Three Rivers Climate Emergency and Sustainability Strategy 2023-2026

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Foreword

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Phil Williams,
Lead Member for Environmental Services and Sustainability.

Introduction

Since the original Climate Emergency and Sustainability Strategy was published in 2021, the climate has continued to change as a result of human activity. In 2022, the estimated rise in global mean temperature was 1.16 degrees higher than the pre-industrial period[1] and global carbon emissions were at a record high. If current emissions levels continue, there is a 50% chance we will exceed global warming of 1.5C within the next nine years[2].
Climate-related disasters have increased by five times over the past 50 years, causing US$202 million in losses daily[3]. Despite the Paris Agreement goal of limiting global warming to well below 2°C, under current policies we are more likely to be facing anywhere between 2.2°C and 3.4°C increase by 2100 if we do not undertake rapid and significant emissions reductions[4].

The effect of these shifts in global climatic systems can be observed in every region on Earth, including in Three Rivers. The need for swift and deep emissions reductions to prevent dangerous levels of global heating, while adapting and building resilience to the effects of climate change that are already irreversible, remain the most urgent tasks of our time.

Three Rivers District Council has been at the forefront of bringing forward work streams to mitigate the Climate Emergency. The Council declared a climate emergency in 2019 and continues to lead responsibly, by our own example, whilst encouraging and enabling others to join us on our journey towards net zero and climate resilience. This strategy covering the period of the new Corporate Framework acknowledges that mitigation alone is no longer sufficient to combat climate change; climate adaptation is now also critical to the future of our District.

In 2020, Three Rivers District emissions were recorded at 474,300 tCO2 compared to 730,800 tCO2 in 2005[5] an average annual emissions reduction of 2.2%, This is positive progress but with Tyndall Centre calculations showing that the District will need to reduce its emissions by 14.1% annually to make its fair contribution to the Paris Climate Change Agreement and with much of the reduction to date linked to grid decarbonisation, there remains much still to do.

Reducing emissions by 14% per year is an immense challenge that will require concerted and sustained efforts from the entire District from not just the Council but from our businesses, communities, residents and visitors if it is to be achieved. Our ability to reach net zero at the local level is further complicated in that it is greatly dependent on national and international action on climate change mitigation. Addressing the planetary scale problem of climate change requires urgent and strong top-down leadership, and global collective action. Three Rivers will play its part, but so too must others.

[1] 2022: sixth warmest year on record globally - Met Office
[2] ESSD - Global Carbon Budget 2022 (copernicus.org)
[3] Weather-related disasters increase over past 50 years, causing more damage but fewer deaths | World Meteorological Organization (wmo.int)
[4] The CAT Thermometer | Climate Action Tracker
[5] https://www.gov.uk/government/collections/uk-local-authority-and-regional-greenhouse-gas-emissions-national-statistics

This Strategy focuses on what the Council and its partners are and plan to do within the parameters of the current legal, financial, regulatory and technological frameworks, under which we must operate. It seeks to show how the Council proposes to stay on course to reach its net zero and climate resilience ambitions within the external constraints that we are bound by.

At a national level, as recognised in the Skidmore Mission Zero report, there is significantly more that is needed to enable local authorities and the areas they serve to achieve net zero targets with, *a need for* national policy confidence, continuity and long term funding certainty.

This new strategy builds on the success of the initial Climate Emergency and Sustainability Strategy (2021) with aims and objectives derived from the independently modelled "Route to Zero" pathways for Three Rivers, which in turn will drive our Action Plan for the coming years. In responding to the climate emergency Three Rivers District Council will not only seek to limit the impacts of climate change, but also to secure wider benefits for communities including health, prosperity, and greater equality alongside protection of and resilience for the natural world.

National Policies on Climate and Sustainability:

Legislation and Strategies in existence at time of the 2021 Strategy:

- **The Climate Change Act 2008 (Order 2019)** introduced the legally binding target for the UK to achieve at least a 100% reduction of greenhouse gas emissions (compared to 1990 levels) by 2050.
- **The 25 Year Environment Plan 2018** sets comprehensive goals and targets to improve the UK's air and water quality, and protect threatened plants, trees and wildlife.
- **The Resource and Waste Strategy 2018** outlines the actions the UK will take to minimise waste, promote resource efficiency and move towards a circular economy.
- **The Clean Air Strategy 2019** focuses on reducing industrial, agricultural and transport emissions and aims to reduce particulate matter emissions from solid fuel used in homes.

New Legislation and policies published since the 2021 Strategy:

- **The Environment Act 2021** sets out new legal frameworks for air pollution, water quality, biodiversity conservation, waste and resource management, and the use of chemicals.
  The Act is a key vehicle to deliver the goals and targets set out in the *Government's 25 Year Environment Plan* and places greater statutory duties on local government in delivering its policies, most notably through ensuring a minimum 10% net-gain in biodiversity is delivered in all new housing and development, and creating or contributing to Local Nature Recovery Strategies.
- **The Net Zero Strategy: Build Back Greener 2021** sets out policies and proposals for decarbonising all sectors of the UK economy to meet our net zero target by 2050.
- **The Heat and Buildings Strategy 2021** describes how the Government intends to decarbonise homes, and commercial, industrial and public sector buildings, to reach net zero by 2050.
- **Industrial Decarbonisation Strategy 2021** details how industry can decarbonise in line with net zero.
- **British Energy Security Strategy 2022** sets out how Britain will accelerate nationally generated power for greater energy independence.

