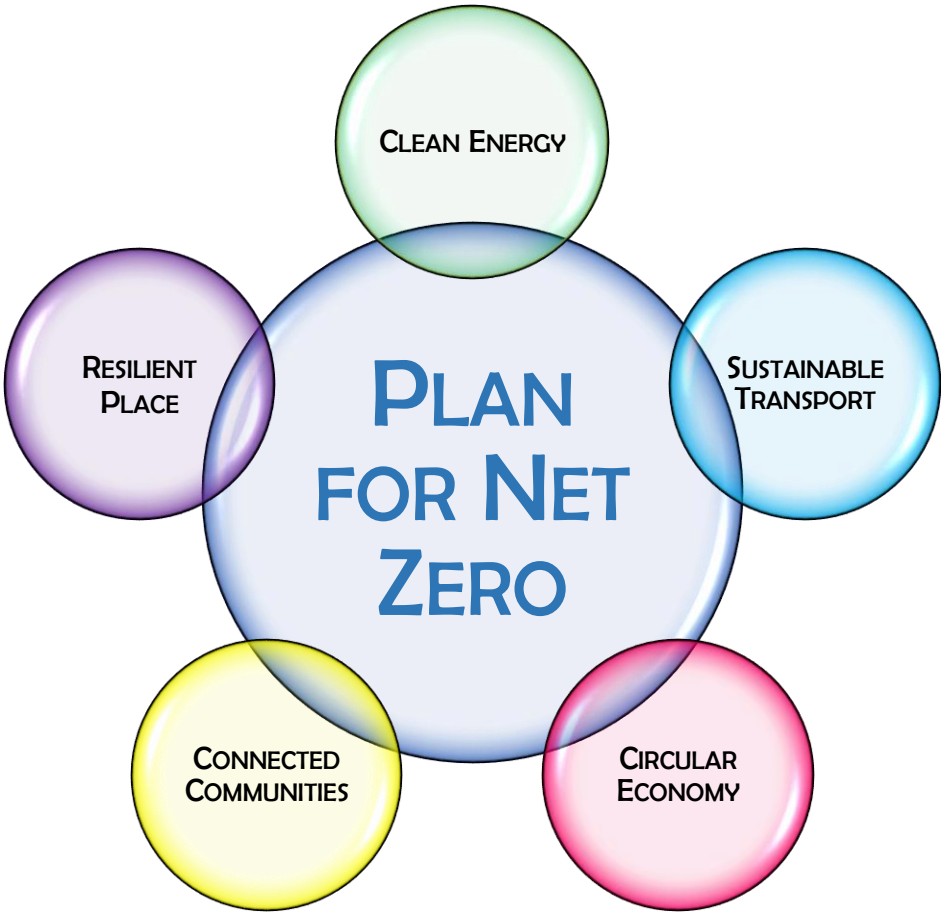


RENFREWSHIRE'S PLAN FOR NET ZERO

PHASE 1: WORKING TOWARDS NET ZERO EMISSIONS BY 2030



 Our Plan for Net Zero

We want to end Renfrewshire's contribution to climate change within a generation. We are committed to working towards net zero by 2030 for the whole of Renfrewshire to ensure a safer, healthier, greener and fairer place for everyone to live, work and spend time in



EXECUTIVE SUMMARY

From evidence and research we know that human activities are the main cause of climate change. Many of our actions produce greenhouse gas emissions, raising our planet's temperature and causing our climate to change. Emissions from greenhouse gases from burning fossil fuels, from the way we treat valuable resources as 'waste' and from land use changes have all contributed to global warming, and this is the biggest threat to our planet. Our response to the climate emergency brings opportunities for our local communities and economy. It also brings potential solutions to tackle inequalities, including those exacerbated by the COVID-19 pandemic and the current cost of living crisis.

Renfrewshire Council has shown leadership at both a strategic level and operational level to be a driver of change - declaring a climate emergency in June 2019 and committing to work towards net zero by 2030. We have developed strong governance to lead by example and take action to tackle climate change, including establishing a Climate Change Sub-Committee, now the Planning and Climate Change Policy Board, and committing £1million to a Climate Change Action Fund supporting innovative climate projects and initiatives across Renfrewshire which build on transformative projects that the Council have already delivered across our operations.

When we're talking about net zero for Renfrewshire, we mean reducing greenhouse gas emissions to as close to zero as possible (from our energy, resource use, transport, etc.) and locking up remaining emissions through initiatives like tree planting, restoring peat bogs and carbon capture and storage schemes. This makes the balance of our emissions 'net' zero.

This Plan is Council-led but is for the whole Renfrewshire area and we need everyone to participate to achieve our ambitions. Moving towards net zero will transform our communities, our economy and how we deliver our services, so engagement is key to ensure all voices are heard. In developing this Plan, we worked hard to gather different views and ideas with a Climate Survey, a Business Survey, establishing our representative citizens Climate Panel and working with local public, private and third sector and community planning partners to get everyone involved.

Throughout this summary document and the full Plan, you will notice references to 'we' – this means Renfrewshire Council as a lead partner and producer of this Plan, but it also means Renfrewshire stakeholders, communities, citizens and the people we've been speaking to as we pull together this Plan and shape our route forward.

To work collectively to reduce emissions, it is important to have a robust evidence base. Our greenhouse gas emissions baseline for Renfrewshire Council as an organisation and Renfrewshire as an area highlights progress made so far and the gaps we need to fill with actions reach net zero. Renfrewshire Council makes up around 2.5% of the area's total emissions, with buildings we are responsible for being the main source of emissions (67%), followed by transport (17%) and waste collection (8%). For the Renfrewshire area, transport is the biggest source of emissions (34%), with residential energy use and commercial and industrial energy use both on 29%. The Plan for Net Zero will identify and prioritise action across all of the different sectors in collaboration with all of our stakeholders, and signpost to information, advice and support (including financial support) to enable change to work towards net zero.

We will work together with partners, businesses, local people and communities to target 5 focused outcome areas, creating opportunities for all. The key focus areas of activity which we will progress, lead and enable are:

- **Clean Energy:** we will minimise energy demand, maximise energy efficiency and transform our energy systems to deliver clean, affordable energy for all
- **Sustainable Transport:** we will maximise sustainable transport opportunities to deliver an inclusive, affordable transport system that provides choice for all
- **Circular Economy:** we will make Renfrewshire a circular economy society: minimising waste and maximising reuse, recycling and recovery of resources rather than treating them as waste
- **Connected Communities:** we will empower our communities by ensuring an inclusive and just transition to net zero with social justice and health and wellbeing at its core for current and future generations
- **Resilient Place:** we will optimise biodiversity and nature locally to enhance our natural environment and maximise green economic opportunities while planning and preparing for impacts of climate change

There will always be emissions that we are unable to remove, such as those associated with medicines and anaesthetics. Even a best case scenario has shown that both Renfrewshire Council and Renfrewshire area would have remaining emissions that would need to be offset. The Plan for Net Zero aims to set out how we can take action collectively to reduce emissions to as low a level as possible, leaving achievable emissions levels to offset.

There is not a 'one size fits all' solution across Renfrewshire – we need to look on an area by area, community by community basis to tailor solutions to meet local needs and make sure that no one is left behind. We need to identify and understand barriers to change, so that we can find solutions and we need to transition in a way that is just, creates opportunities equitably and creates a greener, fairer, sustainable way of life for all our citizens, communities and local businesses.

We want everyone to be involved - our engagement will be ongoing to raise awareness and encourage conversations with all stakeholders as the Plan is implemented. We will develop a communications plan to ensure a coordinated approach for ongoing engagement to ensure people can follow progress and participate in climate activities across Renfrewshire; continue effective governance in partnership with public, private and community organisations; and develop visualisation tools to model, monitor and report progress.

We will welcome comments and feedback from all citizens, communities and stakeholders on Phase 1 of the Plan for Net Zero. This will inform Phase 2 of the Plan for Net Zero – which will outline our route map to net zero and the phased actions, projects and interventions that will enable us to reach our target.

The change needed to reach net zero is unprecedented. It will require long-term financial resources and large-scale investment. It will require government at all levels to redirect and, in some cases, reprioritise existing finance to support the scale and pace of change required and align investment with climate priorities. The delivery of high quality public services remains a priority - with the transition to net zero and a green recovery from COVID-19 bringing opportunities for increased efficiencies and potential service improvements through rebuilding and designing better systems and putting things back together differently.

