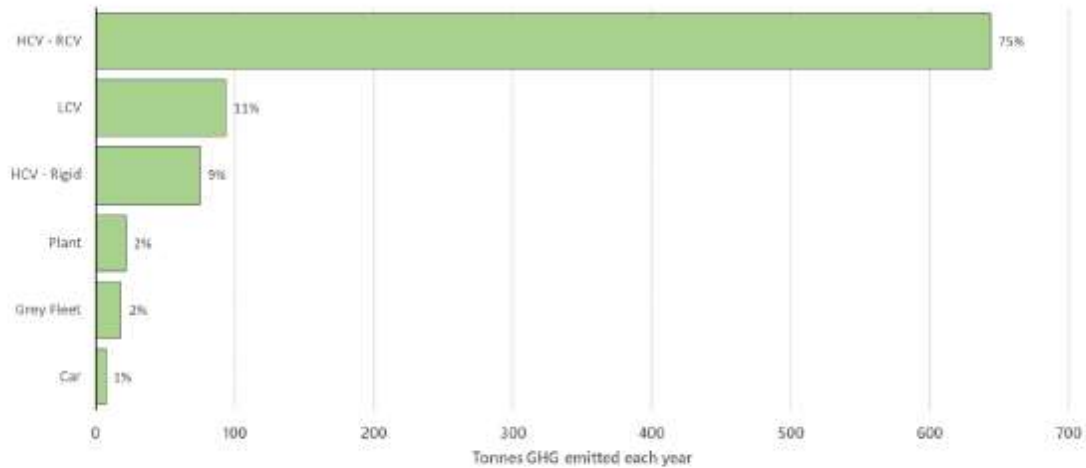


Table 4-3 details the fleet distribution further by fleet size, mileage, GHG and energy use. Although the LCV fleet is largest by numbers, it only produces 11% of the GHG emissions, whereas the HCV fleet altogether is 37% of fleet numbers, over 67% of mileage, and produces over 85% of GHG emissions.

Table 4-3: Analysis of fleet size, mileage, carbon emissions and energy use (excluding grey fleet)

Vehicle Fleet	% Size	% Mileage	% GHG	% kWh
HCV - RCV	25.8%	67.1%	76.6%	76.5%
HCV - Rigid	11.3%	nd	8.9%	8.9%
LCV	47.4%	30.3%	11.1%	11.1%
Fleet car	8.2%	2.6%*	0.9%	0.9%
Plant	7.2%	nd	2.5%	2.6%

*Mileage data for 3 vehicles only, based on MOT records.

1.5.8 The EST Electric Vehicle Charging Infrastructure Report 'Executive Summary' and 'Summary of Recommendations' are included in Appendix D.

1.5.9 The information has been reviewed by the service manager; several other factors need to be considered when reading the recommendations:

- Actual cost of putting eRCVs on the road
- The cost of mid-life refurbishment of the vehicle body and lifts
- We plan for replacement every 6 or 7 years not every 10 years
- Possible need to replace or upgrade any of the drive batteries during the 10 years
- Considerable lead times for vehicles
- Other wider positive impacts of eRCVs on the environment

Finance

1.5.10 The Revised Capital Programme 2021/22 and Provisional Capital Programme 2022/23 to 2026/27 (Council, February 2022) included the replacement of cremators. The note on the capital project states:

'To provide new infrastructure for the crematorium including replacement cremators. The current commitment of £900,000 in 2022/23 is funded from the amounts set aside in the Cremator Replacement Earmarked Reserve. The new spending proposal (£1.75m) for the replacement of the cremators refers to replacing gas powered cremators with electric powered ones which will help to reduce the amount of CO2 produced from the crematorium. Replacement on a like for like basis with gas powered cremators would require additional funding of approximately £300,000 - £400,000. The additional spend also provides additional funding to upgrade the building facilities at the crematorium. Further reports will be required on the project that will detail the most appropriate solution for the replacement of the cremators. The additional spend will require an additional borrowing requirement, however, the annual borrowing cost could be met from the annual sum currently set aside to the cremator reserve over a 23-year period.'

1.5.11 Through the Public Sector Low Carbon Skills Fund received funding to complete a Heat Decarbonisation Report. This report enabled a bid to the Public Sector Decarbonisation Scheme (PSDS). Unfortunately, the fund was oversubscribed, and we did not progress. We have received feedback which will help to reshape the application for future PSDS rounds.

1.6 Update on selected 'Local Actions'

Local Plan

1.6.1 'Gillespies, The Greenway Ribbon' was the winner of the Start with the Park: St Cuthbert's Garden Village Competition. St. Cuthbert's Garden Village 'Start with the Park' will be based near Durdar and Blackwell. It is an opportunity to create a resource that could be a visitor destination attraction and will benefit the existing and future residents of Carlisle. By establishing the 'Greenway' at the outset of SCGV, a greenspace will be created at the heart of the community and will be a unique selling point. It will also connect the proposed new communities with each other, with existing villages in the area, with the city, and with the surrounding countryside.

Housing

- 1.6.2 Carlisle is one of 28 locations taking part in a Heat Network Zone Pilot. The pilot is gathering data from stakeholders that have high amount of heat waste that they could donate to a heat network. Heat Networks require significant investment and there are challenges in installing and maintaining. Additional insulation may be required to make homes suitable for a heat network. They are best deployed for high density housing.
- 1.6.3 The successful consortium bid from the 6 district councils to the Local Authority Delivery Phase 3 (LAD3) and Home Upgrade Grant Phase 1 (HUG1) funds has led to the formation of Cumbrian Sustainable Warmth consortium. The consortium aims to address fuel poverty, improve energy efficiency and carbon savings and has received £19,955,000 funding from the UK Government. The primary purpose of the Sustainable Warmth consortium is to raise the energy efficiency rating of low income and low Energy Performance Certificate (EPC) rated households (those with E, F or G, and a limited percentage of homes with an EPC rating as D). The grants will help tackle fuel poverty by increasing low-income households' energy efficiency. Carlisle has over 2,250 owner-occupied and over 700 privately rented properties which have an EPC rating of E, F or G but which can achieve a minimum C Rating. This is not including the homes who do not have current EPCs but are still eligible for grant funding. The scheme is now open for applications and is being managed by Homelife Carlisle, a Home Improvement Agency, provided by Carlisle City Council.

