

Epping Forest District Council Climate Change Action Plan 2021

Version 9, July 2023

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Introduction

Climate Change Context

Climate change is a global issue primarily as a result of greenhouse gas (GHG) emissions from human activity and land use change. Communities, businesses and the natural environment are already feeling the impacts of the changing climate with higher average temperatures and more extreme weather events such as droughts, flooding, heat waves and storms. Continued change is now unavoidable and is disrupting everyday life, particularly for the more vulnerable where climate change deepens existing inequalities.

More locally, flooding, water stress and overheating are the key changes already experienced and projected for the East of England. Increased urban development as well as changes in weather patterns will result in a reduced capacity for regions to absorb water, leading to more water surface runoff and increased flooding. Climate change projections suggest that in the period to 2050 and beyond, the UK will experience wetter winters and drier summers with overall summer rainfall likely to decrease by up to 15% leading to pressure on our water supplies. There is only limited awareness of the effect that climate change is having on causing overheating in our homes. With average temperatures set to increase, and more hot spells anticipated, overheating could become more commonplace in the future especially in urban areas. This will result in greater discomfort for people and exacerbate underlying health issues.

After considering the overwhelming evidence on climate change Epping Forest District Council (EFDC) declared a Climate Emergency in September 2019 and pledged to do everything within its power to make the area carbon neutral by 2030. This target is more ambitious than the UK target to take bold action and reduce emissions at a faster rate. It also contributes towards the Essex wide recommendations set out in the Essex Climate Action Commissions Net Zero: Making Essex Carbon Neutral 2021 report.

Reaching this target will be a considerable task involving collaboration and engagement from staff, residents, businesses, suppliers, partners and support from the UK Government to reduce emissions throughout the District.

By stepping up action now there is a better chance of avoiding the catastrophic impacts that a global temperature increase of greater than 1.5°C will have. Many of the climate actions that we can take are known to deliver valuable social and economic benefits in terms of creating new jobs, saving money, improving air quality, widening market opportunities and providing health benefits that can help to make Epping Forest District a great place where people enjoy living, working, learning and leisure.

Climate Change Action Plan Purpose

The Climate Change Action Plan supports the Council's ambition to do everything within its power to become carbon neutral by 2030. The Action Plan identifies the main sources of carbon emissions, both within the Council's own operations and across the District, and outlines actions to reduce them.

Achieving reductions in emissions across the wider District will require close collaboration and action from residents, community groups, businesses and other organisations. Therefore, this Plan sets out how the Council plans to engage with these groups to support, influence and facilitate change.

The Plan will be regularly updated to account for further developments in national legislation, regulation and policy. The Council is also undertaking further work to assess its indirect emissions; therefore, the plan will be updated when additional emission reduction pathways are identified.

The following main themes summarise the key emissions reduction pathways identified:

The section on Council Operations sets out how the Council aims to reduce its own carbon emissions to become carbon neutral and identifies actions on how this is to be achieved. Council operations include emissions reduction in Council buildings, including the Civic offices, museum and sheltered housing as well as emissions from the goods and services that the Council purchases, business travel, staff commuting, waste and leased assets.

Further sections of the Plan outline action that can be taken to reduce carbon emissions by residents, businesses and others across the District, either through direct initiatives, using statutory powers or by influencing behaviour change. This ranges from emissions arising from travel, as well as from homes, business premises and production processes, through to the management and disposal of waste. Improvement of the natural greenspace in the area can help to capture carbon, increase biodiversity and relieve pressure on the Epping Forest Special Area of Conservation (SAC), which is an important natural feature of the District. Actions to address air quality and climate change are closely linked, so many of the measures proposed in this Plan will also support improvements in air quality in the District and have beneficial effects on both human health and the Epping Forest SAC.

Monitoring and reporting

Key Performance Indicators (KPIs) are listed within the document, these will be reviewed and published on an annual basis.

Policy Context

This document aligns with policy across the Council including the strategic objectives in the Corporate Plan to keep the district moving sustainably and enable residents to access new opportunities for employment and to reduce the carbon footprint across the district and within our council.

The Council's [adopted Local Plan](#) contains a number of policies that align with the themes within this Action Plan. However, these policies only apply to new development and so this plan focuses on what we can do now.

Other related plans, strategies and guidance:

[EFDC Green Infrastructure Strategy Primer 0](#) – July 2021

[EFDC Green Infrastructure Strategy Implementation: Enhancing our Existing Network 1](#) – July 2021

[EFDC Green Infrastructure Strategy Implementation: Landscape Led Design 2](#) – July 2021

[EFDC Green Infrastructure Strategy Implementation: Green Infrastructure in Strategic Allocations 3](#) – July 2021

[EFDC Green Infrastructure Strategy Implementation: Infrastructure Enhancement Projects 4](#) – July 2021

[EFDC Interim Air Pollution Mitigation Strategy](#) – December 2020

[Essex Highways Epping Forest District Cycling Action Plan](#) – March 2018

[Green Arc Strategy](#)

[Epping Forest District Council Infrastructure Delivery Plan](#) – September 2020

[EFDC Sustainability Guidance & Checklist Vol. 01 \(Major Developments\)](#) – March 2021

[EFDC Sustainability Guidance & Checklist Vol. 02 \(Minor Developments\)](#) – March 2021

[Net Zero: Making Essex Carbon Neutral 2021](#)

[Essex Green Infrastructure Strategy 2020](#)

[ECC Bus Service Improvement Plan](#)

Epping Forest District Council's Own Emissions

Baseline and Methodology

Over the 2020/21 financial year the baseline carbon footprint for the Council's own estate and service provision was calculated using information and data from the 2018/19 financial year. The new baseline considers changes to the Council's estate and has the most comprehensive data set before the Covid-19 pandemic caused marked changes in building usage and staff travel. The baseline will give the figures for comparison against emissions reported up to 2030.