Our Progress So Far

In 2021-2022, the Council has:

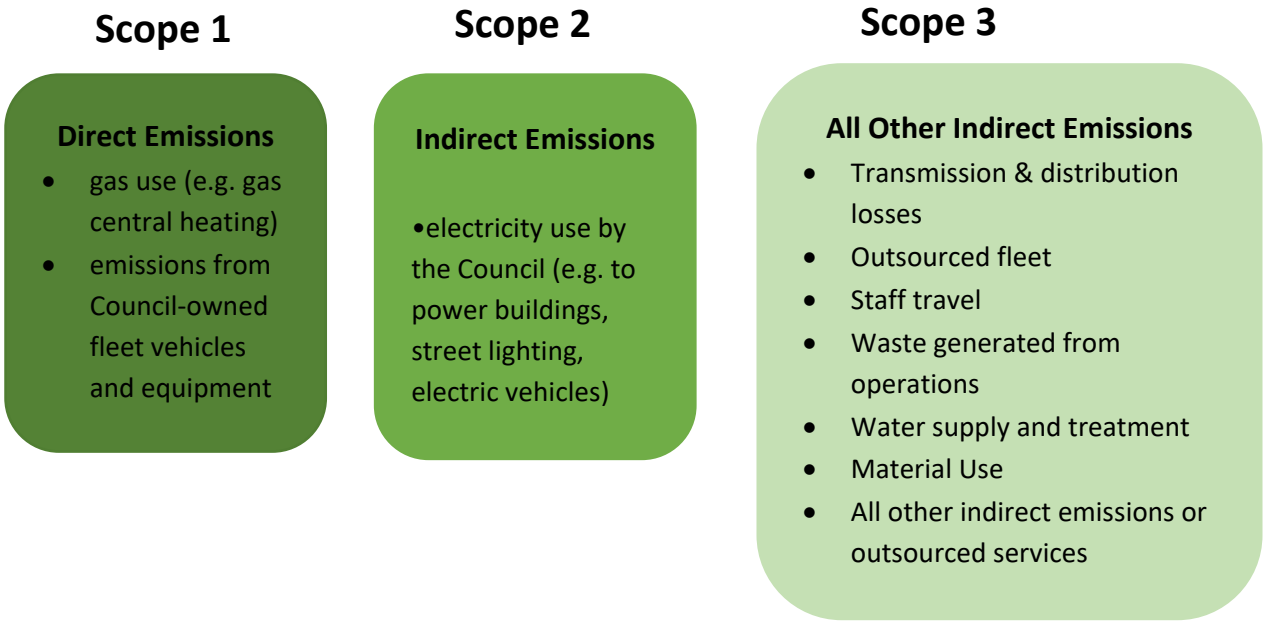
- Achieved reductions in Council emissions through the completion of the new, energy efficient depot and retrofit of Three Rivers House including the installation of air source heat pump technology, installing solar lights in car parks and park lighting, and the purchase of two electric vans.
- Supported the Hertfordshire-wide Solar Together project, with 203 homes in our District participating to-date.
- Retrofitted 117 homes in the District saving 161.2 tonnes of carbon dioxide annually, equivalent to carbon savings of 1.4TCO_2 per home, per year.
- Supported energy efficiency improvements for the least efficient homes in the District through the delivery of Energy Company Obligation (ECO4) and Social Housing Decarbonisation (SHDF) schemes.
- Commissioned the National Energy Foundation to provide an independent Home Energy Support Service helpline, where residents can get free, expert advice on energy saving, energy bills, and energy efficiency improvements. In 2022, the helpline provided advice and interventions to over 200 residents.
- Engaged with over 1600 people, in-person across the District at a wide range of events from school activities and information stands to conferences and talks.
- Published a "Guide to Greening Your Home" document filled with information, top tips, and ideas to inspire residents to make sustainable changes to their homes and gardens, reduce their carbon and water footprints, and enhance biodiversity.
- Adopted a Climate and Sustainability Impact Assessment process that embeds consideration of climate and sustainability in to the Council's decision-making processes.
- Introduced Climate Change training for all Council staff, with senior leadership and sustainability officers benefiting from advanced training on climate change and adaptation.
- Introduced a grassland management plan resulting in a new woodland of approximately 350 small trees; 2 areas of bulb planting; over 50 standard trees and a distinct change in grassland management for the benefit of wildlife.
- x number of free trees were given to x residents of Three Rivers
- Planted 750 trees in Leavesden County Park and Denham Way Playing Fields and 25 street trees in South Oxhey for the Queen's Green Canopy.
- Introduced grazing to the Horses Field at Leavesden Country Park to encourage biodiversity expansion.
- Developed and approved a management plan for the Rickmansworth Aquadrome.
- Hosted 27 wildlife themed events attended by more than 500 local people.
- Resurfaced a significant section of the Ebury Way trail for walkers and cyclists.
- Improved the northbound link in the Grand Union Canal towpath (Three Rivers) route, which connects 7 local settlements along a six-mile stretch northwards of Rickmansworth
- Developed and consulted on the District's Local Walking and Cycling Infrastructure Plan.
- Installed 50 walking wayfinding signs across Croxley Green.
- Promoted Sustainable Travel planning within the District Council and with local businesses.
- Installed Real Time Information signs at 15 district bus stops.
- Established the Three Rivers Water Partnership.
- Piloted the #WorthSaving food waste reduction project.

Awarded community grants for low-carbon infrastructure totalling £7,020 and through the Three Rivers Sustainable Business Programme, helped 12 SMEs develop climate action plans.