In addition to traditional avenues of funding, it will be key to explore more innovative and collaborative ways to finance climate action across stakeholders, including new business models; joint ventures and partnership projects; and potential crowdsourcing initiatives such as community municipal bonds. Action is already being taken across many stakeholders, with funding allocated to committed and desired carbon reduction and climate resilient interventions, but many other potential projects will require feasibility studies or business cases to determine their viability and for funding to be secured to make them happen, particularly in the case of larger-scale projects.

This approach, pipeline of projects and investment in a net zero society and green economy also brings opportunities for the local workforce and market confidence for supply chains and manufacturing through the implementation, installation, construction and maintenance of projects. We need to identify and address skills gaps and ensure a proactive approach to the upskilling, reskilling and training required to ensure this large-scale job creation and sustainable employment opportunity is retained locally as much as possible; to limit the transition risks; and ensure that skills interventions lead to a more inclusive and productive, resilient and future-proofed economy.

We will require ambition, drive and collective local action beyond the national contribution in order to work towards net zero by 2030. This will be achieved through targeted action across our 5 focus areas: clean energy; sustainable transport; circular economy; connected communities; and resilient place.

How will we recognise delivery at a local level? RenZero branding has been developed to visibly highlight projects, activities and initiatives that contribute to our net zero goal. There are various icons that link climate change issues, action and progress across the 5 focus areas of the Plan. This branding is for everyone participating in our journey to net zero. It will be used to highlight action taken by the Council but also can be used by stakeholders to highlight action being delivered by the wider community, showing how we are all contributing collectively to our net zero goal and allowing us to raise awareness and reach a wider audience.



Please get involved and let us know what you think about the areas of focus, issues or opportunities within your community and what you would like to see locally to shape the Plan for Net Zero:

climate@renfrewshire.gov.uk



BACKGROUND TO THE CLIMATE EMERGENCY: We know that human activities are the main cause of climate change. Human influence has warmed the climate at a rate not seen in at least the last 2,000 years¹

What is climate change? The increased concentration of greenhouse gases in the earth's atmosphere is directly linked to the rise in average global temperatures on earth¹ and is resulting in global climate change.

Many of our actions produce greenhouse gas emissions, raising our planet's temperature and causing our climate to change. Emissions from greenhouse gases from burning fossil fuels, from the way we treat valuable resources as 'waste' and from land use changes have all contributed to heating the planet. Fossil fuels are finite resources such as coal, oil and natural gas which have been formed over millions of years from decayed remains of prehistoric plants or animals. Burning fossil fuels releases carbon dioxide and other greenhouse gases, making them the primary contributor to climate change and global warming. Methane (which is the primary component of natural gas) is responsible for more than 25% of the warming we are experiencing today.

Carbon dioxide (CO₂) is the most abundant greenhouse gas (making up around ⅔ of greenhouse gases) and is largely the product of burning fossil fuels.

Global surface temperature has increased faster since 1970 than in any other 50-year period over at least the last 2,000 years, resulting in more severe and more frequent extreme weather events such as heatwaves, droughts, flooding and wildfires. It has also led to sea level rises and nature loss in every region across the globe. In Scotland, we've seen our warmest years and increased rainfall levels – this is expected to continue and get more intense.

Climate change cannot be stopped - some of the damage is already 'locked in'. But taking measures to minimise our greenhouse gas emissions would limit further climate change. There are changes we can all make to prevent it getting worse and to help us cope with the damage that has already been done.

Climate change is happening in Scotland, and is happening in Renfrewshire, and we're already seeing the impacts locally.

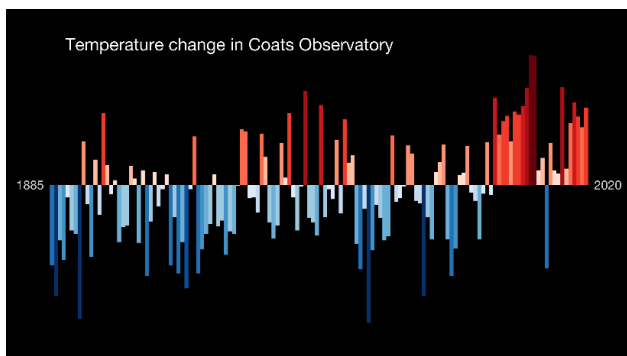


Figure 1: Coats Observatory average local temperature, 1885 to March 2020, courtesy of the University of Reading

In both figure 1 and figure 2, each stripe represents the average temperature for a single year, relative to the average temperature over the period as a whole.

Shades of blue indicate cooler than average years, while reds show years that were hotter than average.

The increasing intensity and occurrence of red stripes on the right-hand side of the graphics clearly highlight how average temperatures have risen in our local area and that this has become more frequent and extreme in the last 25 years.

The **Coats Observatory in Paisley** opened in 1883 and includes a weather station that has been recording local weather daily from 1885.

This provides us with an unbroken record of weather data, including average local temperature for each year since 1885 (figure 1, left) until March 2020 when, as a result of the pandemic, data retrieval was interrupted as it was unable to be collected due to lockdown.

From this data, Paisley's climate stripes were created (figure 2, below). This shows the progressive heating of our local area in a single image.

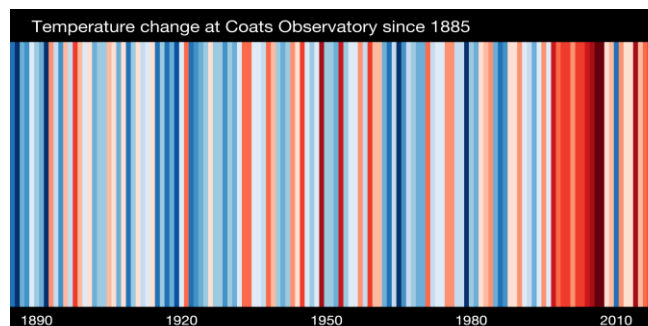


Figure 2: Paisley's Climate Stripes, courtesy of the University of Reading

¹ IPCC: The Intergovernmental Panel on Climate Change – over 200 scientists across 65 countries working together to understand, measure and model global warming

Why is it called a Climate Emergency? Ahead of COP26 in Glasgow in 2021, the UN Secretary General referred to the climate emergency as a 'code red for humanity'. Rising global temperatures will see more floods, storms and heatwaves; erosion of coastlines; and globally, less land will be fit for living and growing food, leading to fresh water and food supply shortages, and resulting in even more species struggling to survive.

'Climate emergency' refers to the urgency of the situation: if we want to preserve a liveable planet, we all need to take action.

A 2°C global warming increase, represents a critical threshold, where it is predicted that tolerance for agriculture and for health will be reached. The IPCC report² predicts that global warming of both 1.5°C and 2°C will be exceeded this century unless massive reductions in greenhouse gas emissions occur in the coming decades. Climate change cannot be stopped, but its impacts can be slowed, and we can avoid or limit some of the worst impacts.

All of us have been impacted by the COVID-19 pandemic over the last two years. Our recovery from the pandemic must also respond to the climate emergency and embrace the opportunities to rebuild and design better systems and put things back together differently to ensure the benefits of a transition to net zero are shared fairly.

We can all act now to reduce our emissions and prepare for the impacts of climate change in order to protect all that we love. Every action we take to cut our emissions will reduce warming and create a greener, cleaner, fairer, healthier and more sustainable way of life for everyone.



RENFREWSHIRE COUNCIL: LEADING BY EXAMPLE

Renfrewshire Council's Carbon Management Plan 2014/15 - 2019/20 set a target to reduce its total annual carbon footprint by 19,389 tCO₂e by the end of financial year 2019/20, using a baseline of financial year 2012-13. In January 2021, the completed Carbon Management Plan reported a total reduction of 31,818 tCO₂e equating to a **60% reduction in carbon emissions** across a range of areas including energy, water conservation, fleet replacement to low emission vehicles, increased recycling and reducing the quantity of waste sent to landfill and behaviour change across the organisation.