Where the term carbon emissions is used throughout the Climate Change Action Plan, this refers to all Greenhouse Gases (GHGs) expressed as carbon dioxide equivalents (CO₂e). The table below shows the GHG's covered by the Kyoto Protocol and where they come from.

Greenhouse Gas	Where it comes from
Carbon Dioxide (CO ₂)	Power stations, transport, industrial and domestic power, cement production, general fuel combustion
Methane (CH ₄)	Landfill, agriculture and oil and natural gas operations
Nitrous Oxide (N ₂ O)	Fertiliser, road transport, industrial processes, fuel combustion
Hydrofluorocarbons (HFC's)	Refrigerants and air conditioning, foams and aerosols
Perfluorocarbons (PFC's)	Electronics, aluminium production
Sulfur Hexafluoride (SF ₆)	Electricity transmission and distribution
Nitrogen Trifluoride (NF ₃)	Semiconductor manufacture

The Department for Business, Energy and Industrial Strategy (BEIS) publishes GHG Conversion Factors each year to aid calculation of carbon emissions for a range of activities.

To calculate the District's carbon footprint, we have used our own data multiplied by the BEIS emission factors for that activity to give the kilograms of carbon dioxide equivalent emitted. This is divided by 1000 to convert to tonnes.

An example for energy use is:

$$(\text{Energy (kWh)} \times \text{emissions factor}) / 1000 = \text{tonnes of carbon dioxide equivalent}$$

Boundary of the Climate Change Action Plan

Carbon emissions are categorised into three groups to define how emissions are generated and who is responsible:	
Scope 1	Direct emissions from gas sources owned or controlled by an organisation. Including fuel combustion from heating buildings and council vehicle fleet.
Scope 2	Emissions from the generation of purchased electricity consumed by an organisation. Including lighting, heating and cooling in buildings.
Scope 3	All other indirect emissions from an organisations activity but from sources not owned or controlled by that organisation. Including emissions from business travel in cars not owned by the Council and purchased good and services.

Previously the Council have reported Scope 1 and 2 emissions, with emissions from business travel and electricity transmission and distribution losses reported as Scope 3.

However, with the declaration of a Climate Emergency the Council recognises the need to show leadership and demonstrate collaboration with our partners and suppliers across the District. Therefore, Scope 3 emissions reported will be expanded to cover purchased good and services, leased assets, waste and staff commuting. Work is currently underway to establish the scale of emissions in some of these areas.

The below tables and diagrams show the baseline emissions data the Council will use as a comparison for reporting up to 2030, unless stated the data is from the 2018/19 financial year.

Scope 1 – Direct emissions from gas sources owned or controlled by the Council.	
Category	Tonnes of CO ₂ e
Council Owned Operational Buildings	194
Fleet Fuel	237
Sheltered Housing Gas	867
Total	1297

Scope 2 – Emission from generation of purchased electricity consumed by the Council	
Category	Tonnes of CO ₂ e
Operational buildings electricity	350
Other purchased electricity	335
Electricity Sheltered Housing communal areas	85
Total	770

Scope 3 - All other indirect emissions from Council activity but from sources not owned or controlled by the Council	
Category	Tonnes of CO ₂ e
Business Travel (Grey Fleet)	103
Transmission and distribution losses	74
Further scope 3 emissions eg. leased assets, staff commuting, purchased goods and services and waste services	To be calculated as further data received
Total	179

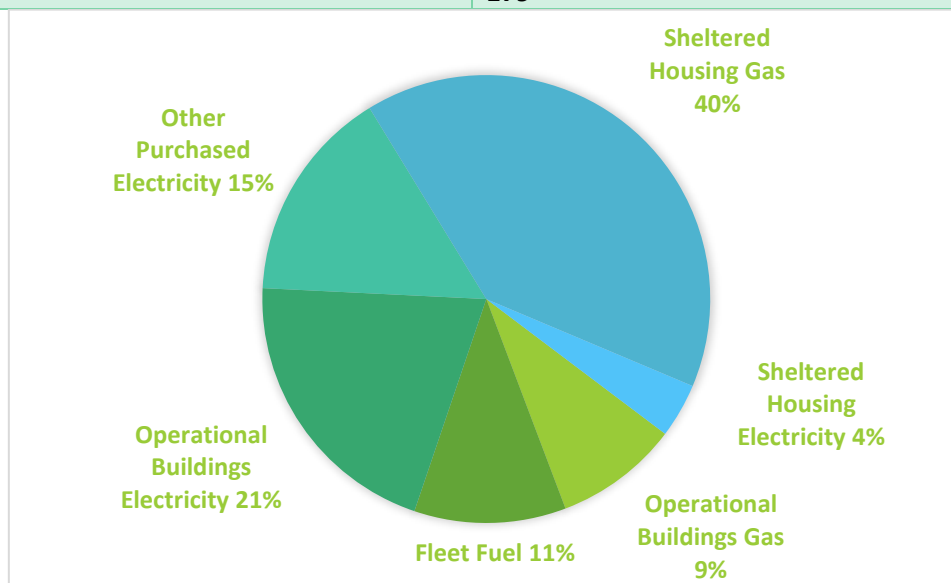


Figure 1. Council's Scope 1 and 2 emissions

The total emissions from Council controlled (Scopes 1 and 2) sources is 2,067 tCO₂e, this is equivalent to 250 homes' energy use for one year or 5.4 million miles driven by an average passenger vehicle. The overall total including Scope 3 emissions is under development to include further data being gathered.

The boundary of the Council's operations is to include Qualis as a wholly owned subsidiary of Epping Forest District Council. As a newly formed entity Qualis has not had any property or paid utility bills up to March 2021. From April 2021 the Council will work closely with Qualis to collate scope 1 and scope 2 emissions data.

Approach to offsetting

Reducing emissions through direct interventions will be the Council's main approach to becoming a carbon neutral organisation. But there will be a certain level of emissions which will not be possible to reduce before 2030 either for practical or financial reasons.