Movement

- 1.6.4 The 12 Charge My Street sites that are now available are mapped on the website:
<https://chargemystreet.co.uk/cluster/cumbria>
- There are several sites that are 'coming soon':
- Currock Community Centre
 - Harraby Sports Centre
 - Morton Community Centre
 - Petteril Bank Community Centre
 - Showfield car park, Brampton

1.7 Round up of Local Actions (with reference to Scrutiny Work Programmes)

- Enforcement Strategy (Health & Wellbeing Scrutiny Panel February 2022)
- Emergency Planning and evolving approach to community engagement and climate change (Health & Wellbeing Scrutiny Panel April 2022)

1.7.1 Place Scrutiny Panel

- Working in partnership with housing providers: Riverside Report, Place Scrutiny Panel (June 2022)
- Regeneration & Borderlands: Economic Strategy Action Plan - performance monitoring (September & January 2023)
- Future Flood Risk Management (October 2022)
- Air Quality: Local Air Quality Action Plan (December 2022)

1.7.2 People Scrutiny Panel

- Green Infrastructure/wildlife and habitats: Healthy City 2022/23 programme and opportunities for broadening approach beyond 2023 (June 2022)
- Sands Centre Redevelopment - Programme Update and plans for re-opening (June 2022)
- Food Security/Thriving Communities (July 2022)
- Local Cycling and Walking Infrastructure Plans (LCWIPs) (October 2022)
- Emergency Planning - winter readiness and LGR preparation (October 2022)

1.8 Communication and engagement

1.8.1 The Carlisle Your Place (Place Standard Project) is now up and running, in its year 1 scoping phase. The Place Standard tool provides a simple framework to structure conversations about place. It allows people to think about the physical elements of a place (for example its buildings, spaces, and transport links) as well as the social aspects (for example whether people feel they have a say in decision making). A 'Climate Lens' is being considered with the intention to add a local view on global trends.

2. CONTRIBUTION TO THE CARLISLE PLAN PRIORITIES

2.1 The Carlisle Plan includes the delivery of the objectives within the strategy.

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Appendices attached to report:

A: Govt Net Zero Strategy: Local authority summary presentation

B: Environment Act 2021

C: Summary of Local Authority territorial greenhouse gas emissions estimates 2020

D: EST Decarbonisation Report Executive Summary and Summary of recommendations

E: EST Electric Vehicle Charging Infrastructure Report Executive summary and Summary of recommendations

Note: in compliance with section 100d of the Local Government Act 1972 the report has been prepared in part from the following papers:

CORPORATE IMPLICATIONS:

Legal - Members are being asked to note progress against the previously agreed Action Plan and provide comments. It should be remembered that the various projects outlined in the report, for example the e-bike suppliers and the electric charging points, will require the involvement of legal services in order that appropriate legal documentation can be put in place.

Property Services - The Council endeavours to include energy efficiency measures in all construction projects as evidenced by the current redevelopment projects at the Sands Centre and Civic Centre.

Finance – The Council's commitment to becoming carbon neutral and the delivery of the objectives of the Climate Change Policy will involve financial implications on the Council's Medium Term Financial Plan; both positive and negative in terms of decreased or increased costs. These implications will need to be carefully considered when implementing any policy changes and will need to be included and considered as part of the annual budget setting processes.

Equality – None

Information Governance – There are no information governance implications with this report.