Three Rivers District Council Emissions

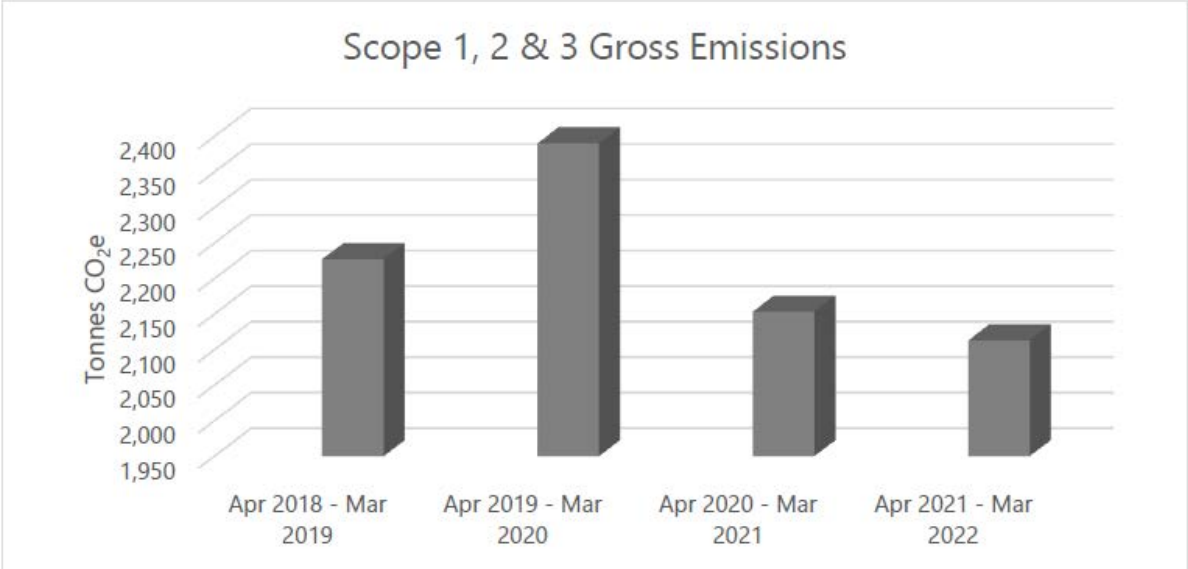
The Council measures and publishes its own emissions annually in accordance with best practise guidance of the Greenhouse Gas Protocol and uses conversion factors for the carbon dioxide equivalent (CO2e) published by the Department for Business, Energy & Industrial Strategy (now the Department for Energy Security and Net Zero).

The Council's emissions can be divided in to three "Scopes", which are described below.
Scope 1: release emissions directly into the atmosphere.
Scope 2: emissions associated with our consumption of purchased electricity, heat, steam and cooling.
Scope 3: emissions that result from other Council activities, but occur at sources which we do not own, control or have full authority over, for example leased assets such as the leisure centres.



Scope 3 emissions are complicated, extensive and far-reaching. They are very difficult to measure accurately for year-on-year comparison purposes with no consistent methodology currently in use.
To enable comparison of the Council's GHG emissions over time, to identify trends, assess the performance of the Council, and avoid duplication of emissions accounting, we aim to maintain consistent accounting approaches, reporting boundaries, and calculation methodologies. Therefore, for Scope 3 emissions, the Council reports only those emissions which are currently measurable, accessible and accurate. Presently, this primarily consists of the emissions generated by our leisure centres, staff and councillor business mileage, and emissions associated with the transmission and distribution of electricity, and water usage on Council-owned property.
Through the Council's Procurement Strategy, suppliers are encouraged to reduce their own emissions and environmental impacts, particularly in relation to the goods or services they provide to the Council.

Figure 2 TRDC Carbon Emissions for 2021/22

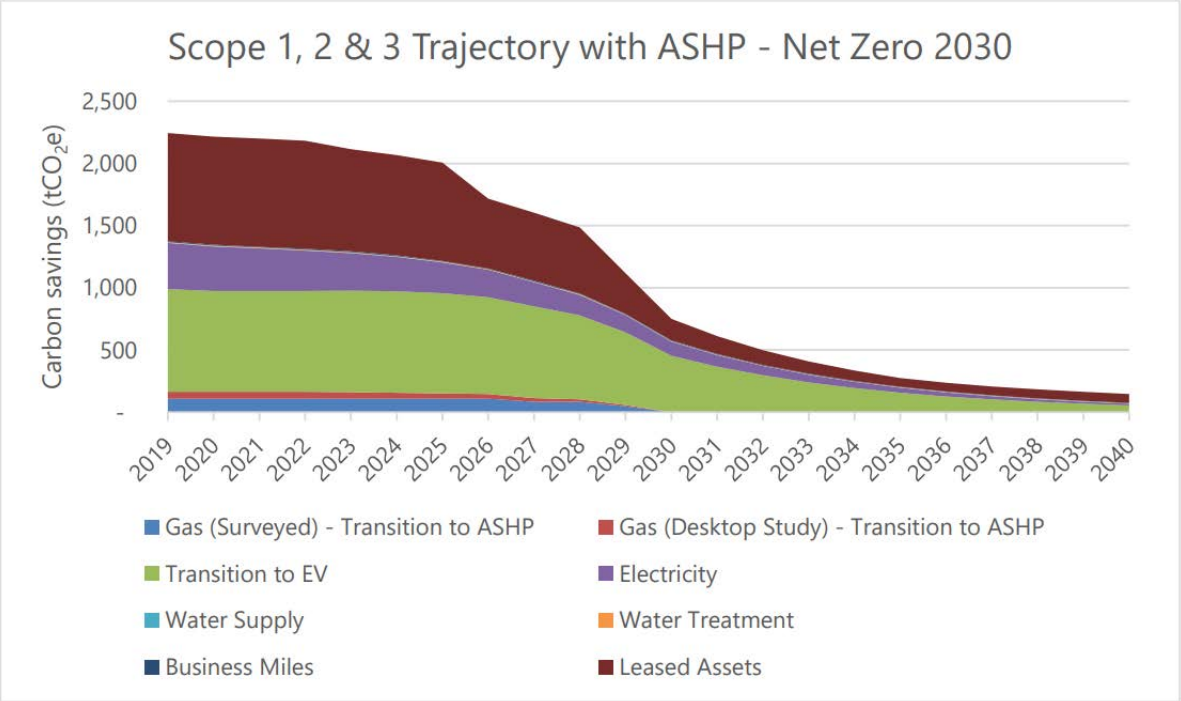


A significant reduction in emissions occurred in 2020-21 as a consequence of the introduction of hybrid working for all Council office staff.

In order to better understand the actions that need to be taken locally, the Council commissioned the Association for Public Service Excellence (APSE) to establish the net zero trajectory for Council emissions. All buildings were surveyed to ensure the recommendations were based on an accurate reflection of the estate and the changes which would be required to decarbonise.