The Council are taking actions to increase tree planting and the provision of natural greenspace in the District, through an endorsed tree planting strategy and the Green Infrastructure Strategy. By taking steps now on tree planting this will allow woodland to become more established by 2030. The need for further offsetting will be considered closer to 2030 having monitored the progress being made. This will be influenced by the development of technology but is likely to include considering renewable technologies.

District Wide Emissions

The Council's pledge shows a commitment to be carbon neutral across the whole District. Although the Council are unable to directly control District wide emissions, statutory powers and our role of community leader and facilitator can be used to influence emissions reductions. Data for these emissions comes from national data compiled for all local authorities in the UK, the scope of the District's emissions will be limited to Scope 1 and 2 emissions as realistically these are the emissions that can be reasonably influenced.

To become carbon neutral on this scale is a challenging task and this will require communities and businesses to take responsibility by also making significant emissions reductions. Changes in national policy and financial intervention from the UK government, as well as advances in technology and decarbonisation of the national grid will also be key to enable the District to become carbon neutral by 2030.

District Wide Emissions – Scopes 1 and 2 (SCATTER Cities 2017)	
Category	Tonnes CO ₂ e
District Waste Operations	20,214
Transport (on-road, off road and aviation)	546,159
Industry and Commercial	125,822
Domestic	168,422
Agriculture and Land Use	-13,052
Total	837,565

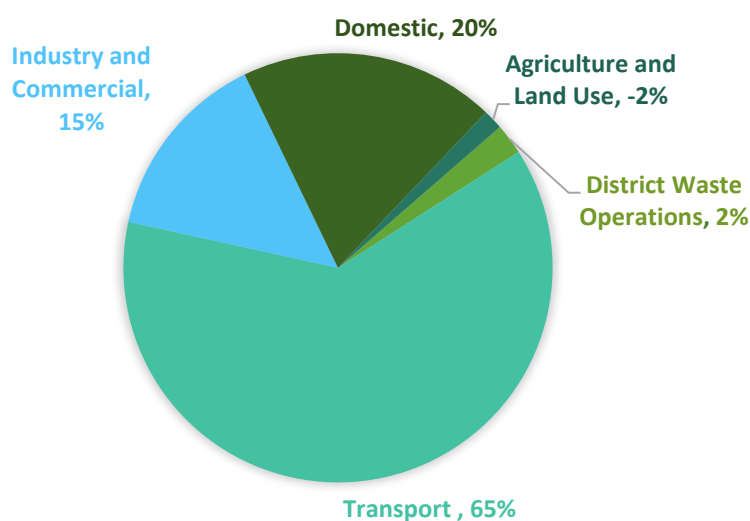


Figure 2. District Scope 1 and 2 emissions

Priority Actions 2023/24

The priority actions for 2023/24 have been recommended where the Council can directly implement initiatives with more significant carbon impacts. They are actions that also aim to bring co-benefits both to the council and to residents such as cost savings and improved living conditions. They are also activities that CCAP consultation respondents highlighted as being important.

Action from CCAP	Activity	Timescale	Portfolio Holder /Partners	Cost	Carbon Saving Potential
Energy efficiency improvement of Council owned estate	Investment in energy efficiency works to be included in Operational Assets Strategy and Asset Management Strategy.	Short	Housing and Strategic Health Partnerships	Grant funding, Capital Budget to be requested, Climate Budget	Higher
Review renewable energy and storage potential at existing council owned sites	Assessment of suitability for measures such as heat pumps, solar PV and solar thermal.	Short	Housing and Strategic Health Partnerships	Climate budget, Grant funding where eligible	Higher
Include consideration of the Climate Emergency in Council decision making processes	Consideration of Climate Change to be embedded into decision reports	Short	Customer and Corporate Services	N/A	Medium
Business travel in staff owned cars 'grey fleet'	Proposal to lease 2 EV pool cars at Oakwood Hill Depot and North Weald Airfield to increase % of low emission mileage for business travel and reduce business mileage spend.	Short	Environmental and Technical Services	TBC – will be based on the cost of 2 cars	Higher
Increase EV charge points on EFDC owned land	Rapid EV chargers to be installed at Burton Road with further locations to be explored	Short	Environmental and Technical Services. Housing	TBC some capital contributions needed	Higher

Council Operations

Between 2008/09 and 2018/19 reported Council emissions decreased by 51% due to the implementation of more energy efficient technologies in our offices, the installation of solar panels and the decarbonisation of the UK electricity grid. This is a good basis to build on but to become carbon neutral by 2030 further critical changes will be needed in the way the Council operates.

Operational buildings and Council owned housing will need to be assessed on their ability to meet future needs and where suitable undertake deep retrofitting to improve their efficiency and resilience to the expected effects of climate change. Modes of business travel and staff commuting will require a shift to active travel and the use of ultra-low emissions vehicles (ULEVs). Consideration of the Climate Emergency will be required in all service areas to influence how services are delivered and how goods and services are procured.

Actions

Council Buildings

Action	Activities	Timescale	Portfolio Holder	Resource
Energy efficiency improvement of Council owned estate	Including operational buildings, community halls and the common parts of the sheltered housing units to assess and implement carbon reduction measures. Investment in energy efficiency works to be included in Operational Assets Strategy and Asset Management Strategy.	Short	Housing and Strategic Health Partnerships	Capital budget to be requested, Grant funding
Review renewable energy and storage potential at existing council owned sites	Assessment of suitability for measures such as heat pumps, solar PV and solar thermal.	Short	Housing and Strategic Health Partnerships	Climate budget, Capital budget TBC
Improvement of energy efficiency of Council owned social housing provision	Stock condition survey underway. Implementation of external wall insulation. Deep retrofit energy assessments. Prioritising energy reduction in estate regeneration projects.	Short/Medium	Housing and Strategic Health Partnerships	Grant Funding - Social Housing Decarbonisation Fund
Implement water saving and sustainable drainage initiatives	Investigate water saving opportunities the councils own estate and raise awareness of water saving behaviours with staff. Implementation of drainage solutions and consideration of initiatives such as green walls in estate regeneration projects.	Medium	Housing and Strategic Health Partnerships	Regeneration budget
Best practice in new Council Developments	Planning applications for new council facilities and developments to lead by example meeting Sustainability Guidance net zero by 2030 levels	BAU	Housing and Strategic Health Partnerships, Qualis	Developer