Since Renfrewshire Council declared a climate emergency in **June 2019**, a Cross-Party working group published its recommendations and many of these actions have been progressed ahead of the formal Plan for Net Zero being published. Actions included setting up a **Climate Change Sub-Committee (now the Planning and Climate Change Policy Board)** and committing £1million to a **Climate Change Action Fund** to support innovative climate projects and initiatives which could be implemented and replicated across the Renfrewshire area, including:



- the purchase of new electric light commercial vehicles as part of the ongoing Council fleet replacement programme (30% of the Council fleet is now electric)
- investigating opportunities for a large-scale solar farm on the Moss Road former landfill site



- our residents' Climate Survey, including weighting and analysis to ensure a representative view as part of the evidence base for Renfrewshire's Plan for Net Zero. A representative sample of residents who responded then formed the Climate Panel
- developing a local response to ensure resilient town centres by addressing current and issues within our towns and local centres in Renfrewshire
- establishing a Community Climate Fund, providing community organisations up to £3K for localised green community projects initiatives



- developing our strategic active travel network to better connect communities to places of work, study and town centres
- baselining Renfrewshire's emissions to see where we've come from, where we are now and future projection scenarios to 2030 to see the actions we need to take



Every year we report our progress to the Scottish Government on Renfrewshire Council's own carbon footprint and the measures we are putting in place to reduce it. The most recent report can be found here: [Public Bodies Climate Change Duties Draft Report 2021-22](#). Historic reports for Renfrewshire Council can be found [here](#).

² <https://www.ipcc.ch/sr15/>

WHAT YOU TOLD US: We have been carrying out extensive engagement across all our stakeholders to ensure all voices are heard and no one is left behind

We want to bring everyone with us, but we understand that people are all at different stages of the climate journey. We have been working across all our stakeholders in order to get everyone involved – residents, communities, local organisations, public, private and third sector and community planning partners. It is also key to have a focus on traditionally under-represented groups, to ensure all voices are heard in the design and delivery of the Plan for Net Zero.

AWARENESS AND INFORMATION

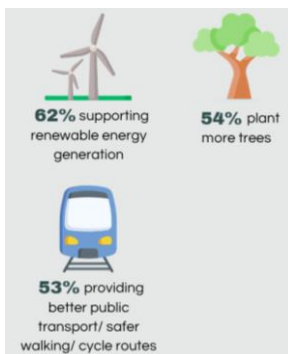
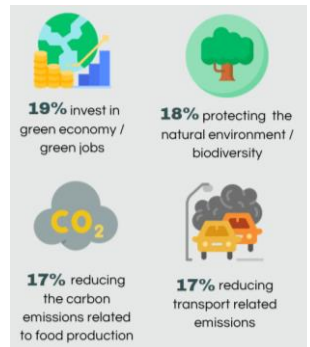


Our residents Climate Survey received 1,758 responses by post, email and online. The results were analysed and weighted to ensure a representative view to form part of the evidence base for the Plan for Net Zero.

Over **99%** of respondents were aware of climate change, **86%** believe we are facing a climate emergency and **96%** believe it is a serious or fairly serious threat to the world.

9 in 10 respondents believed that action can be taken to tackle climate change and believed our **top priorities** should include:

- investing in green economy/green jobs (19%)
- protecting the natural environment/biodiversity (18%)
- reducing the carbon emissions related to food production (17%)
- reducing transport related emissions (17%)



Respondents believed the following would make the **biggest impact**:

- supporting renewable energy generation scored highest at 62%, followed by
- planting more trees (54%), and
- providing better public transport and safer walking/cycling routes
- adopting policies which safeguard and enhance nature and biodiversity in Renfrewshire (50%)
- developing ways of heating buildings and homes other than through gas central heating (50%)
- retrofitting homes to become more energy efficient (48%)

The importance of outdoor spaces was clear in the responses. 97% ranked access to and quality of greenspace very important or quite important, with only 3% responding that it was not really important or not at all important.

Respondents believed that small individual actions, repeated on a large scale, can have a big impact in tackling climate change: **85%** agreed that their actions can help tackle climate change; **83%** agreed their actions can help protect plants, animals and other wildlife; and **83%** agreed that reducing their own impact on the environment is a personal priority.

The Survey also reinforced areas where people need support to enable them to make changes:



- Only **14%** fully agreed that they had the information and tools needed to help tackle climate change, with 44% agreeing somewhat, and
- Only **23%** fully agreed that they knew the changes they needed to make to help tackle climate change, with 48% agreeing somewhat

and also highlighted the barriers that prevent people from making changes:

- **40%** thought that making changes would cost them more
- **21%** stated a lack of resources or facilities in Renfrewshire to support the changes people want to make
- **21%** stated that they didn't know where to start



YOU SPOKE, WE LISTENED: A representative sample of those who responded to the Climate Survey then formed our Climate Panel

We want to bring everyone with us, and to ensure that all voices are heard in the design and delivery of the Plan for Net Zero. Our Climate Panel was formed, made up of a representative sample of Renfrewshire citizens, to look at climate issues, discuss how this affects people locally and help identify what interventions are needed and what actions can be taken to collectively support Renfrewshire’s drive towards net zero by 2030.

The first session was held in November 2021, with 3 further sessions in December 2021, January 2022 and March 2022. The sessions are held over Microsoft Teams, and each month there are 2 sessions on the day – one in the afternoon and one in the evening – to ensure as many people as possible are able to attend.



One Panel member said: “I put my name forward to be part of the Climate Panel because I have an interest in the environment both locally and internationally, which includes keeping my local area tidy and recycling where possible.

I want to encourage Renfrewshire Council to provide more safe cycle routes and would like to encourage them to provide access to e-bikes for all too.”

“I realise I am asking for a lot from my membership of the Climate Panel, but I have to start somewhere, and I might as well be ambitious for the sake of my children and grandchildren.”

The topic can be overwhelming – a message of hope is powerful. Advertising the positivity may engage those who are not engaged

People discovering new parts of the area due to lockdown – first time we all had a chance to take a breath and appreciate local green space

We need more active travel path links that take into account personal safety, particularly for children and women

A consistent message from the Climate Survey, the Climate Panel and engagement with local organisations, was that people don’t know where to start and would like to know what can make the biggest impact. We will address this under each outcome area, as well as including a section on impartial advice and support that is available to residents, communities, SMEs, businesses, private, public and 3rd sector organisations.

There are loads of ‘freebies’ out there: refurbished tools, including kids and tools for people with disabilities; seed libraries; and saplings – how can we let people know what is out there?

What are the hardest hitting actions/would have the biggest impact overall? Is it how we manage our waste, or should we concentrate on consuming less? Or do we need to think about changing how we use transport?

Young people’s gardening clubs where they had to have an adult present, led to adults being engaged and wanting to grow their own food at home too

Planning for new developments needs to include active travel links and not building on green space

Local bike share schemes and EV car club schemes would be great!

Local information – we need to know what’s on our doorstep



This stamp can be found in all 5 of the outcome areas, highlighting priorities which were raised by our representative Climate Panel and how we will address these.



RENFREWSHIRE'S PLAN FOR NET ZERO: We are working towards net zero emissions by 2030. The Plan for Net Zero will transform our communities and economy, and these transformations must be done with our communities and not to them

We want to end Renfrewshire's contribution to climate change within a generation. Renfrewshire's Plan for Net Zero is Council-led but is for the whole Renfrewshire area - we need everyone to participate to achieve our ambitions collectively.

We know that it is not a 'one size fits all' solution across Renfrewshire – we need to look on an area by area, community by community basis to tailor solutions to meet local needs and make sure that benefits are shared equally and fairly across everyone in society and that no one is left behind. The Plan for Net Zero is not just about future injustices – it includes the need to address and deal with existing injustices and improve the lives of all our citizens – including providing solutions to key issues, such as impacts of the cost of living crisis on everyone's lives.

What is Net Zero? When we're talking about net zero for Renfrewshire, we mean **reducing greenhouse gas emissions to nearly zero** – from our energy, resource use, transport, etc. - and **locking up remaining emissions** that we are unable to remove (e.g. those associated with anaesthetics, medicines, etc.) through initiatives like tree planting, peatbogs and carbon capture and storage schemes. So the **balance of our emissions** is 'net' zero.



The impacts of the COVID-19 pandemic on people's lives and livelihoods have been enormously difficult. As with the pandemic, climate change impacts those who are most vulnerable disproportionately. The pandemic also highlighted people's ability to adapt – we have a real opportunity to build on positive behaviours which resulted from the pandemic (e.g. shopping locally to support local businesses, daily exercise embraced and maintained, a reduction in food waste) in order to reduce our emissions, support our local economy and make our communities safer, more attractive and healthier places to spend time in.

We need to transition to net zero in a way that is just, removes social stigmas and ensures social justice - creating opportunities and a greener, fairer, sustainable way of life for all our residents, communities and local businesses, ensuring we don't 'punish' any groups or sectors or make life harder for those already experiencing difficulties. We also need to identify and understand barriers to change, so that we can find solutions to enable change.