Government Net Zero Strategy: Build Back Greener

Summary for local authorities – Local Authority Climate Policy Group

**Natalie Naisbitt, Local Authority Climate Co-ordinator
Zero Carbon Cumbria Partnership**

Net Zero Strategy: Build Back Greener

October 2021

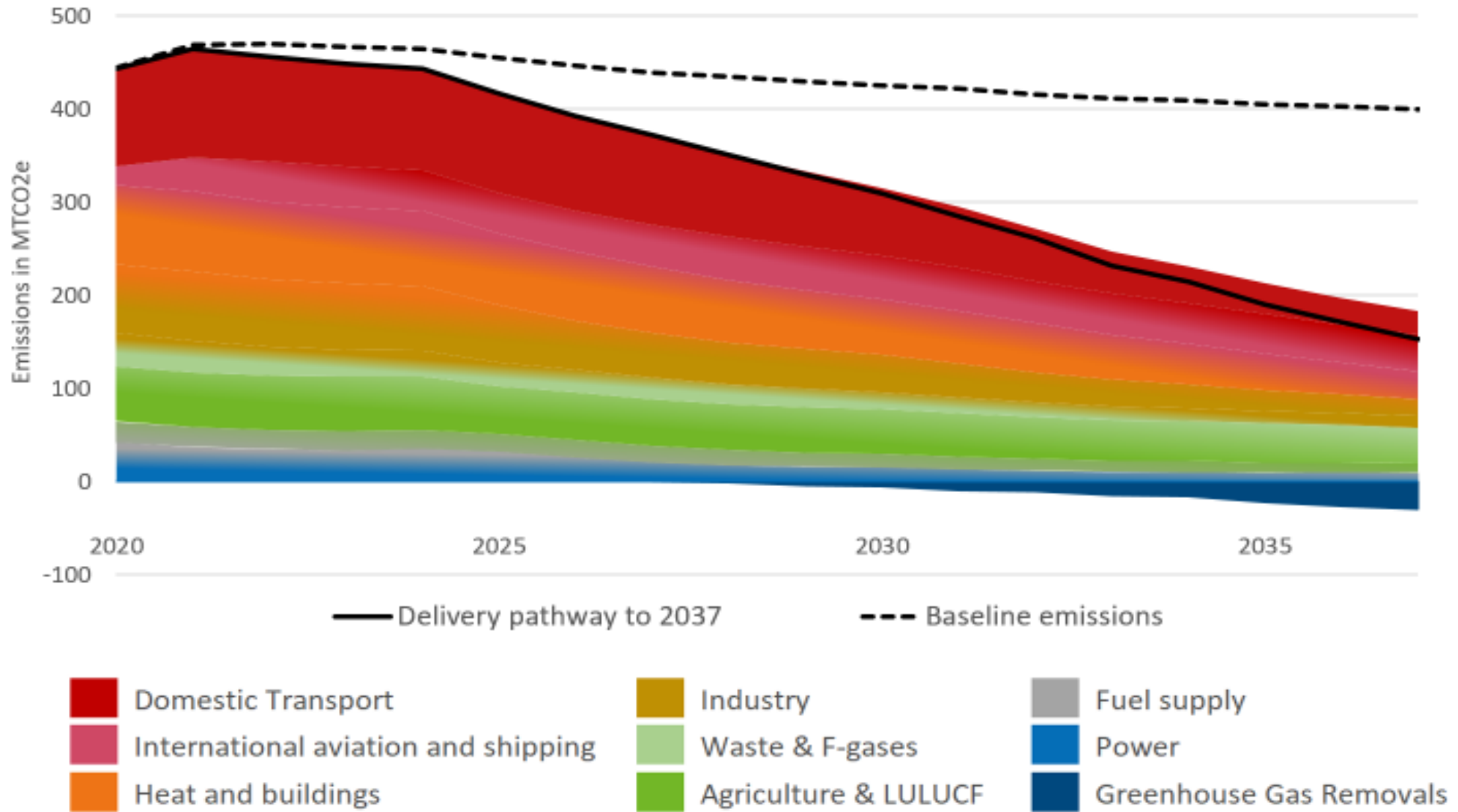


“This document sets out clear policies and proposals for keeping us on track for:

- our coming carbon budgets,
- our ambitious Nationally Determined Contribution (NDC),

and then sets out our vision for a decarbonised economy in 2050.”

[Policy paper overview: Net Zero Strategy: Build Back Greener - GOV.UK \(www.gov.uk\)](https://www.gov.uk/policy-paper-overview/net-zero-strategy-build-back-greener)



Delivery pathway showing indicative emissions reductions across sectors to meet our targets up to the sixth carbon budget (2033-2037). (nb.target 78% reduction from 1990 by 2035)

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Key Policies relevant to Local Authorities

Power

- By **2035** the UK will be powered entirely by **clean electricity**, subject to security of supply.

Heat and Buildings

- An ambition that by **2035, no new gas boilers** will be sold.
- A new £450 million three-year **Boiler Upgrade Scheme** will see households offered grants of up to **£5,000** for low-carbon heating systems so they cost the same as a gas boiler now.
- A new £60 million **Heat Pump Ready programme** that will provide funding for pioneering heat pump technologies and will support the government's target of **600,000 installations a year by 2028**
- Additional funding of **£1.425 billion for Public Sector Decarbonisation**, with the aim of **reducing emissions from public sector buildings by 75% by 2037**.
- Launching a **Hydrogen Village** trial to inform a decision on the role of hydrogen in the heating system by 2026



Heat and Buildings

- as many homes as possible to achieve **EPC Band C by 2035**
- introduce regulations from 2025 through **the Future Homes Standard** to ensure all **new homes** in England are **ready for net zero** by having a **high standard of energy efficiency and low carbon heating** installed as standard
- **Domestic private rented sector** - strengthening the **Minimum Energy Efficiency Standards to EPC band C by 2028** and introduction of a **compliance and exemption database to support local authority enforcement of the Regulations**
- £800 million additional funding to the **Social Housing Decarbonisation Fund (SHDF)** over 2022/23 to 2024/25
- £950 million additional funding for **off-gas-grid properties** through **the Home Upgrade Grant (HUG)**
- expand and extend the **Energy Company Obligation Scheme & the Warm Homes Discount Scheme** until **2026**.
- **£1.425 billion** additional funding for the **Public Sector Decarbonisation Scheme (PSDS)** over 2022/23 to 2024/25

Key Policies relevant to Local Authorities

Transport

- A zero emission vehicle mandate to improve consumer choice and ensure we maximise the economic benefit from this transition by giving a clear signal to investors. This will deliver on our **2030** commitment to **end the sale of new petrol and diesel cars**, and **2035** commitment that **all cars must be fully zero emissions capable**.
- Further funding of £620 million **for zero emission vehicle grants and EV Infrastructure**, including further funding **for local EV Infrastructure**, with a focus on **local on street residential charging**
- Later this year, we will publish an **EV infrastructure strategy**, setting out our vision for infrastructure rollout, and **roles for the public and private sectors** in achieving it.
- £2 billion investment which will help enable **half of journeys in towns and cities to be cycled or walked by 2030**. £3 billion to create **integrated bus networks, more frequent services and bus lanes to speed journeys**.
- Transformation of local transport systems, with **4,000 new zero emission buses** and the infrastructure to support them, and a **net zero rail network by 2050**, with the ambition to remove all diesel-only trains by 2040.