Switch utilities to renewable energy tariffs	Electricity tariff switched to 100% renewable energy select tariff	Complete	Housing and Strategic Health Partnerships	Utilities budget
Minimise waste within the council offices and promote recycling	Drive forward paperless and digital working to minimise paper waste. In line with procurement strategy consider 'end of life' requirements before purchasing goods. Information by bins to make recyclable waste clear	Short/Medium	Place	Internal budget identified

Council Processes and Behaviour Change

Action	Activities	Timescale	Portfolio Holder	Resource
Staff engagement and training to influence behaviour change	Carbon Literacy training to be rolled out in stages across the organisation. With individual climate actions developed as part of the training.	Short	Customer and Corporate Services	Training budget
Include consideration of the Climate Emergency in Council decision making processes	Consideration of Climate Change to be embedded at the project concept stage through to cabinet decision reports	Short	Customer and Corporate Services	N/A
Alignment of policy across the organisation to consider the climate declaration	Climate change to be embedded in the revision of the Corporate Plan. List and review of policies to align with climate pledge.	Short	Customer and Corporate Services	N/A
Establish and analyse the Council's Scope 3 emissions	Calculation and analysis of indirect Scope 3 emissions using financial data.	Medium	Place	N/A
Identification of carbon intensive contracts based on Scope 3 emissions analysis	Assess carbon reduction opportunities and develop a carbon reduction plan to eliminate waste in the supply chain and engage suppliers.	Medium	Place	N/A

Staff Travel

Action	Activities	Timescale	Portfolio Holder	Resource
Make the Council an exemplar on staff commuting and business travel – achieve Bronze or Silver Modeshift accreditation	Staff surveys to identify viable options to increase sustainable commuting. Modeshift accreditation for Staff Travel Plan - Green level accreditation achieved in 22/23 Modeshift employer survey scheduled late June /Early July	Short	Environmental and Technical Services	N/A

Encourage and incentivise sustainable commuting	Online personal travel planning tools, investigate bus/rail discounts, build on learnings from DRT trial to launch viable service, car share scheme launch, investigate park and ride options.	BAU	Environmental and Technical Services	N/A
Business travel in staff owned cars 'grey fleet'	Revisit pool car options to increase % of low emission mileage for business travel and reduce business mileage spend	Short	Environmental and Technical Services	TBC - Cost of 2 pool cars

Monitoring

Key Performance Indicators	Baseline	Current	Target
% reduction in reported Scope 1 and 2 Council emissions	2,067 tCO ₂ e (2018/19)	1,746 tCO ₂ e (2020/21)	14% reduction per year
- Council Buildings (Scope 1 and 2)	1830 tCO ₂ e (2018/19)	1538 tCO ₂ e (2020/21)	
- Owned Fleet (Scope 1)	237 tCO ₂ e (2018/19)	208 tCO ₂ e (2020/21)	
No. of electric vehicles in the EFDC fleet	2 (2020/21)	32 (2021/22)	All by 2030
Emissions from business travel	103 tCO ₂ e (2018/19)	62 (2022/23)	TBC
Average SAP rating of Council owned social housing	71 (2011)	Will be based on stock condition survey	81 by 2030
% of staff certified as Carbon Literate through the Carbon Literacy Program	0% (2020/21)	2% (2021/22)	100% by 2030

District Wide Actions

Behaviour Change and Engagement

To become a carbon neutral District by 2030 changes to the way that we go about our daily lives will be needed to reduce emissions particularly from transport and energy use. The Council are unable to directly influence most emissions within the District; therefore, the success of this Plan will be down to all of us. The Council will build awareness and actively engage with the District's communities, schools and businesses to ensure its success.

Actions identified in this section of the Plan will be supported by raising awareness of the issues and opportunities, sharing information on ways in which we can help become carbon neutral, inspiring behaviour change and making it as easy as possible for people to make the changes needed. In addition to the themes within this plan the council will also promote carbon reductions through diet and sustainable food.

Adopting changes to help lower emissions also has many co-benefits that will help to make the District a great place to live, work, learn and play including through, improving health, resulting in better air quality and economic growth as well as helping to save money and creating employment opportunities.

The District already has active community groups that focus on climate change and sustainable transport. By working together with these groups as well as our partners, broader community groups, schools and the public, we are looking to expand our communication channels to reach a wide and varied audience.

General behaviour change actions

Action	Activities	Timescale	Portfolio Holder/ Partners	Resource
Develop a behaviour change strategy to support emissions reduction throughout the District	Develop and implement communication and engagement plan. With the aim to educate on and incentivise behaviour change in sustainable travel, consumption, waste, energy use and food.	Medium	Place	Internal budget identified
Keep website relevant with climate knowledge and information from national campaigns and local partners including ECC and ECAC.	Quarterly update of website information and promotion of campaigns	BAU	Place	N/A
Education and empowerment of residents, businesses and organisations to reduce their own emissions	Promotion of ECC behaviour change initiatives eg. Cutting Carbon app, Love Essex, Liftshare. Campaigns to link household emissions reductions to health, indoor air quality, savings on energy bills. Campaign to promote sustainable travel using demographic tools to understand populations.	BAU	Place, ECC, Comms,	N/A