We will work together with partners, businesses, local people and communities to target 5 focused outcome areas, creating opportunities for all. The key focus areas of activity which we will progress, lead and enable are:

- **Clean Energy**
- **Sustainable Transport**
- **Circular Economy**
- **Connected Communities**
- **Resilient Place**

SCOTLAND'S PROGRESS TO DATE



EMISSIONS
DOWN BY
51.5%
(1990-2019)

It can seem overwhelming when hearing of targets and the scale of change that is needed to reach net zero, but nationally we have already achieved so much together.

- Scotland has cut greenhouse gas emissions by more than half since 1990 and since 2008 we have decarbonised faster than any country in the G20
- We exceeded world leading targets for 2020 early (and new targets set) relating to:
 - **reduction in emissions by 42% by 2020 (reached 48% by 2014)**
 - **reducing final demand for energy by 12% by 2020 (exceeded by 2014)**
 - **0.5GW of community owned energy by 2020 (exceeded by 2015)**
- In 2020, renewable sources generated the equivalent of nearly 99% of Scotland's gross annual electricity consumption
- Scotland's tree planting makes up 80% of the UK total and last year continued on a massive scale, despite COVID-19 and ongoing restrictions
- Landfill waste has decreased by almost 50% in under 10 years

 **WORK ON THE GO & PROJECTS TO DATE:** Since declaring a climate emergency, Renfrewshire Council has already undertaken many operational changes that are within our control as an organisation, as well as larger scale regional projects

In line with our commitment to work towards net zero by 2030, we have made changes within Council operations to reduce carbon emissions and we have also delivered large-scale projects with regional and national benefits which align with our focus areas. Click on the links for more details on some of our projects to date:

The first of a kind in Scotland: AMIDS District Heating Network - provides low carbon heating, cooling and hot water via a district heating network to businesses at the Advanced Manufacturing Innovation District site in Paisley, with a carbon reduction of over 95% over the 40 years lifecycle of the project and potential to connect other buildings locally.

Housing Regeneration & Renewal Programme: a £100M ten year programme delivering high quality, energy efficient Council housing across Renfrewshire - creating nicer places to live, reducing energy bills and alleviating fuel poverty, with associated health and wellbeing benefits. Follow on works will look at zero energy buildings and minimising embedded and operational carbon in new building stock and also to explore possible district heating options.

LED Street Lighting Conversion Programme: over 30,000 streetlights have been converted from sodium to more energy efficient LED lanterns, with a longer lifespan of up to 20 years and lower carbon output - delivering a reduction in street light electricity and carbon emissions of 64% - an 8% reduction in the Council's overall carbon consumption.

Active Travel Improvements: investing in our active travel network to ensure links to key employment centres and key destinations between our centres and improving health, wellbeing and safety. We are upgrading existing routes as well as constructing new high quality routes - creating a comprehensive network, such as the new Paisley to Renfrew and Bishopton to Glasgow Airport routes and improving the National Cycle Route 7 which passes through Paisley.

Public EV Charging Expansion: as well as switching the Council's cars and light vans fleet to electric vehicles (EVs), we are continuing to add public EV charging bays across Renfrewshire to support the switch to low emission vehicles. There are currently 72 public charging bays with a further 54 planned in 2022.

Educational Settings Meals Services: delivery models have changed with metal cutlery and ceramic plates, and we are at nearly 100% no single use plastics in nursery and primary estate. We are also looking at initiatives like bamboo cutlery for secondary schools which by their nature have more of a take-away type service.

Energy from Waste & Diversion from Landfill: the Clyde Valley Residual Waste Partnership (Renfrewshire, North Lanarkshire, North Ayrshire, East Renfrewshire and East Dunbartonshire Councils) is the largest, most successful collaboration of a joint waste processing facility in Scotland. It not only diverts waste from landfill but produces energy from waste – generating the enough energy to power the equivalent of 32,391 homes and demonstrating the value of reuse and recovery in a circular economy.

Reusable Period Products: partnering with a social enterprise to enable everyone in Renfrewshire who uses period products to order reusables – pants, pads and cups – via an online ordering service. All period products provided by Renfrewshire Council are biodegradable, recyclable or reusable. We are also piloting reusable products within schools.

Renfrewshire's Climate Panel: following the residents' climate survey, Renfrewshire's Climate Panel was established. This is a representative sample of citizens to identify priority areas, opportunities and explore barriers and solutions associated with our journey to net zero and takes into consideration the voices and views of a range of people with different needs and experiences.

Community Climate Fund: awards of up to £3K to community organisations to develop localised, green projects tailored to the needs of individual communities to encourage participation and raise awareness of the climate emergency within our communities, with initiatives designed and delivered by local residents but supported by the Council.

New Biodiversity Areas: we are creating 8 new wildlife-friendly environments in 2022, with 33 sites in total over the next 3 years. The first 8 areas are in Linwood, Erskine, Johnstone, Inchinnan, Lochwinnoch and Paisley and include roadside wildflower corridors, wildflower areas and new native tree planting.

Clyde Climate Forest: as part of the Clyde Climate Forest, we will deliver climate and ecological benefits to the Glasgow City Region by planting 10 trees for every man, woman and child over the next decade. It is estimated the new urban forest will remove over 55 tonnes of CO₂ for every year of its lifespan.



WHERE ARE WE NOW – RENFREWSHIRE AREA AS A WHOLE: We are committed to working towards net zero emissions. In order to work collectively to reduce emissions, it is important to know where we are starting from as an evidence base.

Scotland has set targets to reduce greenhouse as (GHG) emissions to net zero by 2045 under the Climate Change (Emissions Reduction Targets)(Scotland) Act 2019. Working towards net zero by 2030, Renfrewshire Council will be placed well ahead of national targets. We will require significant ambition, drive and action beyond the national contribution in order to achieve our target, but we believe that by working together we can rise to this challenge.

In order to prioritise, it is critical to identify key sources of emissions to be targeted, to enable us to monitor progress using an open and transparent process.

To measure where we started from (financial year 2014-15); where we are now; and the key areas we need to focus on to reach net zero, we completed an emissions baseline and trajectory to 2030 for the Renfrewshire Council area as a whole.

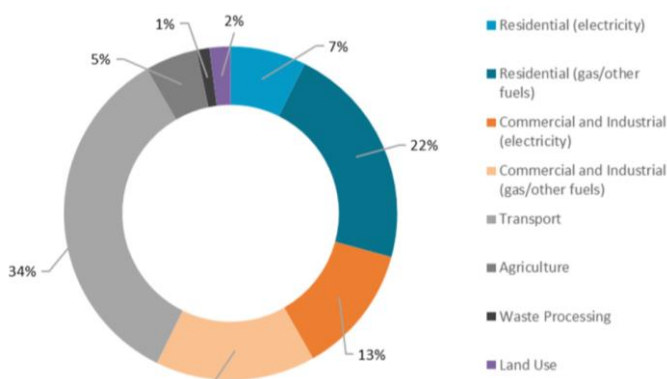


Figure 3: Estimated ktCO₂e⁵ emissions for the Renfrewshire area as a whole, 2018/19

Emissions were broken down by sector (transport, residential, etc.) and by fuel type (electricity, gas, road fuel) to identify our key emission sources and so we can model the impact of decarbonisation actions we take.

Our “where are we now” year is financial year 2018-19 - this is the most recent year that did not include the effects of the COVID-19 pandemic. The pandemic had significant effects on emissions and this data would have skewed results, including future projections.

Data shows **transport³ is currently the biggest source of emissions in Renfrewshire at 34%**, Figure 3 (left).

Total emissions in Renfrewshire decreased by 2% from 2014-15 to 2018-19 (figure 4). Residential electricity emissions decreased by 19%, but these savings were negated by increases in other sectors.

The Plan for Net Zero will identify and prioritise action across all of the different sectors in collaboration with all of our stakeholders, and signpost to information, advice and support to enable change to work towards net zero.

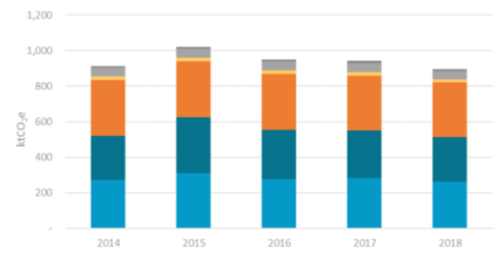


Figure 4: Emissions for Renfrewshire area (2014/15-2018/19)

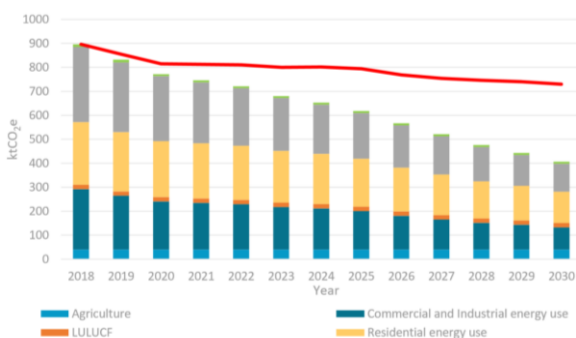


Figure 5: Tailwind and BAU projection for Renfrewshire area to 2030

Two scenarios to 2030 were modelled: a Business as Usual (BAU) “worst case scenario” if no further action is taken; and a “tailwind scenario” if significant action is taken at the “best case” level in line with national net zero targets (net zero by 2045), figure 5.