Key Policies relevant to Local Authorities

Natural Resources, waste and fluorinated gases

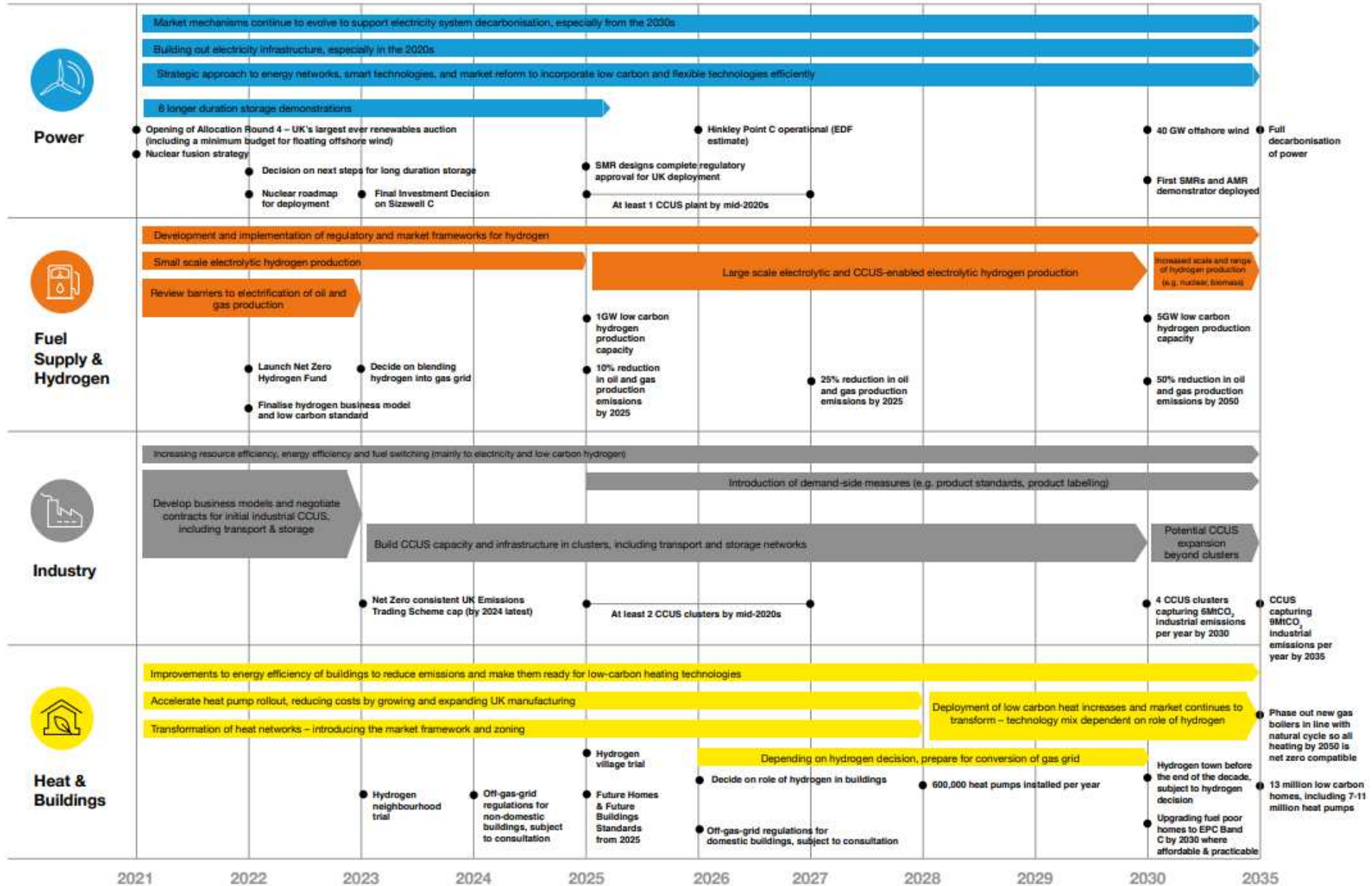
- Supporting **low-carbon farming** and agricultural innovation through the Farming Investment Fund and the Farming Innovation Programme to invest in equipment, technology, and infrastructure to improve profitability, benefit the environment and support emissions reductions.
- We will boost the existing £640 million **Nature for Climate Fund** with a further £124 million of new money, ensuring total spend of more than £750 million by 2025 on peat restoration, woodland creation and management – above and beyond what was promised in the manifesto. This will enable more opportunities for farmers and landowners to support Net Zero through land use change.
- **Restoring approximately 280,000 hectares of peat** in England by 2050 and **trebling woodland creation rates** in England, contributing to the UK's overall target of increasing planting rates to 30,000 hectares per year by the end of the Parliament.