	<p>Idling vehicles promotion campaign. Awareness raising of effects of air pollution on Epping Forest Emphasis on reducing waste in all campaigns. Information campaign on recycling and contaminates to reduce high contamination rates. Publicise existing video to show what happens at the waste depot. Educate businesses on circular economy principles to encourage waste reduction.</p>			
Promotion of initiatives and grants to help residents, businesses and organisations reduce their own emissions	<p>Charge point funding, work with Economic Development to identify high traffic sites. Publicise business related grants and initiatives through the business newsletter and DIZ network. Renewable energy scheme Solar Together.</p>	BAU	Place, Housing and Strategic Health Partnerships, Economic Development	N/A
Involvement of the community in EFDC planting projects	<p>Invitation of schools and the community to EFDC run tree planting events. Residents to learn about the wildlife attracted by growing projects. Creation of planted sensory zones for wellbeing and to encourage biodiversity.</p>	BAU	Place, Schools, Parish Councils, Community groups	N/A

District Travel

65% of the District's carbon emissions come from on road transport sources. Reducing the number of journeys made by vehicles, encouraging sustainable transport choices and maximising opportunities to make it easier for residents and businesses to change to using Ultra Low Emissions Vehicles (ULEV's) are major components of this Plan. Emissions from petrol and diesel vehicles have also been shown to be harmful to both human health and the health of the Epping Forest Special Area of Conservation. Therefore, actions in this area will have multiple and significant benefits for the District as a whole.

The Epping Forest District Council area contains key transport corridors that are not under the Council's control including the M11 and M25 motorways and the London Underground Central Line. The remainder of the road network is managed by Essex County Council. Although this makes influencing what we can achieve more challenging there are opportunities to be innovative with proximity to transport hubs and to collaborate with ECC and transport operators such as TfL.

Actions

EFDC actions - Reducing the need to travel by car, active travel, electric vehicle uptake.

Action	Activities	Timescale	Portfolio Holder/ Partners	Resource
Identify broadband gaps and areas with no fibre to the premises (FTTP) option to support home working	Support of early 5G rollout in 'not-spot'/rural areas. Digital Innovation Zone (DIZ) programme and Essex Broadband Improvement programme	Short	Digital Innovation Zone	N/A
Create and improve active travel routes in rural and urban areas	Ensure footpath and bridleway network maintenance plans meet resident's needs. Improve signage and promote routes.	Medium	Place, ECC	Developer contributions, REPF Grant
Raise standards and availability of cycle parking	At tube stations and town. Review best practice for new developments.	Medium	Place, ECC, Parish and Town Councils	To be requested
Facilitate improvement of active travel infrastructure	Commission Local Cycling and Walking Infrastructure Plans (LCWIPs) starting with Waltham Abbey, with community involvement to develop the plan	Short	EFDC, ECC, Parish and Town Councils	Shared Prosperity Fund
Increase availability of public EV charge points	In EFDC car parks and at public visitor trip attractors including private sector sites via Economic Development team. Active engagement with innovative providers of public rapid charge sites. Parking team feasibility review of EFDC car park EV bays, streetlight EV charging, power supply constraints.	Short	Contracts, Service Delivery and Improvement	Network providers, Finance from EFDC
Secure a switch from petrol cars to Ultra Low Emissions Vehicles	Preferential car parking rapid charging for electric vehicles Engage with businesses to provide public charge points eg. supermarkets	Medium	Place, Environmental and Technical Services	N/A

Work with Local Partners

Action	Activities	Timescale	Portfolio Holder/ Partner	Resource
Engage with ECC to influence and encourage sustainable travel initiatives in the EFDC area	Influence EFDC provision in ECC's Bus Service Improvement Plan. Support and influence Essex County Council's cycling strategy. Work with Essex Highways to provide on street charging infrastructure by supplying sites for OZEV bids. Work with ECC Rights of Way to support active travel routes. Support ECC DRT initiatives.	BAU	Place, ECC	ECC
Promote ECC sustainable travel initiatives	Promote school streets and ECC's school travel plans Promote travel plan guidance to businesses and other organisations. Campaigns on new and existing public transport services	BAU	Place, ECC	N/A
Identify and engage community groups and influencers.	Epping Forest Transport Action Group (EFTAG), Epping Forest Climate Action Group (EFCAG), EFDC community initiatives, sport-driven schemes, NHS/CCG/GP led active travel messaging	BAU	Environmental and Technical Services	N/A
Work with Conservators of Epping Forest and ECC to encourage development of a Transport Access Management Strategy for Epping Forest.	Encourage visits to the forest by means other than the Car eg. developing a low emission Forest shuttle for visitors/ramblers.	Medium	Conservators of Epping Forest, ECC	

Monitoring

Key Performance Indicator	Baseline	Current	Target
% of ULEV's registered in the District	0.6% (2018)	2.1% (December 2021)	4-5% by 2025 8-10% by 2029
No. of EV chargers on Council owned public land	10 (2020/21)	12 (2021/22)	105 by 2025

Air Quality

As well as impacting on the District’s natural environment, and particularly the Epping Forest, poor air quality is detrimental to people’s health. Poor air quality (including as a result of particulate matter) arises from sources and activities including; vehicle emissions (including particulate matter from engines, brake pads and tyres), industrial processes, domestic and commercial gas and use of other fossil fuels, energy generation, agriculture, non-road mobile machinery, rail and construction activities to name a few. Air pollution is associated with many adverse health impacts including being a recognised contributing factor in the onset of heart disease, cancer and respiratory problems.

Air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because often less affluent areas are more densely populated and located closer to roads and near to industrial areas with poor air quality. The annual cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion. Measures in this plan look to mitigate the negative impacts of poor air quality on human health and support the delivery of the Council’s Air Quality Action Plan and Interim Air Pollution Mitigation Strategy (IAPMS). The IAPMS has been developed to avoid causing harm to the Epping Forest Special Area of Conservation (SAC) from traffic on roads passing through it, recognising that it is already under pressure due to both traffic levels and the harmful emissions created by petrol and diesel cars. Many of the actions in this Plan will be beneficial to responding to both our climate change and air quality issues.