Remaining emissions in 2030 under the tailwind scenario for Renfrewshire are **406ktCO₂e**. These emissions would need to be offset for **each year** that emissions remain above net zero after the target date.

The action and scale of change needed to reach net zero is unprecedented. For context, offsetting 406ktCO₂e annually is equivalent to planting 946 hectares of trees every year (3.6% of Renfrewshire’s total landmass), so we need to take action collectively

in order to reduce emissions as low as possible, leaving achievable emissions levels to offset.

³ Although Glasgow Airport is situated within the Renfrewshire Council area, emissions from this source are not included locally, but instead are included within national climate targets

⁵ CO₂e (carbon dioxide equivalent) measures emissions from various greenhouse gases by converting to CO₂ on the basis of global warming potential



WHERE ARE WE NOW – RENFREWSHIRE COUNCIL AS AN ORGANISATION: We are also working towards to net zero emissions by 2030. In order to lead by example; share knowledge and learning; and develop projects to reduce emissions, it is important to monitor and share our progress as an organisation.

In order to be open and transparent in our progress to net zero, we carried out emissions baselining for Renfrewshire Council as an organisation as well as for the Renfrewshire Council area as a whole – looking at the buildings we own, the resources we use, the services we provide, how we travel and the open spaces we maintain.

Our baselining evidence has shown that Renfrewshire Council makes up only 2.49% of the emissions of the Renfrewshire Council area as a whole.

Although the vast majority of emissions are out with the control of the Council, we can pilot projects which can be replicated by other organisations; signpost residents and businesses to advice and support; share knowledge and lessons learned; and facilitate and enable change through action and initiatives, policies and strategies.

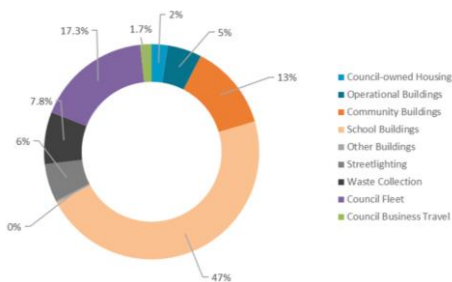


Figure 6: Estimated emissions % for Renfrewshire Council, 2018-19

Renfrewshire Council’s greenhouse gas emissions for 2018-19 were estimated to be **22.3ktCO₂e**. Renfrewshire Council emissions are dominated by buildings that we are responsible for (67%). The most significant emissions source is school buildings (47%) which is also the largest element of our estate, with community buildings at 13%, operational buildings (5%) and other buildings (2%). This Council emissions data does not currently include facilities managed by OneRen (such as leisure facilities, museums and libraries). Renfrewshire Council and OneRen will work in partnership on emissions reduction opportunities and the data for the buildings managed by OneRen will be included in annual emissions monitoring.

Total Council emissions decreased by 39% between 2014-15 and 2018-19. A significant factor was the streetlighting LED conversion, completed 2017, leading to a 79% reduction in streetlighting emissions.

The COVID-19 pandemic is expected to initially show a sharp decrease in energy emissions for the Council, particularly during lockdown when buildings were unoccupied. However, we expect sharp increases in transport emissions associated with frontline services, e.g. waste collection crews using additional vehicles to maintain collections due to limiting operatives in the cab; the delivery of meals to vulnerable residents; and the need for increased ventilation in schools meaning that heating was required earlier in the year to maintain thermal comfort for pupils and staff.

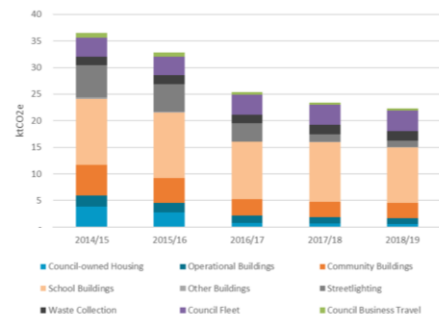


Figure 7: Changes in Renfrewshire Council emissions, 2014-15 to 2018-19



Figure 8: Tailwind and BAU projection for Renfrewshire Council to 2030

Remaining emissions in 2030 under the tailwind scenario for Renfrewshire Council are **11.3ktCO₂e**. These emissions would need to be offset for each year that emissions remain above net zero after the target date.

The Council’s Carbon Management Plan 2014-15 to 2019-20 saw us remove 31,818tCO₂e in 6 years, so we know that we can take massive strides in a relatively short period of time. Reducing Council emissions to reach net zero will be a challenge, but with knowledge gained to date and advances in technology we know can do this.

The tailwind scenario for both Renfrewshire Council as an organisation, and the Renfrewshire area as a whole, highlights further and increased local action is required in order to work towards net zero by 2030. This will be achieved through targeted action across our 5 focus areas.



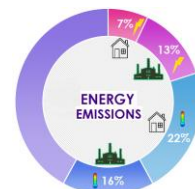
CLEAN ENERGY: We will minimise energy demand, maximise energy efficiency and transform our energy systems to deliver clean, affordable energy for all

The majority of Renfrewshire's homes and businesses, including the Council estate and Council housing stock, are currently heated and powered by fossil fuels which contribute to climate change. Many homes and buildings are also older and/or less well insulated, making them harder and more expensive to heat, which increases carbon emissions and exacerbates issues with fuel poverty.

It is vital that we cut emissions from Renfrewshire's homes and businesses, in a way that ends fuel poverty, ensures warm homes and buildings and develops a thriving, wellbeing economy.

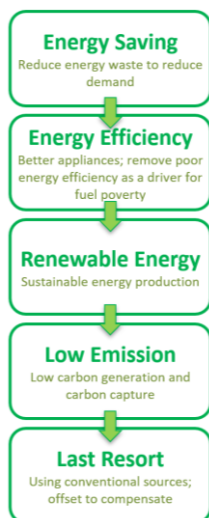
Renfrewshire's energy consumption makes up more than half (**58%**) of the area's total emissions:

- electricity to power homes and businesses totals **20%** of our total emissions (7% residential and 13% commercial and industry)
- gas and other fuels for heating homes and businesses total **38%** of our total emissions (22% residential and 16% commercial and industry)
- Latest figures show that **22%** of households in Renfrewshire are in fuel poverty⁴
- **89%** of Renfrewshire's homes use mains gas as their primary source of heat (higher than the Scottish average of 79%)
- Council housing stock currently makes up nearly **15%** of the overall housing in Renfrewshire



WHAT DOES CLEAN ENERGY LOOK LIKE FOR RENFREWSHIRE?

Energy costs are increasing at a time when we are recovering from the pandemic, and many citizens are experiencing a cost-of-living crisis. As a Council, we need to take this into account in everything we do. The Plan for Net Zero will outline a transition to clean energy systems to provide reliable, secure, affordable energy for everyone.



The way we generate, supply and use energy needs to change. We need to move from traditional models of energy generation and supply to a more effective and efficient use of energy at a local level. Many of the energy choices that will drive our energy transition are made locally – by local people, local businesses, local communities and Local Government. A decentralised, more local model of energy generation and supply will ensure that systems are tailored to meet local needs and associated benefits will stay within our communities, including affordable energy for all, local job creation and upskilling of workers.

The Plan for Net Zero will follow the energy hierarchy and this will be applied to the Council estate, as well as identifying opportunities in our communities and for local businesses – reducing the amount of energy used in the first place; maximising energy efficiency of all buildings; then meeting the remaining demand primarily by renewable and low carbon energy systems, using energy storage to optimise efficiency and ensure resilience. Traditional sources of energy will be a last resort and the carbon associated will be offset locally to compensate. This will make our homes and buildings warmer, greener and more efficient with an affordable, secure energy supply and will remove poor energy efficiency as a driver for fuel poverty.