Figure 3 shows the theoretical trajectory that APSE produced, representing an overall saving of 1,493tCO2e (67%) when comparing 2020 to 2030 utilising Air Source Heat Pumps, (ASHP). It is estimated that there will be 751 tCO2e from hard-to-reduce sources that will remain by 2030 and would need to be offset through a combination of Solar PV installations and tree planting schemes to enable the Council to reach net-zero. The estimated cost of this offsetting is £736,000 at 2022 prices.

Figure 3



To achieve this theoretical trajectory it was estimated that a total investment of £19 million (at 2022 prices) would be required to improve building energy efficiency, install ASHP technology, generate renewable energy, and develop a tree planting scheme. It is estimated that these interventions would save the Council £160,626 per year by 2030. It is therefore clear that there are significant financial challenges in realising the Council's ambitions.

Our Approach to Net Zero for Council Operations

Given the costs outlined above, it is apparent that achieving net zero for Council operations in the current fiscal context of local government is exceptionally challenging due to:-

- the increasingly high cost of retrofit
- the high operational cost of heat pump technologies due to the high unit costs of electricity
- skills shortages
- the lack of reflection of net zero in national planning processes and policies
- uncertainty over "low-carbon" technologies such as hydrogen
- lack of a clear decarbonisation plan by the Government
- lack of resource and finance in central and local Government, and reduced capacity of many residents to spend on pro-environmental changes due to ongoing cost of living crisis.

One of the objectives in this strategy is to model how and to what extent the net-zero trajectory could be achieved, taking into account existing challenges, affordability, sources of

finance, practicality, suitability of low carbon technology, and consideration of existing plant replacement timetables.

The emphasis of this 3-year strategy is to focus on actions that are achievable within the current funding landscape but will deliver substantial emissions reductions. For example, we will undertake an in-depth assessment on how to expand the Solar PV capacity of Council buildings and land. Whilst this would require substantial upfront investment, the positive return on investment is likely to make it affordable.

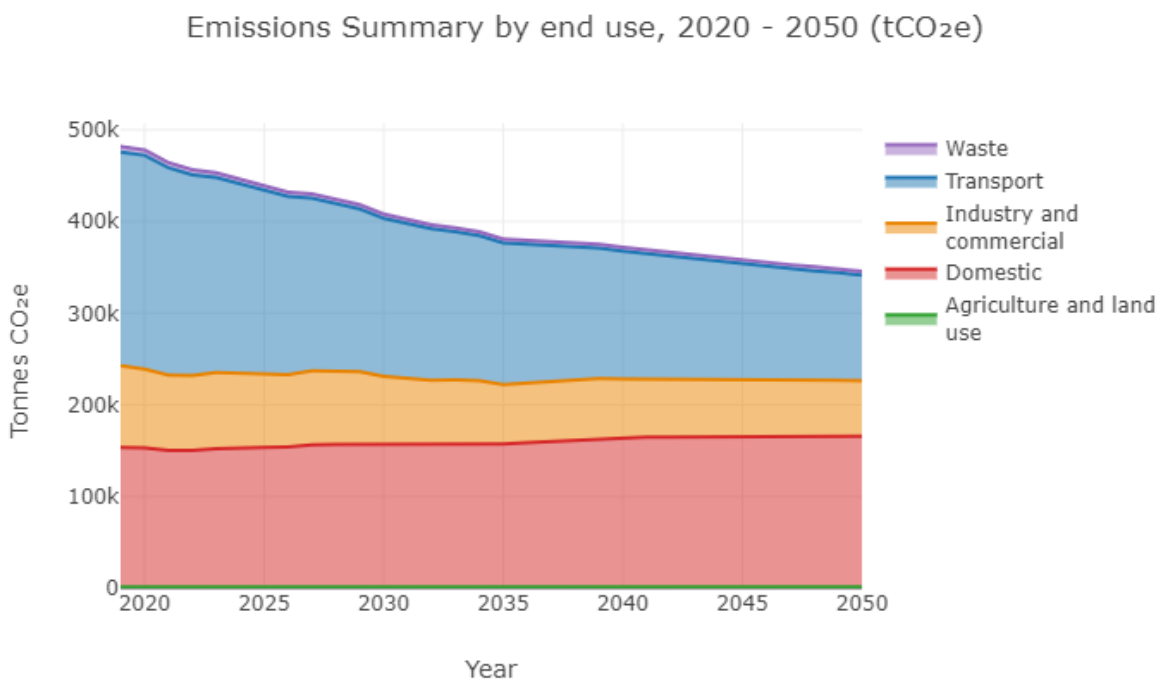
As recognised by the "Mission Zero" review of Net Zero (2023), the Council needs long-term certainty of government funding in order to make net zero investment plans through to 2030, and beyond.

Three Rivers District Emissions

In addition to considering the Council's own emissions, the APSE report provided analysis of emissions of the wider district as a whole and considered what would be required to achieve net zero at district level by 2050.