Actions

Initiative/Activity	Description	Timescale	Portfolio Holder/ Partner	Resource
Liaise with internal departments on the emerging Local Plan ensuring policies facilitate mitigation to protect human health	Develop a guide for developers to outline Council expectations when assessing the impact of development on Air Quality and incorporate appropriate mitigation to minimise any impacts	Short	Regulatory Services	Internal budget identified
Reduce concentrations of nitrogen dioxide in the Bell Common AQMA to below the objective	Liaise with Epping Forest Conservators and ECC Highways to improve air quality in the Air Quality Management Area, with the aim of making sufficient progress to continue updating the Air Quality Action Plan.	Short	Regulatory Services	Internal budget identified
Reduce impacts of new development on existing receptors and ensure new developments are not subjected to poor air quality	Work with the Council’s Development Management Service to update standard conditions on planning applications, ensuring they address current and future issues resulting from development.	Short	Regulatory Services	Internal budget identified

Engagement and promotion of incentives to encourage behaviour change

Initiative/Activity	Description	Timescale	Portfolio Holder	Resource
Idling vehicles promotion campaign and enforcement	Continue to raise awareness of the impacts of idling vehicles and that idling is an offence that may lead to a fixed penalty notice (FPN). Use of powers granted to nominated officers in respect of the issuing of FPNs for idling stationary vehicles.	BAU	Regulatory Services	Internal budget identified
Campaign Raising Awareness of the effects of air pollution on the Epping Forest SAC	Highlight the long-term effects on habitat associated with driving through the Forest. Information on grants, incentives and benefits when switching to electric vehicles.	Short	Place	Internal budget identified

Monitoring

Monitoring will be undertaken in accordance with the Council's Air Quality responsibilities and as set out in the Council's Interim Air Pollution Mitigation Strategy for the Epping Forest SAC. District Travel is closely linked to air quality therefore monitoring from this area will also inform progress.

District Wide Buildings

Up to 20% of the District’s carbon emissions come from the electricity and gas used to light, heat and cool buildings. This is second only to emissions from transport. If we are to become carbon neutral by 2030 this will be a key area that we need to address.

It will be expected that all new buildings adopt an approach which maximises energy efficiency through the their design and the materials used for their construction, minimise emissions from energy use, ensure fossil fuel free generation of energy (which will also help to improve local air quality) and be able to adapt to climate change. Existing buildings will need to be assessed on their suitability to meet carbon efficiency standards in the future and where appropriate undertake retrofitting to be more efficient and resilient to the effects of climate change.

The Council’s emerging Local Plan policies and its supporting Sustainability Guidance gives the Council the ability to embed climate change and air pollution measures into new development. This goes beyond just reducing carbon emissions. However, it has less influence over what happens to existing buildings in private ownership whether they be homes or premises. The Council will work to engage with property owners and landowners to highlight the importance of, and opportunities for, introducing climate change measures and behaviours as well as the incentives available to undertake improvements. This work will also need to be supported by the UK government to introduce legislation and funding opportunities that help the residents, businesses and landowners in the District implement the required measures.

Actions

New Developments

Action	Activities	Timescale	Portfolio Holder/ Partners	Resource
Sustainability Guidance Vol.01 (Major Developments), Vol.02 (Minor Developments) and Vol.03 (Extensions and refurbishments) developed as material planning considerations	Aims to help applicants meet the goal of becoming net zero-carbon by 2030, and, to build strong and integrated communities across new and existing places.	Complete	Place	Internal budget identified
Training of Planning Officers on use of the suite of Sustainability Guidance documents	To guide the assessment of planning applications within the District, inform pre-application discussions and assist sustainable decision making.	Short	Place	Internal budget identified
Harlow and Gilston Garden Town Sustainability Guidance and checklist.	Applies to the Garden Town masterplan sites within the District. Aims to help applicants meet the Garden Town goals of becoming net zero-carbon by 2030, and, to build strong and integrated communities across new and existing places.	Complete	East Herts District Council Harlow District Council, ECC, Herts County Council	Internal budget identified

Existing Buildings

Action	Activities	Timescale	Portfolio Holder/ Partners	Resource
Facilitate domestic energy efficiency improvements	Installation of energy efficiency measures in low income, low efficiency homes using grant funding. Maximise opportunities from central government grant funding.	BAU	Commercial and Regulatory Services	Green Homes Grant Local Authority Delivery Phase 2, Sustainable Warmth

Engagement and promotion of incentives to encourage behaviour change

Action	Activities	Timescale	Portfolio Holder/ Partners	Resource
Proactively engage with housing associations to understand their carbon reduction plans	Highlight incentives related to implementing energy efficient and low carbon solutions. Introduce Carbon Literacy Training.	Medium	Housing Associations	N/A

Monitoring

Key Performance Indicator	Baseline	Current	Target
Cumulative value of grants awarded to homeowners for energy efficiency and renewable heating measures	£45.6k (2019/20)	£89.2k (2021/22)	£1.74m by March 2023

Natural Environment

The character of Epping Forest District is defined by large areas of agricultural land, the ancient Epping Forest and other area important for their biodiversity, pockets of woodland and mature trees as well as large areas of common land. Epping Forest provides important habitat and is labelled as a Special Area of Conservation (SAC). Therefore, this plan along with other Council policies, plans and strategies aims to protect the SAC by reducing emissions and air pollution while also creating new, and enhance existing, natural greenspace to alleviate recreational pressure on the Forest and protect against biodiversity loss. This will also support climate change and biodiversity objectives.

The District is also home to the Roding Valley Meadows Site of Special Scientific interest, nine other nature reserves and the Roding, Stort and Lea rivers together with their tributaries. This green and blue infrastructure is important to help mitigate against climate change by contributing to carbon storage, cooling and shading, opportunities for species migration to more suitable habitats, and the protection of water quality and other natural resources. It can also be an integral part of providing multifunctional approaches to securing sustainable drainage and natural flood risk management measures. By conserving and enhancing the natural environment we can therefore bring a range of benefits, including additional storage for carbon, ecological connectivity, increased biodiversity and opportunities for communities to engage with nature to increase their health and wellbeing.