PRIORITY AREAS FOR CLEAN ENERGY

- 1: minimising energy demand:** reduce energy waste to reduce demand at source
- 2: maximising energy efficiency:** improved energy efficiency across all homes and buildings to reduce consumption and remove poor energy efficiency as a driver for fuel poverty
- 3: maximising sustainable energy generation:** decarbonise the energy we use for heating, power and transport - matching local demand and local supply with community involvement and using energy storage to optimise the amount of locally generated energy able to be used locally
- 4: alleviating fuel poverty:** through improved energy efficiency and the provision of affordable, low carbon heat and power, ensuring warm homes to improve wellbeing and reduce health inequalities
- 5: energy security and resilience:** a managed energy transition to ensure resilient communities, with secure and affordable energy supplies for everyone
- 6: offsetting:** conventional sources of energy as a last resort, with local carbon offsetting to compensate

⁴ Fuel poverty is defined as any household spending more than 10% of their income on energy after housing costs have been deducted. The Scottish average is 24%.

We need significant emissions reductions in how we generate, supply and use energy to meet our net zero target. It will be challenging, but transitioning to clean energy systems also brings new local opportunities that are smart, sustainable, fit for the future and improve local lives.

£284 Million

Renfrewshire as an area spends an estimated **£284M** annually on all of its energy and fuel bills. This means that **6.3%** of everything that is earned leaves the area to pay for energy and fuel.

Think of the opportunities if some of this was spent in the local economy (through local energy generation meeting local demand) to benefit our communities.

OPPORTUNITIES from our ENERGY TRANSITION

Economic opportunities include:

- **regeneration of local areas**
- **creating sustainable jobs and businesses:** local job creation and upskilling/reskilling of local workers, not just in installation of energy infrastructure but in manufacturing, supply chain and maintenance
- **strengthening communities and businesses** by managing local energy needs and reducing costs



YOU TOLD US: it was hard to know where to start when it comes to changing energy suppliers; looking at energy efficiency improvements; changing your heating; or looking at renewables. You wanted to know what help is out there, including financial assistance and grants.

WE WILL work with all public partners and local agencies as a priority to deliver an area-wide energy awareness campaign ensuring impartial advice and support (including financial support) is in place and easily accessible for everyone - with more affordable energy to ensure warm homes; reducing energy costs; and alleviating fuel poverty specific priorities as part of the Plan for Net Zero.

HOW THE COUNCIL WILL LEAD & ENABLE THE TRANSITION TO CLEAN ENERGY:

1: We will undertake a strategic review of all the buildings we own to ensure more efficient use: minimising energy consumption; reducing energy waste; maximising energy efficiency; and ensuring all public and community buildings have renewables where technically feasible - monitoring and sharing our progress to ensure transparency and facilitate replication by others

2: We will generate the equivalent of 100% of the Council's public buildings' power needs and ensure 100% of Council public building heating requirements are carbon neutral by 2030

3: We will implement measures in Council housing stock aiming to reduce carbon emissions to by 68% (from 2020 levels) and work towards ensuring all Council housing stock has an EPC of B by 2030 where feasible. Where possible we will work with private homeowners within mixed tenure blocks to help them to participate and benefit from Council energy efficiency improvement programmes and will work with owner-occupiers and the private rented sector to share learnings and identify opportunities to reduce costs for all through economies of scale

4: We will increase energy security and resilience - mapping strategically across Renfrewshire to identify local energy solutions for heat, power and transport on an area-by-area basis. This will accelerate deployment of local energy systems where local supply meets local demand; using input from stakeholder engagement to ensure we tailor solutions to respond to and meet our communities' social and environmental needs, including alleviation of fuel poverty and will ensure the benefits of local energy systems stay within our communities

5: We will work with regional partners to attract large-scale public and private investment to ensure community wealth building, quality green jobs and result in inclusive, empowered, resilient, sustainable communities with a reduced reliance on fossil fuels, for example increased community and locally owned energy

Our clean energy transition will place people at its centre - considering the needs of different groups and engaging with stakeholders to identify partnership working opportunities. Low regret solutions and flexibility will reflect the needs of local areas and ensure local solutions are relevant to local characteristics and those that live and work there. We will prioritise projects that can be scaled and replicated across the Council area, and those which use existing infrastructure, e.g. waste heat recovery, as well as new development.

The Plan for Net Zero will link supply and demand of power, heat and transport in collaboration with all local stakeholders to reduce reliance on fossil fuels, support the growth of net zero local economies and tackle climate change while addressing specific energy issues faced locally in our communities.

Think globally, act locally: Small individual actions, repeated on a large scale, have a big impact in tackling climate change. **Reducing energy waste** at source to reduce energy demand is the most effective way to reduce costs and carbon emissions, e.g. switching devices off instead of using standby to stop "vampire power".



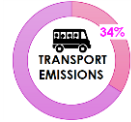
SUSTAINABLE TRANSPORT: We will maximise sustainable transport opportunities to deliver an inclusive, affordable transport system that provides choice for all

Transport infrastructure is a key economic and social driver – it connects people to jobs, education, services and each other. However transport is also the biggest contributor of greenhouse gas emissions in Scotland, and these emissions have not reduced much over the last 10 years. This is an area where we collectively have an opportunity to significantly reduce our emissions; improve the air that we breathe; save money; and improve health and wellbeing by choosing different forms of travel, whether it's a short trip to the shops or a longer commute to work and includes changing how we work as a Council and how staff travel as part of daily work duties.

Over half of journeys in Scotland are under 5km - if we choose to walk, wheel or cycle instead of taking the car for these shorter journeys we'll be helping to reach our net zero target.

Transport makes up **34%** of Renfrewshire's total emissions - made up of personal travel (diesel and petrol cars, motorbikes and buses); freight (HGV, diesel and petrol LGV); and railways.

- on average in Scotland, we are driving **80 more miles** annually than we did a decade ago - the COVID-19 lockdown led to a **23% fall in traffic** in 2020, and a significant increase in cycling, in part due to people feeling safer as a result of reduced road traffic
- replacing car journeys with public transport can reduce emissions by **42%** using the bus, and **73%** using trains



Although Glasgow Airport is located within the Renfrewshire area, both shipping and aviation are largely controlled at a higher government level and cannot be influenced at a local level. As such, these emissions are calculated at a national level – but they are significant and will need to be reduced to meet national emissions reduction targets.

WHAT DOES SUSTAINABLE TRANSPORT LOOK LIKE FOR RENFREWSHIRE?

Walking or Wheeling
Cycling
e-bikes
Public Transport
Electric Vehicle & Car Share
Private Vehicle
Air

In order to cut emissions from transport at the scale required to meet net zero, we will need to be ambitious. A transport system designed around private car use can make getting about for non-car users difficult and causes barriers to people moving around and accessing services they rely on. Sustainable transport is not just about switching to electric vehicles (EVs) - it's about how we organise all transport; where we source goods from; and how goods and people are moved around. Redesigning and improving local areas, and freeing up local space traditionally used by private vehicles, provides opportunities to create more green and open spaces for communities to enjoy and will make our local areas safer, more attractive and healthier places to live, work and spend time in.

Improvements in transport connectivity reduce travel time and lower the costs of transporting goods and people, bringing benefits to citizens and businesses through greater employment and social opportunities, increased economic productivity and local economic growth and investment. Scotland has a world-leading aspiration of reducing car miles by 20% by 2030 – and we need to align with this at a local level. Walking, wheeling and cycling have additional benefits of improving health and wellbeing as well as reducing emissions and often saving money - but we need to recognise that for some reducing car use will be more challenging. We need to address common issues that people have with current transport systems to ensure equal access to opportunities and services and facilitate transition away from car use as much as possible. Issues include people having to spend a significant proportion of their income on transport or living in areas with limited or no available public transport. We need to ensure safe, active travel links between and within our local centres and links to key destinations, including employment opportunities, so that everyone can safely walk, wheel or cycle to get around.

PRIORITY AREAS FOR SUSTAINABLE TRANSPORT

- 1: maximise active travel opportunities:** making walking, cycling or wheeling easy, safe and attractive travel options for all through effective infrastructure
- 2: increase public transport patronage:** enabling an inclusive, safe, effective and affordable public transport network for everyone
- 3: minimise car miles:** support behaviour change through improved and enhanced active travel and public transport provision to reduce car miles
- 4: enable modal shift to Ultra Low Emission Vehicles (ULEVs):** putting in place infrastructure and strategies to enable shift to ULEV cars, buses and heavy goods vehicles
- 5: alleviate transport poverty:** advancing equality of opportunity, ensuring everyone has safe and affordable transportation to access services, employment and social activities
- 6: local carbon offsetting:** to make every trip in the Renfrewshire area net zero carbon

Continued investment and emphasis on supporting car use and ownership further locks in inequalities of access to services and employment. Policies such as free bus travel for under 22s helps advance equality of opportunity as cost of transport can be prohibitive for young people getting to employment opportunities or wider social activities.