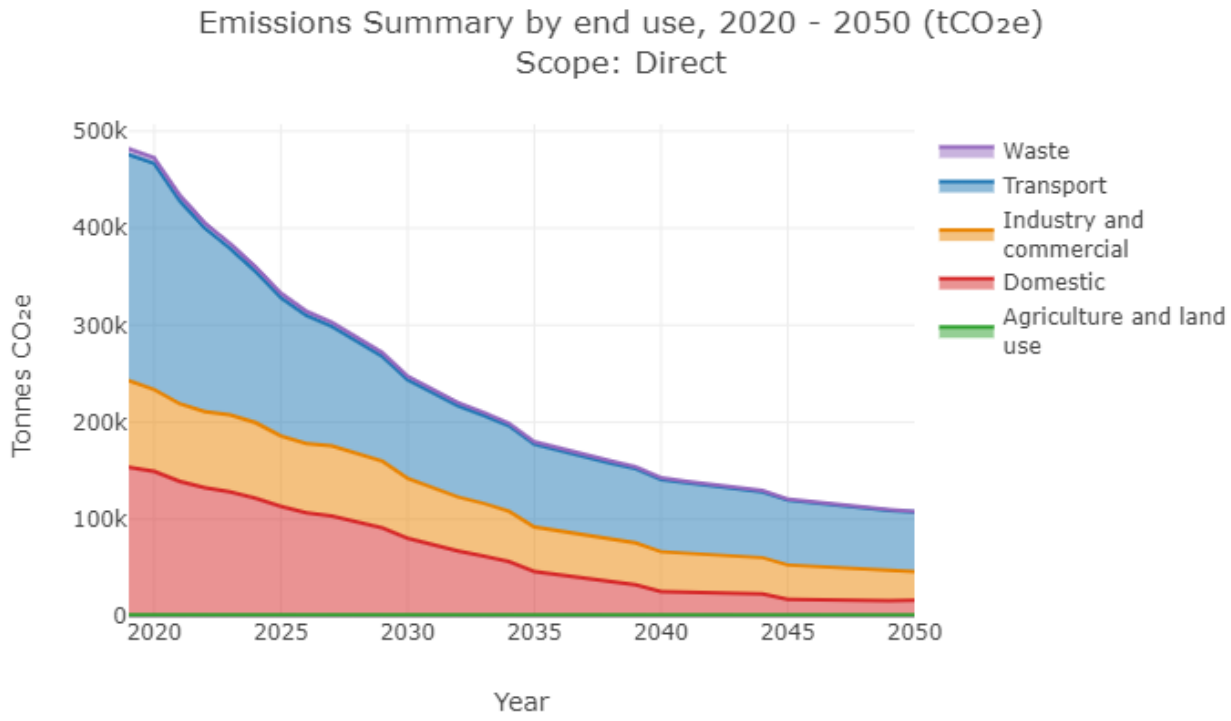
Figure 4 shows the district emits just under 500,000 t CO2e per annum and if no interventions are made, then the effects of grid decarbonisation and the transition to electric vehicles will only have a moderate effect.

Figure 4 Business as Usual



However if ambitious interventions are made, Figure 5 shows emissions could be reduced by 77%t 108,000 t CO2e.

Figure 5 High Ambition Carbon Reduction Interventions



In order to achieve its high-level ambitions for the district, the Council will demonstrate leadership that will seek to inspire businesses, community groups and individual residents to take action to achieve their own personal or organisational net zero.

Carbon emissions associated with domestic dwellings remain a key area to address both in terms of reducing overall energy demand through better insulation and in a switch to electric heating which can benefit from the grid decarbonisation at a national level.

Ward- Level Emissions

The emissions generated across Three Rivers vary considerably between local areas. Data from the Community Carbon Calculator indicates that residents in Chorleywood North and Sarratt, and Moor Park wards have the highest carbon footprints in the district with each household producing an average of 25 tonnes of carbon per year. Residents in South Oxhey, however, have the lowest carbon footprints in the district, producing an average of 12 tonnes of carbon annually.

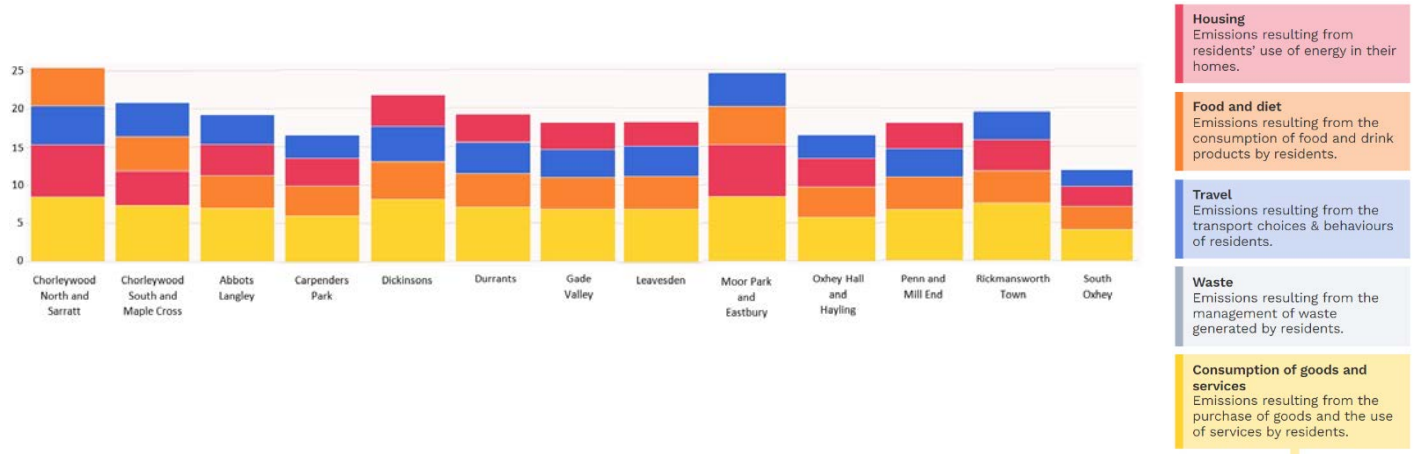
Nevertheless, all of the wards in Three Rivers currently produce emissions above the UK average [6.42tCO2e per person per year in 2019][6] and far exceed what is required to limit global temperature rise to the Paris Agreement goal of 1.5°C [<3tCO2e per person per year from 2035])[7].

Whilst this ward-level data is based on assumptions and estimates, it illustrates the differential impact of residents' day-to-day activities in different parts of the district. Such local level insights are useful in targeting communications and support in different areas and demonstrate the importance of action to reduce emissions at the local level; from ward-based initiatives organised by Parish Councils, to community-led action from community

[6] https://www.climatewatchdata.org/ghg-emissions?breakBy=countries&calculation=PER_CAPITA&end_year=2019&gases=all-ghg&regions=GBR&start_year=1990
[7] The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf (theccc.org.uk)

groups, faith groups, residents associations and charities, all the way down to individual actions taken by residents.