Actions

Action	Activities	Timescale	Portfolio Holder/ Partners	Resource
Increase the amount of natural and semi-natural greenspace	Linking of different greenspaces to connect open space, linking of settlements, and provision of improved wildlife habitats. Eg. the Roding Valley and Theydon Bois Wood	2021-2033 alongside Local Plan Development	Place	Developer contributions
Implement cutting regimes for roadside verges and undertake the seeding of areas to create of wildflower verges.	Work with ECC and Highways England to identify verges and roadside areas that are appropriate for wildflower planting. Encourage local communities to identify local opportunities for highway verge wildflower planting.	Medium	EFDC Countrycare, ECC, Highways England	Existing highway maintenance budgets, Plantlife, Biffa Award for Rebuilding Biodiversity
Community Greenspace Improvements	Through a community-led design approach, by developing a toolkit of guidance on initiatives and stewardship strategies. Seek nominations from community-based organisations to establish a trial project. Advice provided by the Council and its Countrycare Service in relation to maintenance, stewardship and funding applications.	Medium	Qualis, Countrycare, Community Groups Parish and Town Councils	The National Lottery Community Fund, Groundwork, s106 planning obligations, Town and Parish Council precepts

Veteran Tree Management Plan	Measures to address possible effects of predicted increases in nitrogen deposition rates. Potential to include further EFDC managed woodlands and veteran trees.	BAU	Place, Conservators of Epping Forest	Financial contributions from planning applications
Tree planting strategy - new tree planting on appropriate sites, can be on rural or urban sites, and range from a few trees to extensive woodland	Implementation of a strategy to significantly increase tree and hedge planting across the District. In partnership with parish and town councils and community groups, help to implement planting using 'Right Tree Right Place' principles. Work with ECC to coordinate schemes as part of the Essex Forest Initiative.	Short	Planning and Sustainability, ECC, Parish and Town Councils, Schools, Landowners	Developer contributions, Capital budget, grant funding for community groups

Monitoring

Key Performance Indicator	Baseline	Current	Target
% of the high-quality Green Infrastructure projects in the Green Infrastructure Strategy that have been delivered.	0%	Awaiting data from Green Infrastructure Strategy monitoring	56% by 2026
No. of new trees planted within the District	Unknown	2,605 (2021/22)	50,000 by 2030

Waste

District wide waste and its disposal contributes up to 2% of emissions in the District. Whilst Essex County Council is responsible for decisions relating to the District’s waste management disposal options, Epping Forest District Council has a clear ambition of preventing waste going to landfill. Therefore, the Council will continue to encourage residents and organisations to do everything they can to accord with the waste hierarchy where reduction is the main priority followed by reuse, recycling and recovery with disposal being the last resort.

Through the Council’s emerging Local Plan policies and Sustainability Guidance developers will be expected to incorporate solutions to achieving waste reduction at the design stage by increasing recycling opportunities and reducing household residual waste. Developers will need to provide operational waste strategies, contribute to waste reduction and design in areas for local food production. New developments within Epping Forest District Council are also expected to promote the circular economy and be designed to reduce construction waste.

Actions

Action	Activities	Timescale	Portfolio Holder /Partner	Resource
Improve recycling and food waste collection in flatted areas.	Clear and accessible communications at the point of disposal. Consultation with stakeholders to introduce more bespoke collections. Design communal bin areas to increase accessibility and housing of bin compounds	Short	Contracts, Service Delivery and Improvement	Internal budget identified
Facilitate further recycling opportunities for residents	Expansion of WEEE flat collection scheme. Investigate service improvements that would lead to higher recycling rates	Short	Contracts, Service Delivery and Improvement	TBC for service improvements
Implementation of a Litter Strategy	Development and implementation of a litter strategy	Complete	Contracts, Service Delivery and Improvement	N/A
Development of Personal Digital Assistant (PDA) devices and software	To record data and report bin contamination and repairs. Potential for targeted campaign use.	Medium	Contracts, Service Delivery and Improvement	Internal budget identified
Encourage innovation in waste reduction and collection in new developments	Planning applicants to explore innovative ways to reduce waste at the design stage by increasing recycling opportunities and reducing household residual waste.	BAU	Place	Developers
Wider provision of recycling bins in public areas	With recycling information for the area on show. Audit of bin numbers and locations.	Medium	Contracts, Service Delivery and Improvement	Internal budget identified
Review of waste contract	To minimise emissions from waste collections and ensure climate change taken into account Review options for waste depot site.	Complete	Contracts, Service Delivery and Improvement	Internal budget identified

Essex Waste Partnership	New legislation under consultation for plastic deposit schemes and waste practices expected in 2030. Work together on county wide initiatives and campaigns.	Short	ECC	TBC depending on outcomes
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Monitoring

Key Performance Indicator	Baseline	Current	Target
% kerbside waste that is recycled, reused or composted	56% (2018/19)	54% (2020/21)	70% by 2030
Average Annual Household Residual Waste Collected	479kg per household per year (2020)	311kg per household per annum (2021/22 – note full year data to be received therefore will increase)	10% reduction per household per annum by 2030

Climate Change Adaption

The expected impacts of climate change in the East of England include experiencing drier, hotter summers and wetter winters. Less rainfall in summer coupled with the District's growing population, changing land use and a finite supply of water means action to secure availability of water for the future is required now. The Environment Agency has identified the District as being in an area of 'serious water stress'. It is important that any new development does not lead to an overall increase in demand for water and that general water use in the District is reduced.

The heavier and more frequent rainfall expected in winter will increase the scale and severity of flooding in the District. The incorporation of sustainable drainage systems (SuDS) in new developments will limit surface run off by mimicking natural drainage and encouraging passive infiltration and attenuation. To make effective use of existing and planned drainage infrastructure, rainwater should be managed as a valuable resource rather than a waste product. A multi-functional approach to the delivery of SuDS can help to provide interest in the provision of public open space and increase biodiversity. In addition, existing households and premises can take action to reduce their water consumption.