MAIN BARRIERS to ACTIVE TRAVEL

- safety concerns (incl. driver behaviour and particular concerns of women and girls around their safety on quieter routes)
- condition of roads and cycle routes (incl. surfaces, lighting and overhanging vegetation)
- lack of on-road cycle lanes
- lack of off-road, traffic-free cycle routes
- bad weather
- traffic congestion

We can't promise to fix the weather, but we will work with partners to address the other barriers, to increase active travel opportunities for everyone

BENEFITS of our TRANSPORT TRANSITION

By moving away from the emphasis on investment to support car use we will:

- **advance equality of opportunity** of access to services and employment, and improve social connections
- **reduce traffic congestion, air pollution and noise pollution** to make our local communities safer, healthier and more pleasant for everyone
- **improve physical and mental health and wellbeing** by increasing walking, wheeling and cycling
- **create people centred places** with improved access to services, opportunities and each other



YOU TOLD US: that public transport needs to be a central part of the mix going forward as well as an emphasis on active travel. Barriers need to be removed for it to be viable for people make the switch to affordable, sustainable transport for journeys to employment opportunities, services and social needs.

WE ARE working with SPT and bus operators to support infrastructure improvements, including bus prioritisation (traffic signals and bus lanes) and improving journey times and on-time journeys. We are also supporting active travel for key/functional journeys by addressing network breakages, improving existing active travel routes and creating new routes, with safe crossings at heavy traffic areas and busy junctions and traffic calming measures to increase active travel and lock in positive behaviour changes which arose due to the COVID-19 pandemic.

HOW THE COUNCIL WILL LEAD & ENABLE THE TRANSITION TO SUSTAINABLE TRANSPORT:

- 1: We will** remove the need for new petrol and diesel light commercial vehicles in the Council fleet by 2025 and phase out the need for all new petrol and diesel vehicles in the Council fleet by 2030
- 2: We will** explore options for a public bike share scheme (including e-bikes) and will continue to work with local communities to identify active travel infrastructure to be systematically upgraded and extended where feasible and create strategic new paths for functional journeys, alongside policy updates and promotion to enable more people to walk, wheel and cycle safely and more often
- 3: We will** ensure safer streets that enable active travel, including introducing 20mph zones where proportionate, to make our communities safer, identifying suitable areas for pedestrianisation and segregated/off road active travel networks
- 4: We will** work with public transport partners to explore options for increasing deployment of low emission buses, including electric and hydrogen vehicles, and improving public transport provision across the area
- 5: We will** advance equality of opportunity by exploring options for a public EV car club scheme and through continuing to invest in and expand public EV charging infrastructure across Renfrewshire, and will meet the equivalent of 100% of this increased electrical demand from renewables by 2030

20-minute neighbourhoods (or 'walkable neighbourhoods') are when residents can meet all their day to day needs without having to travel more than 20 minutes by walking, wheeling, cycling or public transport. In rural areas this is tailored to local living and 20 minute hubs. Both approaches make the local places where we live and work more resilient and sustainable and promote equality and inclusion, helping to tackle inequality. Equal access to essential services and social support networks is important for all of us, but particularly for people with care needs, older people, younger people, disabled people, young families and people of low income, and this is a key priority.

Quality, connected, sustainable transport systems will enable everyone to access goods, services, amenities and social connections that are essential for health and wellbeing.

One Small Action: During lockdown, the number of people walking or cycling instead of using other forms of transport increased so much in Scotland that air pollution levels were nearly halved! Traffic levels are now back up to pre-pandemic levels – can we make small changes to lower these car journeys again?



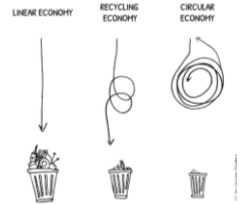
CIRCULAR ECONOMY: We will make Renfrewshire a circular economy society: minimising waste & maximising reuse, recycling & recovery of resources rather than treating them as waste

A circular economy is a key part of the solution to the climate emergency – where products, services and resources are optimised; where everything has value; and waste is minimised or designed out. It is described as ‘make, use, reuse, remake’ instead of the current linear system of ‘buy, use, dispose’. This will help dramatically reduce waste generated, as well as saving the Earth’s valuable finite resources, reducing our emissions and reducing costs.

Renfrewshire’s latest data shows that **91.8%** of household waste is now being diverted from going to landfill. This is due to waste and recycling collection service changes, introduced in 2018, alongside participation in the Clyde Valley Waste Project which generates energy from residual waste (i.e. non-recyclable waste from the grey bins).

In its first year, the waste and recycling kerbside collection changes led to:

- ↓ a **9.6% reduction** in grey bin waste
- ↑ an increase in recycling from 49% to **53%** (the pandemic impacted recycling - in 2020 it dropped back down to 49%, but 2021 showed an increase again to 52%)
- ↑ food and garden waste recycling **up 36%**
- ↓ increased segregation leading to improved quality and quantity of recyclates: moving down a full contamination band for our plastics, cans and glass service



The pandemic has had an impact on waste prevention, how we recycle and what we use. Disposable items increased initially to help stop the spread of the virus, but food waste was found to have reduced. The pandemic also affected household waste figures: in 2020, there was an increase of 3,400T in non-recyclable (grey bin) waste, and an increase of 4,300T recyclable waste (green, blue and brown bins), but an overall reduction in recycling rate from 53% to 49.1%. In Renfrewshire, since the recycling centres reopened after lockdown there has been a marked increase in black bags of waste as opposed to people separating waste into the separate skips.

WHAT DOES A CIRCULAR ECONOMY LOOK LIKE FOR RENFREWSHIRE?

Total consumption has increased in Scotland since 1998, along with an increased population. A lot of our emissions are also related to the fact that many of our goods are imported, particularly from China and the EU. Transitioning to a circular economy will keep our resources and materials in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life. Behaviour change alongside innovative new processes and standards will lead to a society and economy in which fewer resources are consumed and wasted, which will benefit our environment, economy and our communities. These changes will bring businesses new commercial opportunities, reduce resource costs and also reduce carbon emissions.

As individuals, the best thing we can do is to only buy what we need - repairing and reusing; ditch unnecessary single use items; recycle; and shop locally where we can. Shopping locally not only supports local businesses and jobs, but also shortens supply chains which brings resilience and reduces the distances and emissions required to transport goods. The Plan for Net Zero will follow the waste hierarchy – with preventing waste at source being the key priority, followed by reuse and repair, recycling, recovery and then disposal as a last resort.

Priority 1:
Waste Prevention
Reducing waste that you generate at source, e.g. washable masks, bag for life, food waste

Priority 2:
Reuse and Repair
e.g. buying refills instead of new containers; donating pre-loved clothing and furniture

Priority 3:
Recycle
Recycling materials (that would otherwise be sent to landfill) into new products

Priority 4:
Recover
Recovering energy or materials where further recycling is not possible

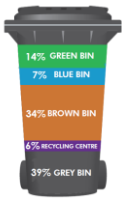
Last Resort
Disposal – when all else fails, materials that cannot be reused, recycled or recovered for energy will be landfilled or incinerated

PRIORITY AREAS FOR A CIRCULAR ECONOMY

- 1: reduce waste at source:** minimise carbon impact per person in the products and services we buy through cutting consumption and reducing waste at source, including water conservation, eliminating demand for non-essential single use and disposable items
- 2: maximise reuse, repair and recovery:** make more effective use of resources through keeping goods and materials in use for longer, stepping away from a ‘take-make-dispose’ economy
- 3: sustainable waste management:** enable behaviour change and embrace innovation to maximise recycling and composting and minimise waste going to landfill through comprehensive engagement
- 4: supporting communities to reduce waste:** facilitating initiatives such as community fridges; pre-loved school uniforms; tool share stations; and mending and repair skill-sharing workshops
- 5: offsetting:** disposal as a last resort, with local offsetting of associated emissions to compensate

If food waste globally was a country, it would be the world's 3rd largest greenhouse gas emitter. It's not just the food waste itself, it's also the resources and energy that go into producing the food – it's the production, processing, transportation and cooking of food that are all wasted.