The Council cannot realise its vision of a net zero Three Rivers alone, it requires everyone to do their bit to contribute, no matter how big or small.



Carbon Offsetting

There are a variety of ways to reach net-zero, not all of them equal. The Council will follow the carbon management hierarchy; this means we will prioritise emissions avoidance and reduction, and only replace or compensate our hard-to-treat emissions as a last resort. Tree planting and expanding renewable energy generation will play a key role in any offsetting that is needed for the Council to reach net zero.

Climate Change Adaptation

The Council recognises that even if all greenhouse gas emissions ceased immediately, the emissions produced over the last century have already committed us to a certain degree of global warming. The effects of the resultant climate change in the UK, including, hotter drier summers, warmer wetter winters, and more frequent and intense extreme weather events, are being experienced with increasing regularity.

In 2022, Three Rivers experienced serious drought, dried up chalk streams, and wildfires. These issues cause real and present risks to our built and natural environments, the health and wellbeing of our residents and local wildlife, and to our local economy.

In the summer of 2022, landscape fires broke out across the country due to the extreme hot and dry conditions, including in Three Rivers, where fires were reported at Leavesden Country Park, South Oxhey Playing Fields and Oxhey Woods. Pictured: the aftermath of a landscape fire at South Oxhey Playing Fields.

While the Council works to limit further climate change by reducing greenhouse gas emissions from the Council's operations and across the district, it is recognised that mitigation alone is no longer sufficient. Adapting to our changing climate and building the district's resilience to the impacts of the changes that now face our communities, businesses, services, and natural spaces, is increasingly important.

Measurement, Governance and Next Steps

The Climate Emergency and Sustainability Strategy 2023-2026 is supported by an Action Plan which is updated continuously and reviewed bi-annually by the Leisure, Environment and Community Committee. Progress on the work of the Council on the climate emergency can be followed on the Council's website here.

The establishment of the route to zero for Council measured operational emissions will produce annual carbon reduction targets, against which progress will be measured.

The District Council's role

Three Rivers District Council declared a climate emergency in 2019 and is committed to achieving net-zero for its own measurable emissions by 2030, and working with partners to support the district in achieving net-zero by 2045.

The aims and objectives in this Strategy all follow a hierarchy of action which recognises the three broad spheres of influence that Three Rivers District Council can have.

Enable and Engage

Aim: **Inspire everyone to work together to adopt sustainable lifestyles and make climate aware decisions.**

Three Rivers together with the community has an opportunity to lead a new low-carbon future enabling cleaner, healthier lifestyles where the local economy thrives through the growth of sustainable and green businesses. We recognise the key role that the Council has in leading and inspiring local people to be part of the solution; contributing to the enrichment of local biodiversity, altering habits and encouraging improved home efficiency and to reduce their carbon, water and ecological footprints.

To achieve our aim we will:

- Embed consideration of the climate and ecological emergencies into the culture and decision making of the Council.
- Reduce the district's vulnerability to the impacts of climate change and take advantage of any opportunities that arise.
- Inspire and enable everyone in the district to adopt sustainable, climate resilient behaviours.
- Provide and foster an attractive environment for sustainable business and "green" jobs.

Energy

Aim: Minimise energy-related emissions in the district through reducing consumption, improving efficiency and transitioning to renewable energy sources to achieve net-zero targets (2030 – council emissions, 2045 – district-wide emissions).

Renewable energy projects can generate lasting cost and carbon savings, and protect against future energy price rises. They can also deliver broader social objectives such as ensuring security of supply and addressing fuel poverty.

Recent exposure to increasingly high prices for imported fossil fuels[8], highlights the importance of deploying renewables at scale and reducing our reliance on fossil fuels urgently as well as reducing the energy demand through improved fuel efficiencies

The Council is restricted in the amount of renewable energy it can produce by the constraints of its estate, however as a community leader and planning authority we can inspire and enable residents, businesses, and other land owners in the district to invest in their own renewable energy production.

To achieve our aim we will:

- Establish the route to net-zero for the Council's measurable operational emissions.
- Make further progress towards the management of a Net Zero Carbon Council estate.
- Develop the business case for solar PV on Council buildings, sites and car parks.
- Research options for decentralised renewable energy generation.
- Encourage and enable renewable energy generation in the district.
- Help residents and businesses identify how they can reduce their energy use.

[8] Quarterly Energy Prices UK April to June 2022 (publishing.service.gov.uk)

Sustainable Design and Construction

Aim: **The highest standards of sustainable design and construction**

The Future Homes and Building standard is expected to pass into legislation in 2024 with implementation following in 2025. Under the current proposals, all new homes would be required to produce 75-80% less carbon emissions than allowed under current regulations. The goal of the standard is that, by 2025, new homes will be "zero carbon ready" so that they will not need retrofit to become carbon neutral once the electricity grid has been decarbonised.

As a Local Planning Authority, Three Rivers District Council has a responsibility to produce the Strategic Local Plan and determine and enforce planning applications and Building Regulations. The Council's policies will, therefore, be reviewed and strengthened as Building Regulation changes allow. We will strive, within the constraints of the national planning framework, for the highest standards of sustainable design and construction so that the district can have adaptable buildings which are resilient to the effects of climate change, and minimise the use of natural resources over the intended lifetime of a development.

To achieve our aim we will:

- Progress towards approval of a new Local Plan that can secure the highest standards of environmental performance and sustainability in development.
- Encourage developers within Three Rivers to adopt net zero design standards.
- Require all major developments to submit an adaptation strategy and sustainability statement to demonstrate how the development will mitigate and adapt to climate change over its lifetime.
- Integrate renewable energy within any new Council developments, Council joint venture developments and within public and private sector developments.
- For major non-residential developments, proposals should achieve BREEAM 'Excellent' as a minimum with the ambition to achieve "Outstanding."
- Ensure developments minimise the use of water resources, minimise impact on sewerage infrastructure, and do not increase the risk of flood on site or in the adjacent areas.
- Encourage Biodiversity Net-Gain to be achieved on site or within the district.