Key Policies relevant to Local Authorities

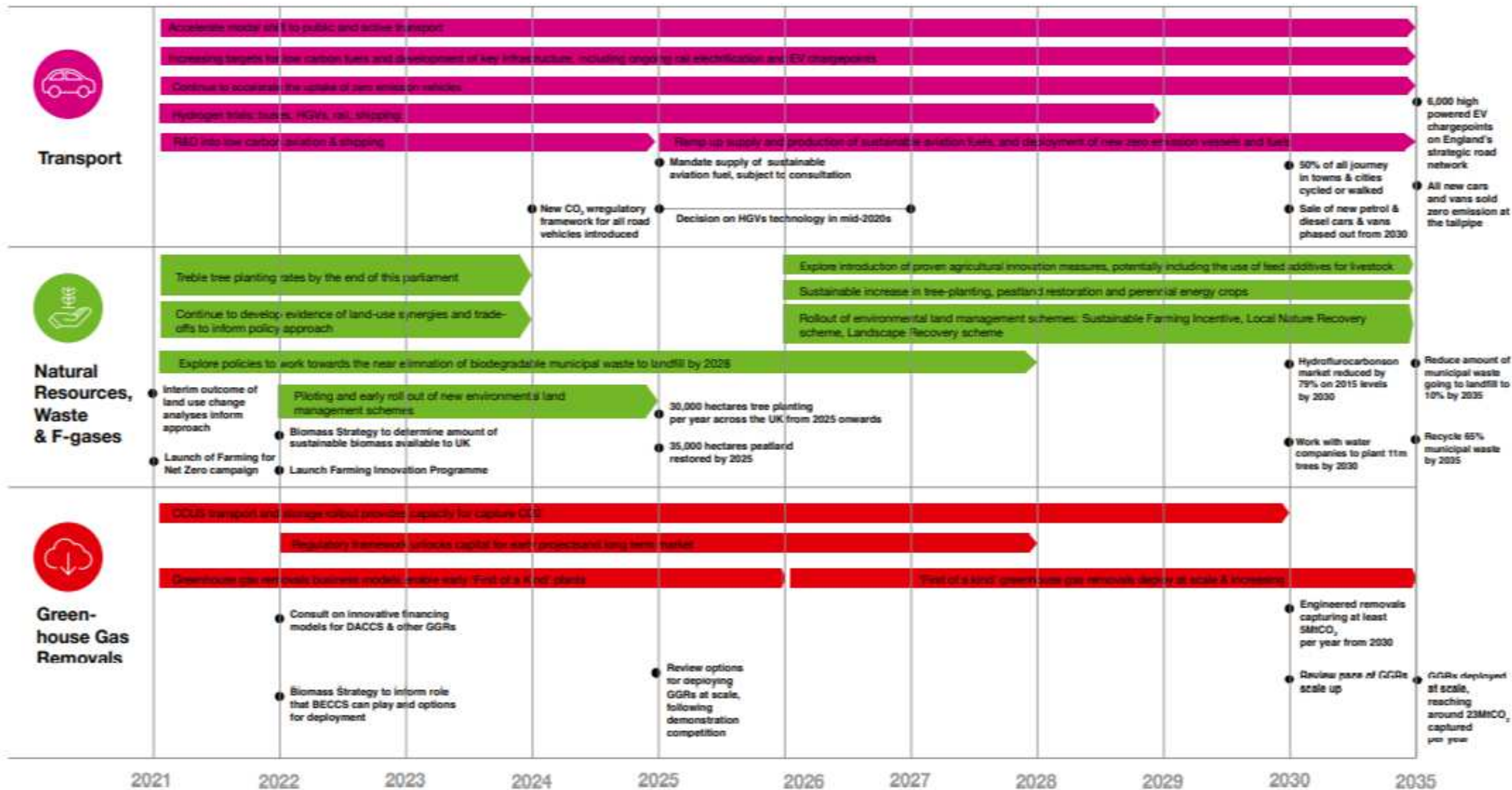


- A commitment to **increase municipal recycling rates to 65%** and to ensure that **no more than 10%** of municipal waste is **landfilled by 2035**
- Bringing forward **£295 million of capital funding** which will **allow local authorities** in England to prepare to implement **free separate food waste collections for all households from 2025**
- **Consistent collections of household and business waste** will be introduced via the Environment Bill. The powers will allow us to **require local authorities to separately collect a core set of materials for recycling, including paper and card, glass, metal, plastic, food waste and household garden waste**
- A **deposit return scheme** for drinks containers and **extended producer responsibility for packaging**, placing the net costs of disposing of packaging on producers, will also be introduced
- introduction of the **plastic packaging tax** from April 2022

Figure 16: high-level essential activity across sectors to 2035



Note: Markers indicate the year milestones will occur rather than the precise point in a given year, while arrows of activity are inclusive of the years in which they start and finish



Note: Markers indicate the year milestones will rather than the precise point in a given year, while arrows of activity are inclusive of the year they run to start and finish

4v. Local Climate Action

Supporting decarbonisation and regeneration in our local areas and communities

- Of all UK emissions, 82% are within the scope of influence of local authorities.
- Government analysis suggests that over 30% of the emissions reductions needed across all sectors to deliver on our Carbon Budget 6 target, as set out in this strategy, rely on local authority involvement to some degree.
- Central and local government will need to work closely together to deliver net zero and our interim carbon budgets.
- There are currently no net zero statutory targets on local authorities or communities in the UK, and we do not believe that a new general statutory requirement is needed. This is because of the existing level of local commitment with the sector, and because it is difficult to create a uniform requirement that reflects the diversity of barriers and opportunities local places experience.
- However, we do understand that there is a real need to ensure local leaders across the board are supported by enhancing the capacity and capability of local areas to deliver net zero, coordinating engagement with local authorities, and clarifying expectations at a national level to accelerate local progress towards net zero

Key Commitments

- Set clearer expectations on how central and local government interact in the delivery of net zero.
- Build on existing engagement with local actors by establishing a Local Net Zero Forum to bring together national and local government senior officials on a regular basis to discuss policy and delivery options on net zero.
- Continue the Local Net Zero Programme to support all local areas with their capability and capacity to meet net zero. This includes provisions to:
 - Continue the Local Net Zero Hubs (previously known as the local energy hubs) to support all areas of England to reach net zero, including those lacking capacity and capability, or those facing unique challenges.
 - Promote best practice and support **local authorities** to develop net zero projects that can attract commercial investment.
 - Increase knowledge sharing to demonstrate and share successful net zero system solutions.

4v. Local Climate Action - Funding

- Funding for local climate action comes from a combination of the **Local Government Finance Settlement, other government grants and support schemes, borrowing, and private finance.**
- Collectively, this means there is a **range of funding available** for local authorities to act on climate change.
- Some have chosen to explore **community bonds and crowdfunding.**
- A third of local authorities say their climate change plans will be **cost neutral** by incorporating goals into existing service area strategies, drawing on the funding available for those services
- The recent National Audit Office (NAO) review into local government and net zero identified **22 dedicated grant schemes for net zero work from central to local government.**
- We will explore how we could **simplify and consolidate funds** which target net zero initiatives at the local level where this provides the best approach to tackling climate change
- The **UK Infrastructure Bank (UKIB)** will lend to local authorities for strategic and high value projects and invest in projects alongside the private sector, crowding in private sector capital.

4v. Local Climate Action - Funding

The Green Finance Institute and Abundance Investment, supported by UK100, Local Partnerships and Innovate UK, have also launched a national campaign to help local authorities issue a type of municipal finance investment – **Local Climate Bonds**.

For citizens, the Local Climate Bond provides a low-risk and fixed return investment, and a way to mobilise their savings to help tackle the climate change in their area.