Actions

Action	Activities	Timeline	Portfolio Holder/ Partners	Resource
Tree planting for flood resilience and shading	100 trees to be planted in the Roding Valley for flood resilience.	Complete	Environmental and Technical Services	
Investigate opportunities with partner organisations eg. the Environment Agency to support mitigation projects	Opportunities to support work on the River Lee catchment	Medium	Environment Agency	

Education and engagement to encourage action from businesses, organisations and residents

Action	Activities	Timeline	Portfolio Holder/ Partners	Resource
Information to residents, businesses and landowners to prepare for predicted climate change effects	Add adaption section to the website to include information on climate effects, ventilation and protection from overheating, increase of rainwater storage.	Short	Place	N/A
Encourage retrofit of water conservation measures in housing and businesses	Rainwater harvest and greywater re-use. Promotion of water saving kits and water saving home visits through the Save our Streams campaign run by Affinity Water.	Medium	Place	N/A
Encourage retrofit of measures to protect from overheating in housing and businesses	Passive solar shading methods and low energy ventilation to be explored. Strategic planting of trees for shade	Medium	Place	

Appendix 1 - Glossary

AQMA - Air Quality Management Areas are designations used by DEFRA (Department for Environment, Food and Rural Affairs) to manage areas with air pollution, that are unlikely to meet the Government's national air quality objectives.

Air Quality Action Plan - A document produced by the Council with Natural England setting out the steps that will be taken to reduce pollution within an Air Quality Management Area (AQMA). This could include steps to reduce car usage and promote public transport.

Biodiversity - The variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable.

Carbon Footprint - The amount of carbon dioxide released into the atmosphere as a result of the individual, organisation or community

Carbon Literacy - The awareness of climate change and the impact of humans on the global climate.

Carbon Neutral - no net release of carbon dioxide into the atmosphere, where some emissions remain these emissions are offset making the overall carbon dioxide emissions zero.

Carbon Offset - the process of trying to reduce the impact of releasing carbon dioxide into the environment by doing other things to remove atmospheric carbon dioxide, for example, by planting trees

Circular Economy - The circular economy is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended.

Climate Change - A large-scale, long-term shift in the planet's weather patterns and average temperatures.

Climate Emergency - The intention to take immediate action and develop policy to mitigate climate change beyond current government targets and international agreements.

DRT - Demand-responsive transport is a user-oriented form of passenger transport characterised by flexible routes and smaller vehicles operating in shared-ride mode between pick-up and drop-off locations according to passengers needs

EV – Electric Vehicles.

EPC – Energy Performance Certificate. A requirement under The Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations 2007 for properties to have a valid EPC (valid for 10 years) when the property is rented or sold. The EPC provides an indicative rating for the energy efficiency of the property and an indicative rating for retrofit improvements that could be made.

Fabric First - buildings are designed so that they are extremely efficient and need less energy than a building of standard construction. This is done through several methods including maximising airtightness, insulation, optimising solar gain using openings and shading, optimising natural ventilation, using thermal mass of the building fabric and using energy generated by occupants and equipment.

GoO – A Guarantee of Origin is a document that proves the origin of electricity from a specific energy source. A guarantee of origin enables the traceability of renewable energy from the producer to the final consumer. It is worth noting that electricity networks provide electricity from mixed sources to the end user the document shows that the share of energy was produced from renewable sources.

Green House Gas - a gas that absorbs infrared radiation and reradiating it back to Earth's surface contributing to the greenhouse effect.

Green Tariff – A portion of or all the electricity purchased is matched by purchased or generation of renewable energy from the energy supplier. Renewable energy can be from sources such as wind, solar, tidal, hydroelectric or nuclear energy. Some tariffs do not contain nuclear energy.

Grey Fleet - is a term used to describe the business miles travelled by an employee in their own vehicle.

IPCC – Intergovernmental Panel on Climate Change, who published a special report in 2018 on the impacts of global warming of 1.5 degrees Celsius.

LCWIP - Local Cycling and Walking Infrastructure Plans

Modal Shift - Modal shift means a switching of energy consumption methods, such as when people switch from fossil fuel reliant forms of transport (such as cars) to sustainable transportation options such as busses, trains and (electric) bicycles.

OZEV – The Office for Zero Emissions Vehicles formerly the Office for Low Emissions Vehicles (OZEV)

Passivhaus - a building in which thermal comfort can be achieved solely by post-heating or post-cooling the fresh air flow required for a good indoor air quality, without the need for additional recirculation of air.

PV – photovoltaics, also known as solar panels. PV is a technology that converts sunlight into electricity through its solar photovoltaic cells.

Renewable Energy - Renewable energy is energy that is collected from renewable resources, which are naturally replenished on a human timescale, such as sunlight, wind, rain, tides, waves, and geothermal heat.

REGO – The Renewable Energy Guarantees of Origin scheme is administered by Ofgem and gives transparency to consumers about the proportion of electricity that suppliers source from renewable generation.

Retrofit – modifications to existing buildings to improve its energy efficiency and/or decrease energy demand.

SAP – Standard Assessment Procedure (SAP) is the methodology used by the Government to assess and compare the energy and environmental performance of dwellings. Its purpose is to provide accurate and reliable assessments of dwelling energy performances that are needed to underpin energy and environmental policy initiatives.

SuDs - Sustainable drainage systems (SuDS) are drainage solutions that provide an alternative to the direct channelling of surface water through networks of pipes and sewers to nearby watercourses. By mimicking natural drainage regimes, SuDS aim to reduce surface water flooding, improve water quality and enhance the amenity and biodiversity value of the environment. SuDS achieve this by

lowering flow rates, increasing water storage capacity and reducing the transport of pollution to the water environment.

ULEVs - a low emission car or van that emits 75g/km CO₂ or less, based on the NEDC test. ULEVs include pure electric vehicles, electric range-extender vehicles, and plug-in hybrids (PHEVs).