Efficiency of Existing Buildings

Aim: Improve industrial, commercial and domestic energy efficiency in the district in existing buildings.

Home energy use accounts for 28.8% of the district's greenhouse gas emissions (2020)[9], making it an area of significant emissions reductions potential and thus a key sector to focus on to meet the district level net-zero target.

Improving the energy efficiency of domestic and commercial buildings is not only an essential component of reducing greenhouse gas emissions to mitigate climate change at the local level, it also contributes to tackling fuel poverty, improving public health and wellbeing, and supporting the green economy.

The Council is a non-stock holding Authority, with the exception of a small number of temporary accommodation dwellings. Registered Social Housing Providers own and manage socially rented housing in the district with the Council maintaining a regulatory function to enforce Minimum Energy Efficiency Standards (MEES) for privately rented properties.

To achieve our aim we will:

- Reduce carbon emissions from existing Council buildings through retrofit.
- Co-ordinate a Domestic Decarbonisation programme for the district, in collaboration with Housing Associations and Social Landlords.
- Educate residents on the ways that they can reduce their energy consumption.
- Encourage the retrofitting of buildings for energy efficiency improvements at the change point of application for planning permission[10].
- Develop the local retrofit sector to increase capacity for retrofit projects in the district.

[9] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1086980/UK-local-authority-ghg-emissions-2020.xlsx

[10] https://www.threerivers.gov.uk/download?id=47493

Sustainable Travel and Air Quality

Aim: Enable and encourage journeys to be made by sustainable transport modes

Hertfordshire has some of the highest vehicle ownership levels in the country, with 87% of residents with access to a car compared to 74% nationally.[11]

The Council is playing its part to reduce resident and commercial reliance on carbon-fuelled transport, working closely in partnership with the local Highway Authority (Hertfordshire County Council), and other stakeholders to encourage, enable and, where it falls within the remit of the district Council, to deliver:

- Improved public transport accessibility
- High quality active travel infrastructure
- Travel behaviour change
- Parking management that encourages sustainable mobility
- Improved streetscapes

There are two Air Quality Management Areas (AQMAs) in Chorleywood, the plans for which can be found at: https://www.airqualityengland.co.uk/local-authority/hnb-reports.

To achieve our aim we will:

- Adopt the Local Cycling and Walking Infrastructure Plan.
- Support and promote the concept of 20 Minute Neighbourhoods.
- Support our partners in the development and promotion of strategic sustainable passenger transport and infrastructure.
- Promote and improve the public experience and perception of public transport.
- Work with the Hertfordshire Climate Change and Sustainability Partnership (HCCSP) to develop a county wide programme that supports a transition to low carbon private hire vehicles and taxis.
- Maximise opportunities via planning and development control to promote travel planning and increase sustainable low- and zero-carbon transport infrastructure.
- Ensure Air Quality Management Plans are successfully delivered.
- Encourage behaviour change on vehicle idling through education and partnership working.
- Expand electric vehicle charging infrastructure within Three Rivers.

[11] https://www.hertfordshire.gov.uk/media-library/documents/environment-and-planning/planning/planning-in-hertfordshire/the-sustainable-modes-of-travel-strategy-smots-2022.pdf

Waste Management and a Circular Economy

Aim: **Reduce the volume of waste produced and encourage a circular economy.**

Modern consumerism and throw-away culture is unsustainable. It generates greenhouse gasses and uses unnecessary natural resources. The volume of waste created as a result currently means that a significant portion has to be exported overseas to be recycled, which in turn, leads to further environmental issues and carbon emissions.

The Council is a waste collection Authority with Hertfordshire County Council holding the responsibility of the waste disposal Authority. Consequently, how our waste is disposed of and treated is not under the Council's direct influence as contracts held by Hertfordshire County Council with re-processors influence what can and cannot be collected for recycling.

To achieve our aim we will:

- Reduce waste and increase the proportion of recycling, composting and reuse within Council operations.

- Play an active role in the Hertfordshire Waste Partnership.

- Consult on and comply with the Government's Resources and Waste Strategy.

- Inspire and enable households and businesses to reduce the waste produced and increase recycling and composting. Achieve 65% recycling and composting rate, 10% landfill, and 25% incineration by 2035 for household waste. Total volume of waste is 61% of 2017 levels by 2040.

- Maintain our position as one of the highest recycling authorities in England.

- Consider all suitable technology when replacing waste collection vehicles to reduce their carbon footprint, and continue to use them to promote reuse and recycling.

Biodiversity

Aim: Ensure net gains in local biodiversity that protect and enhance habitats and species, and utilise the power of nature to build climate resilience.

Three Rivers is home to a rich diversity of habitats and species including those of high priority with the district fortunate to benefit from ancient woodland, chalk streams and wet woodlands. Site specific management plans are in place to assess and ensure the most appropriate management techniques for the habitats present, for example; conservation grazing is utilised on several grassland sites across the district resulting in a wider floristic diversity.

The Three Rivers Nature Recovery and Tree Strategies support delivery of this Strategy, ensuring also the protection and enhancement of the natural world both for the benefit of biodiversity and contributions towards mitigating climate change.

Engagement with local communities regarding the value of the natural world is vital to its protection and enhancement. Through, for example, wildlife based events such as bat walks, interpretation explaining the habitats present on site, outreach with local schools and community groups or advice to local residents on how to help wildlife in the garden or window box the Council seeks to engage its residents in their natural surroundings.

Route to zero emissions modelling has identified the huge role that trees will need to play in mitigating our unavoidable climate emissions. It is estimated that tree coverage will need to expand by more than 30% by 2050, however, this needs to be balanced with the extremely important role that our grassland areas have in providing environments for biodiversity to thrive, and against the need for food production. As leaders in combating the climate emergency the Council will continue to work with our partners and fellow landowners in the district to navigate the competing demands for our land.