4vi. Empowering the Public and Business to Make Green Choices

Moving towards a net zero society together

We will deliver public engagement on net zero to:

- a. Communicate a vision of a net zero 2050, build a sense of collective action, improve understanding of the role different actors play in reaching net zero, and how and when choices can be made;
- b. Ensure there is trusted advice and support for people and businesses to make green choices;
- c. Mobilise a range of actors and stakeholders to increase and amplify their communication and action on net zero and green choices; and
- d. Give people opportunities to participate in and shape our plans for reaching net zero, thereby improving policy design, buy-in and uptake of policies

Local Government and the Path to Net Zero – Housing, Communities and Local Government Committee Report

- A report by the cross-party Housing, Communities and Local Government Committee published on 29th October, says the UK will struggle to reach the net zero target by 2050 unless **Government steps up efforts to work together with local councils on climate action in areas such as housing and planning, low-carbon heating and energy efficiency.** The Committee recommends that the Government immediately begin working with local government on a net zero delivery framework which sets out the roles and responsibilities of local and central government and clarifies the critical role of local councils in delivering a just transition for their local communities.
- On funding, the report notes that the recently published Net Zero strategy, includes **no clear commitment to increasing the level of long-term funding specifically for local authority climate action.** The report recommends the Government come forward with a long-term funding plan for local authority climate action.

[Net Zero - Government will struggle to achieve 2050 target unless they engage with local councils on climate action - Committees - UK Parliament](#)

Government's Net Zero Strategy is a major step forward, CCC says

It is an achievable, affordable plan that will bring jobs, investment and wider benefits to the UK. It is also a strong example to bring to the COP26 summit of how to follow climate change targets with action.

Gaps that need to be addressed:

- Plans to tackle **emissions from agriculture** are still unclear. A credible strategy, led by Defra, and integrated with the challenges for how we use our land and our soil, is needed.
- Currently vague plans must be quickly pinned down for **improving home energy efficiency for the 60% of UK households that are owner-occupiers but not in fuel poverty.**
- The Strategy makes positive statements that **recognise the need for public engagement**, but **insufficient action** is currently proposed.
- The Government does not include an explicit ambition **on diet change**, or **reductions in the growth of aviation**, and policies for managing travel demand have not been developed to match the funding that has been committed.
- Strengthened focus on Net Zero across Government does not yet constitute a full '**Net Zero test**' which the CCC proposed this summer.

Appendix B: Environment Act 2021 ([World-leading Environment Act becomes law - GOV.UK \(www.gov.uk\)](https://www.gov.uk))

The Environment Act will deliver:

- Long-term targets to improve air quality, biodiversity, water, and waste reduction and resource efficiency
- A target on ambient PM2.5 concentrations, the most harmful pollutant to human health
- A target to halt the decline of nature by 2030
- Environmental Improvement Plans, including interim targets
- A cycle of environmental monitoring and reporting
- Environmental Principles embedded in domestic policy making
- Office for Environmental Protection to uphold environmental law

WASTE & RECYCLING

- Extend producer responsibility to make producers pay for 100% of cost of disposal of products, starting with plastic packaging
- A deposit Return Scheme for single use drinks containers
- Charges for single use plastics
- Greater consistency in recycling collections in England
- Electronic waste tracking to monitor waste movements and tackle fly-tipping
- Tackle waste crime
- Power to introduce new resource efficiency information (labelling on the recyclability and durability of products)
- Regulate shipment of hazardous waste
- Ban or restrict export of waste to non-OECD countries

CLEAN AIR

- Require Local Authorities to tackle air quality
- Simplify enforcement within smoke control areas

NATURE

- Strengthened biodiversity duty
- Biodiversity net gain to ensure developments deliver at least 10% increase in biodiversity
- Local Nature Recovery Strategies to support a Nature Recovery Network
- Duty upon Local Authorities to consult on street tree felling
- Strengthen woodland protection enforcement measures
- Conservation Covenants
- Protected Site Strategies and Species Conservation Strategies to support the design and delivery of strategic approaches to deliver better outcomes for nature
- Prohibit larger UK businesses from using commodities associated with wide-scale deforestation
- Requires regulated businesses to establish a system of due diligence for each regulated commodity used in their supply chain, requires regulated businesses to report on their due diligence, introduces a due diligence enforcement system

WATER

- Effective collaboration between water companies through statutory water management plans
- Drainage and sewerage management planning a statutory duty
- Minimise damage water abstraction may cause on environment
- Modernise the process for modifying water and sewerage company licence conditions

Appendix C: Summary of Local Authority territorial greenhouse gas emissions estimates 2020

Local Authority	Industry Total	Commercial Total	Public Sector Total	Domestic Total	Transport Total	LULUCF Net Emissions	Agriculture Total	Waste Management Total	Grand Total	Per Capita Emissions (tCO ₂ e)	Emissions per km ² (kt CO ₂ e)
Allerdale	217.2	22.6	7.8	169.6	145.2	49.7	457.7	22.1	1,091.9	11.2	0.8
Barrow-in-Furness	254.7	46.6	9.5	104.2	35.7	8.2	15.8	57.0	531.8	8.0	4.0
Carlisle	92.9	70.7	20.3	182.7	228.7	-115.2	362.2	55.1	897.5	8.3	0.8
Copeland	15.4	11.7	12.4	114.4	65.0	-15.2	151.2	14.1	369.1	5.4	0.5
Eden South	299.3	42.2	4.3	107.8	359.5	51.6	559.7	28.4	1,453.0	27.0	0.7
Lakeland Cumbria	109.5	50.5	9.7	197.3	283.2	68.3	344.8	21.7	1,085.0	10.3	0.6
Total	989.0	244.4	64.0	876.0	1,117.3	47.6	1,891.4	198.4	5,428.1	10.9	0.8

The data tables in this spreadsheet were published at 9:30am on 30 June 2022.

The next publication will be in June 2023.

Data across all tables are reported in kilotonnes of carbon dioxide equivalent (kt CO₂e) except where noted otherwise.

The time in all tables refers to calendar years i.e. January to December.

Appendix D: EST Decarbonisation Report Executive Summary

1 Executive summary

Carlisle City Council (Carlisle CC) has sought this report to assess the efficiency of its vehicle fleets in terms of greenhouse gas (GHG) emissions, energy consumption and operating cost, as well as consider the opportunities for and implications of implementing low-emission vehicles, including electric vehicle charging infrastructure (EVCI, covered in a separate report). The analysis was undertaken by Energy Saving Trust and funded by the Department for Transport (DfT).

This report presents Carlisle CC with an analysis of the fleet's energy use and emissions production, and evaluation of the fleet profile current to March 2021. It sets out the evaluation and recommendations for decarbonising Carlisle CC's fleet following the Council's aim to be net zero carbon by 2037¹, including an estimation of costs following a whole life cost (WLC) procedure.

In the financial year April 2019 to March 2020, Carlisle CC operated 46 light commercial vehicles (LCVs), 36 heavy commercial vehicles (HCVs) including 25 refuse collection vehicles (RCVs), 8 cars, and 7 items of plant. Based on the data supplied we estimate these combined fleets:

- drove at least 615 thousand miles
- produced an estimated 840 tonnes of greenhouse gas emissions (GHG)
- consumed an estimated 3,430 megawatt hours (MWh) of energy
- emitted at least 0.86 tonnes of nitrogen oxides (NO_x)
- emitted at least 12 kg of particulate matter (PM)
- were 52% clean air zone compliant.

In addition, the grey fleet of staff travel for business use drove an approximate 76 thousand miles, consumed 77 MWh of energy, and produced an estimated 19 tonnes of GHG, 33 kg of NO_x, and 0.5 kg of PM emissions.

If the whole Carlisle CC road fleet (excluding grey fleet and plant) was transitioned to battery electric vehicles (BEVs), we would expect the energy use to fall by around 70%, from 3,350 MWh to 1,010 MWh and for annual energy costs to fall from an estimated £345,000 to £123,000, saving £222,000 a year (based on 2021 prices). The annual fleet energy saving identified can contribute to funding the higher purchase or lease cost of the BEVs and the charging infrastructure. Furthermore, the reduced service costs of maintaining an electric vehicle drive train and chassis can reduce maintenance costs by 30% to 40%.

Based on the data provided, the age profile of the fleet, and BEV technology, all of the Carlisle CC fleet could transition to BEVs by 2030, making a significant contribution towards net zero. The data presented has not identified any vehicle that could not be transitioned to a BEV already available, announced by OEMs, or known to be in development. None of the vehicles appear to have energy demands that could not be met by current battery technology, but use of tracking data including accurate payloads would provide more detail.

At the moment, only some HCVs, specialist vehicles, and the 4x4 utility vehicles lack suitable OEM replacement models, but the expectation is that new BEVs with the required capacity will come to market by 2025.

There is opportunity for significant GHG reductions in the RCV fleet, as the fleet accounts for 75% of Carlisle CC's transport GHG emissions. Our analysis of replacing the diesel RCVs (at the normal replacement cycle) suggests that for the Mercedes 26 tonne Hillend body vehicles a £1,800 cost saving could be achieved per vehicle, and for the Mercedes 26 tonne Faun body with lift a £73,600 cost saving could be achieved per vehicle (based on a ten-year replacement cycle for the electric eRCVs and a seven year cycle for the diesel RCVs). Some of that saving can fund the charging infrastructure and some may be needed to refurbish the rigs at seven or eight years. Over their ten-year life, a single eRCV would save 300 tonnes of GHG, 373 kg of NO_x, and 3 kg of PM. The RCV fleet is therefore an important area to focus on for fleet decarbonisation.

Energy Saving Trust is an organisation that runs a fleet support programme funded by the Department for Transport (DfT). Our remit is to provide unbiased, pragmatic advice that enables fleets to become energy efficient, reducing both costs and emissions.

¹ On the 2nd of March 2021, the Council amended the net zero target date from 2030 to 2037, in line with the Carbon Baseline for Cumbria recommendation adopted by the Zero Carbon Cumbria Partnership.

2 Summary of recommendations

Section	Recommendation	Notes and estimated GHG saving, air quality improvement, and cost saving
7.1	Establish a BEV transition team consisting of finance, sustainability, fleet, estates, energy and procurement that reports to a nominated manager.	Important basis for project success.
6.4 - 6.6	Gather accurate (tracking) data regarding daily energy consumption (kWh) of all fleet vehicles and use this to establish an accurate estimate of the BEV replacement required and energy needed at the depot to recharge the vehicles.	This will allow the estates/energy team to determine if the local grid can meet the requirements of the fleet and will also allow alternatives such as on-site battery storage and PV to be considered and costed.
6.3	Use enhanced data to improve energy efficiency/fuel consumption (mpg) across the existing ICE fleet as this will have a positive impact on range when the driver transitions to a BEV. It will also result in interim GHG and cost savings.	Annual cost and GHG saving of 5% should be achievable with better driver feedback, departmental GHG targets and league tables in place. 5% saving = £17,250 and 41 tonnes GHG a year.
10.5 - 10.6	2022/23: Obtain electric RCV long term demonstrator and assess suitability across a range of rounds and collection types, after BEV driver training and efficiency improvements. Develop plan to replace all RCVs with eRCVs.	Saving estimated at 30 tonnes of GHG per vehicle per year, and WLC saving of £1,800-73,600 per vehicle over 10 years.
8.2 - 8.3	2022/23: Evaluate the introduction of BEVs in the car fleets in line with the replacement cycle, and test the need for low mileage vehicles.	Saving 1.7 tonnes of GHG/year and saving £260/year per car.
9.5 - 9.8	2022/23: Review all LCV fleets with a view to downsizing where possible. Test the need for all low mileage vehicles. Evaluate the introduction of BEVs in all the LCV fleets (up to 3.5 tonnes) as they are replaced.	Saving 1.7 tonnes of GHG/year and costing £110/year per small van. Saving 3.4 tonnes of GHG/year and saving £350/year per medium van. Saving 2.4 tonnes of GHG/year per large van, with potential saving of £450 per panel van and £30 per chassis cab van.
9.2	2023-25: Investigate battery electric 4x4 utility vehicles as these become available.	Some vehicles may be harder to replace because of their range, size, towing requirements or payload but by 2023-25 there should be a range of BEV 4x4s from OEMs.
10.2	2023-25: Obtain demonstrator sweepers and tippers.	Specialist vehicles need to be considered on a vehicle-by-vehicle basis. Several local authorities are successfully operating small (4-5 tonne) electric compact sweepers and specialist body builders are working with OEMs on all-electric solutions.
3 & 7	2022/3: Publish plan for transition of the entire fleet to zero emission BEVs. Link this to a plan to generate the renewable electricity required by the fleet.	Important for project planning across Carlisle.