To achieve our aim we will:

- Ensure that all TRDC-owned land is managed sustainably and for the benefit of biodiversity, soil health, education, responsible recreation and climate resilience.

- Understand the value of trees in the district and the role they will play in tackling the climate emergency locally.

- Encourage ecologically-resilient and varied landscapes to ensure that habitats remain diverse and adaptable to the impacts of climate change, thereby safeguarding local flora and fauna.

- Maximise opportunities for biodiversity arising from Biodiversity Net Gain requirements to protect, enhance and extend existing habitats within the district.

- Support landowners in the district to enhance biodiversity through proactive land management including rewilding, tree planting, improving soil health, and creating wildlife corridors.

- Encourage local residents and householders in the district to improve biodiversity in their private gardens and the district's open spaces.

Water and Flooding

Aim: Reduce water consumption, prevent contamination of our river network, mitigate the impacts of and support resilience to flooding.

Hertfordshire is one of the driest counties in the UK with average rainfall only two thirds of the national average yet its residents are amongst the highest consumers of water in the UK (8% above the national average, at 153 litres per person per day).[12] Chalk Stream in Crisis, produced by The Rivers Trust, reported low flows and chronic over abstraction in our chalk streams. In addition, the sewage overflows and pollutants that end up in the rivers and in riverine habitats places the district's three rivers under severe pressure.

Meanwhile, a Strategic Flood Risk Assessment (SFRA) has identified that over 2400 properties in Three Rivers are at high risk of flooding. The Colne and Gade catchments were identified as highly sensitive with warmer, wetter winters and more severe weather due to climate change likely to further increase the risk of future flooding.

One way of preventing additional pressure on water supplies is to ensure that any new development does not increase water abstraction for drinking water above existing levels – water neutrality. Whilst this is not currently enforceable in Three Rivers, it is a concept which is having an impact in other parts of the county and is expected to grow in importance over the coming years.

The Council has no statutory duty with regard to water, instead we focus on encouraging those with responsibilities to work together to benefit residents and our chalk streams**.** To that end, the Council established and hosts regular meetings of a local Water Partnership, providing key stakeholders with a network and constructive platform to discuss issues, raise awareness and establish solutions in order to achieve the above aim.

To achieve our aim we will:

- Reduce the Council's water consumption across its estate.
- Require new development to facilitate optimum water and waste water efficiency and flood mitigation measures, aiming towards water neutrality.
- Work in partnership on a catchment-scale with key stakeholders to protect and enhance local rivers and the habitats which surround them.
- Promote reductions in water consumption in the district.
- Actively encourage Thames Water to invest in their waste water catchments and the Maple Lodge Sewage Treatment Works to ensure sufficient capacity and eradication of untreated sewage discharges into the chalk streams.
- Refuse development if it is subject to unacceptable flood risk or if it would exacerbate flood risk on site or elsewhere.

[12] https://www.hertfordshire.gov.uk/microsites/building-futures/a-sustainable-design-toolkit/technical-modules/water/water-facts.aspx

Adaptation and Resilience

Aim: Create communities, services, infrastructure and environments that are climate resilient.

Climate adaptation is critical to the future of our district and is a priority for the Council under the Corporate Framework 2023-26. Evidence is increasing of the ways in which the climate changes already being experienced exacerbates existing inequities with lower-income and other marginalized communities who are, for example, disproportionately affected by the extreme weather conditions, not least because they are often unable to meet the expense of the adaptation measures that now must go hand in hand with carbon mitigation.

Fostering increased local resilience will require extensive collaboration between the Council, residents, public, private, and voluntary sector organisations, and partners across a wide range of concerns including energy, food and water supply, public health, transport and emergency services.

Adaptation and increased resilience will be needed cross every level and department of the Council. To achieve this, the Council will continue to work in partnership with other key partners particularly Hertfordshire County Council, who hold responsibility for managing and maintaining the infrastructure for flood risk and are the Highways Authority responsible for to prevention and alleviation of flooding through road surface drainage as well as the Environment Agency which is responsible for flooding from rivers.

To achieve our aim we will:

- Ensure our emergency and public health plans account for more severe weather and its impacts on communities.
- Prioritize climate adaptation efforts that explicitly help our most vulnerable populations.
- Assess climate risks and subsequent adaptations required to ensure the resilience of the Council’s buildings and services to the impacts of climate change.
- Ensure the Councils infrastructure, landscapes, services are built, maintained and managed to be resilient to the impacts of climate change.
- Inspire and support stakeholders, partners, community groups, businesses and residents to be resilient to the impacts of climate change.

Food and Agriculture

Aim: Encourage sustainable food production and consumption in the district, and engage with farmers to improve habitat networks.

Climate related risks are, and will continue to have, a significant impact on food security, particularly given the global nature of food supply chains. Exposure to rising food prices and tackling this associated carbon emissions requires an increase in local food production, a reduction in food waste and a shift towards a more plant based diet. Encouraging local growing, preparation and consumption of more seasonal local food provides opportunities to engage with resident on nutrition and its positive impacts on health and wellbeing.

The Hertfordshire State of Nature reports that only 3% of species in the county are connected to farmland. Working with landowners on habitat networks can create vital natural corridors that will support the expansion of wildlife populations.

The Council acknowledges that its influence over food production and consumption is limited, however, through our community partnerships and social media campaigns we can improve knowledge and awareness of the benefits of shopping and eating more sustainably.

To achieve our aim we will:

- Encourage and inspire local land owners to increase biodiversity and climate resilience on their land, and explore options for renewable energy production.
- Inspire and encourage local, sustainable food producers to connect food retailers, the hospitality sector, and residents.
- Encourage local food production through the development of community gardens, allotments, and orchards, and
- Engage with local businesses, community groups, and residents to adopt sustainable food consumption and reduce food waste.