BEV	Battery Electric Vehicles
ICE	Internal Combustion Engine
GHG	Green House Gases
RCV	Refuse Collection Vehicle
LCV	Light Commercial Vehicle
OEMs	Original Equipment Manufacturers (Automotive)

Appendix E: EST Electric Vehicle Charging Infrastructure Report Executive summary and Summary of recommendations

1. Executive summary

Carlisle City Council (Carlisle CC) has sought this report to assess its electric vehicle charging infrastructure (EVCI) requirements, to enable it to transition to zero emission (ZE) transport both now and in line with its own net zero carbon aims and ambitions. The analysis was undertaken by Energy Saving Trust and funded by the Department for Transport.

If the Carlisle CC fleet were transitioned to battery electric vehicles (BEVs), we would expect the energy use to fall by around 70%, from 3,350 MWh to 1,010 MWh annually (based on the data from 2019/20). The fleet review has not identified any class of vehicle that could not be replaced by a battery electric model by 2030, although some vehicles are not immediately available. The speed of transition to a zero emission fleet will be restricted by operational suitability primarily in terms of range, the capital funding for the BEVs, and the ability to charge the vehicles.

Transition to an all-electric fleet will require a planned programme to roll out EVCI, which may require upgrading the physical grid infrastructure. Based on analysis of the 2019/20 fuel data and assumptions made, this is likely to be an estimated capacity requirement of 500 kVA and include the need for smart charge point management to maximise the use of dynamic capacity. This estimate is based on the minimum capacity necessary, with a 25% uplift – this is discussed further in Section 5.

Fleet electrification is a major investment; a dual 7.4 kW AC charge point with card reader and telemetry can cost from £1,700 to £2,700 (excluding VAT and installation), dual 22 kW AC charge points can cost up to £4,000 each. DC chargers range from £12,000 to £30,000 depending on the kW capacity; more if over 50 kW. The larger (heavy commercial) vehicles on the fleet will need 22-44 kW AC, and the rest will need 7.4-22 kW AC charge points. These costs can increase depending on the location of the installations. Normally, one charge point for each vehicle is ideal, certainly initially as a fleet begins to introduce BEVs, but this may change as the charging needs of the vehicles in operation become clearer. There are several vehicles on fleet with low mileage which we would not expect to need charging every day. Table 1-1 gives an indication of the charge point costs involved, assuming one charge point per vehicle (based on the fleet as of March 2021).

Table 1-1: Charge point indicative costs

Fleet	Fleet size	Minimum cost	Maximum cost
HCV - RCV	26	£104,000	£650,000
HCV - Rigid	13	£52,000	£325,000
LCV	49	£36,750	£73,500
Car	10	£7,500	£15,000
Total	98	£273,750	£1,210,500

There will be additional costs associated with the charge point management system, annual maintenance, protective bollards or kerbs, groundworks and with the upgrade of site capacity. It is important to develop a detailed plan for the site to avoid unnecessary additional groundworks or upgrades in the future. There is also the opportunity to include on-site generation (solar photovoltaic or wind) and storage which can help avoid grid upgrades, reduce energy costs, and contribute to long term cost and greenhouse gas (GHG) savings.

In future, a large battery electric fleet may play a role in local grid services using vehicle to grid (V2G) systems to provide power back to the grid, or to provide other grid services regulating the quality of the local electricity supply where the vehicles are capable. This may, in time and if managed well, be a source of revenue.

The estimates of site capacity in this report are based on the energy consumption of the ICE fleet (excluding plant) in 2019/20 adjusted for the improved energy efficiency of an electric vehicle - they use between 25% and 35% of the energy used by ICE vehicles, we have used an average 30%. Our estimates are therefore dependant on the accuracy of the fuel data of the fleet, and based on vehicles which were used and on fleet in 2019/20. Mileage data was missing for all the HCV - Rigid fleet, and a majority of the car fleet, meaning that the ICE energy consumption analysis for these fleets may prove inaccurate. Furthermore, the energy consumption data for the HCV - RCV fleet gave a higher mpg than would be expected. It is likely the mileage data (as provided in miles), may have been recorded in kilometres, which would also lead to an inaccurate energy consumption. This report provides an indication of EVCI, but Carlisle CC will need to implement tracking and continually review usage as the fleet transitions to BEV.

2. Summary of findings and recommendations

Item	Recommendation	Notes
1	Establish a plan for EVCI based on the best available data regarding the electric vehicles' predicted energy consumption.	EVCI is a critical enabling step in the transition to BEV fleets. A lot of the investment will have a longer operational life than the vehicles.
2	Implement on-board telemetry on all vehicles to determine actual maximum daily energy usage.	Our analysis is based on annual averages, with a significant amount of missing mileage data. Carlisle CC should assess deviations from average daily mileages within the fleet.
3	Engage with the local Distribution Network Operator and determine the maximum available capacity at Bousteads Grassing Depot. Obtain costings for increasing site capacity where necessary.	At Bousteads Grassing Depot there will be a balance between the cost of a capacity upgrade and the use of smart, dynamic charging systems. Upgrading the capacity may be lower cost than smart charging systems.
4	As part of the EVCI project investigate the opportunity to invest in photovoltaic generation (potentially on overhead canopies), or even wind generation, as well as on-site battery storage. Consider optimising PV alignment with BEV charging.	The cost of these technologies is falling rapidly. Without PV or some other form of on-site renewable the fleet will still have a residual GHG footprint in 2030 ¹ if charged from the UK grid.