HOUSEHOLD WASTE BIN ANALYSIS



Analysis on Renfrewshire household grey bins in 2022 found that **61%** of waste could have been recycled:

14% could have gone in the green bin (glass, plastics, cans and tins)

7% was paper or card which could have gone in the blue bin

34% could have gone in the brown bin (garden or food waste)

6% could have been recycled at local Recycling Centres (textiles, wood, electrical items)

61% COULD HAVE BEEN RECYCLED

BENEFITS of a CIRCULAR ECONOMY

A circular economy is about making better use of resources and how we deal with products at the end of their life:

- **changing consumption patterns** to tackle our throwaway culture, reduce waste and save money
- **moving to recycled and recyclable materials** to reduce the amount of raw materials required: reducing fossil fuel use; waste; and emissions
- **local benefits** local employment opportunities, lower cost options to access goods and lower local pollution
- **boost our economy and innovation** new business models focused on reuse, repair, remanufacturing and sharing offer significant innovation opportunities, improve productivity and open up new markets

YOU ASKED: Can we facilitate distribution of excess food from local shops and businesses and Council services to food banks, community pantries or households who could benefit, to reduce food waste but also to help alleviate the cost of living crisis many people are going through?



WE ARE supporting a number of community pantries and larders in Renfrewshire who make use of surplus food from supermarkets and other sources, helping to reduce food waste and carbon emissions. We are also working with Council services to link them with the community food projects to ensure surplus food is redistributed rather than thrown away

HOW THE COUNCIL WILL LEAD & ENABLE THE TRANSITION TO A CIRCULAR ECONOMY:

- 1: We will** identify procurement hot spots within the Council's supply chains, activities and operations to maximise circular economy opportunities; optimise local supply chains; and identify areas where we can reduce carbon in the products and services we buy through innovative procurement
- 2: We will** ensure recycling is accessible for everyone, including non-standard properties, e.g. tenements and flats, and work to resolve problem areas such as storage space, stairs, communal bins, lack of participation and fly tipping through ongoing stakeholder consultation and engagement
- 3: We will** ensure that all Council buildings, including schools, have the facilities for the full recycling collection service and work with local businesses and commercial waste providers to identify improvement opportunities
- 4: We will** promote sharing and repairing behaviours (including within our own operations) and work with local partners to expand existing models of sharing libraries and repair cafés and workshops
- 5: We will** reduce the carbon impact of waste from Council operations annually per head of population, monitoring and sharing progress as well as lessons learned from initiatives which have been implemented

Around 13% of Scotland's waste is currently processed outside Scotland. This represents a potential economic opportunity which, with Renfrewshire's strong manufacturing base, can be seized to create new business models and create local employment. Changing the way we use and reuse materials and stimulating the development of new markets to deal with future waste and materials will bring sustainable, long-term local economic opportunities.

Through the Plan for Net Zero we will work with citizens to tackle our throwaway culture to reduce demand for raw materials, encourage reuse, repair and remanufacture to prevent waste and work with local businesses to identify the opportunities of maximising the value of materials through recycling and recovering materials and energy, creating a circular economy with opportunities and benefits that stay within our communities.

Earth Overshoot Day marks the date each year when humanity has exhausted "nature's budget", i.e. we have consumed all the biological resources that Earth regenerates during the entire year. In 2022 Earth Overshoot Day landed on July 28th, so for the rest of the year we are in environmental deficit.

Think globally, act locally: Textile production uses thousands of billions of litres of water (4% of the world's freshwater), and we throw away wearable clothes each year. Donating pre-loved clothes is a great way to support all households to access quality, affordable items and ensures textiles are kept in use for longer and recycled or repurposed, further reducing resource use, maximising the value in our materials and reducing waste going to landfill.



CONNECTED COMMUNITIES: We will empower our communities by ensuring an inclusive and just transition to net zero with social justice and health and wellbeing at its core for current and future generations

The climate crisis is not felt equally – this is true in Renfrewshire, in Scotland, and across the world. Climate change makes existing inequalities worse such as poverty, disability, poor health. Often the most vulnerable and disadvantaged in our communities, who have contributed least to climate change, are most impacted.

Social justice is at the heart of our Plan for Net Zero. Our transition to net zero is not just an opportunity to tackle future inequalities, but also to address and deal with existing inequalities.

We want to empower our communities by ensuring a just transition to net zero with social justice and health and wellbeing at its core for current and future generations. We will listen to our communities and addressing their local needs on an area by area basis, while empowering and enabling local action so that benefits stay within our communities. This will ensure the benefits of the transition are evenly distributed and fairly accrued; will reduce the gap between the richest and poorest; and will ensure the most vulnerable in our society are not further disadvantaged as a result of unintended consequences.

WHAT DO CONNECTED COMMUNITIES LOOK LIKE FOR RENFREWSHIRE?

Social justice promotes fairness and equity in a society that is mutually shaped to meet everyone's needs and ensure that everyone is safe and secure. The 5 main principles of social justice are:

- **access to services;**
- **equity;**
- **participation;**
- **diversity;**
- **human rights.**

Putting people and our communities at the centre of our transition to net zero will enable us to address existing and future inequalities, creating benefits and opportunities for all. To ensure social justice and a just transition, we need to explore the risks, benefits and impacts of decarbonisation on those living in poverty and other vulnerable groups within our society.

The Plan for Net Zero cuts across many aspects of our lives and aligns with civil, economic, social and environmental rights that everyone, including our children and young people, are entitled to. This is why it is key that all groups are given the opportunity to be listened to in the design and delivery of the Plan.

'Place' is a key aspect of the Plan for Net Zero. Through understanding our area, we recognise the differences across local areas and settlements (i.e. rural vs urban; gas grid vs off gas grid) so that proposed solutions reflect each area and take into account local distinctive needs; opportunities and priorities.

The Plan for Net Zero relies on a joined up approach across all our stakeholders - using the skills, expertise and capacity of partners, communities and businesses across local areas to identify opportunities. This will encourage collaboration and partnership working with groups within those areas so that solutions can be community led.

PRIORITY AREAS FOR CONNECTED COMMUNITIES

- 1: comprehensive and ongoing engagement:** including traditionally under-represented groups, to ensure all voices are heard, enabling all stakeholders to contribute to the design and delivery of the Plan for Net Zero
- 2: supporting community initiatives and partnership working:** enable local action through knowledge sharing and skill sharing and identify local spaces suitable for community projects as well as opportunities for collaborative working, with stakeholder involvement to ensure solutions are tailored to different communities' needs, increasing community resilience and ensuring benefits stay local
- 3: socio-economic impact assessments:** to identify and evaluate direct and indirect impacts of proposed interventions and projects to ensure benefits are shared equitably and no one is further disadvantaged
- 4: our children and young people:** children and young people are the least responsible for climate change and inequalities yet are affected by the impacts of both. We will work with our children and young people to address their priority issues which affect them and identify solutions to benefit them, their families and wider society and tackle existing and future inequalities to improve outcomes for all
- 5: support and advice:** signposting to grant funding and ensuring impartial advice and support is in place in advance of change

Connected communities are more likely to respond better to the challenges of the climate emergency and are also able to build on their local knowledge, assets and capabilities to help transform and adapt their local area for the benefit of the whole community, including those most vulnerable.

LOCAL COMMUNITY RENZERO PROJECTS

Community Climate Fund: awarded up to £3K to community organisations to develop localised, green community projects tailored to the needs of individual communities. The aim is to encourage participation and raise awareness of the climate emergency within our communities, with initiatives being designed and delivered by local residents but supported by the Council.

[Click to read more on these and other local community based projects](#)

OPPORTUNITIES from CONNECTED COMMUNITIES

Opportunities include:

- **regeneration of local areas:** to benefit those that live there, e.g. creation of food growing spaces
- **creating places for social interaction and community support:** positive impacts on children and young people as well as vulnerable groups; assisting isolation and improving health, wellbeing and social outcomes
- **empowering communities:** more localised decision making and strengthening links locally



YOU TOLD US: Engagement of children and young people is critical – we need to target older children also and ensure we're not missing teens. You also highlighted that we need to be mindful that people who filled out the survey may all be engaged already – are we reaching everyone?

WE ARE we are engaging with our COP26 Local Ambassadors and linking closely to schools as part of an overall green programme. To ensure we engage with all young people, we have developed a 'child friendly' version of this Plan for Net Zero to ensure our young people can participate and give feedback. The Climate Panel is a representative sample of residents, but our focus is also on engaging traditionally under-represented groups to ensure all voices are heard in the design and delivery of the Plan for Net Zero and ensure that any interventions don't further disadvantage or make life harder for those already experiencing difficulties.

HOW THE COUNCIL WILL LEAD & ENABLE CONNECTED COMMUNITIES:

- 1: We will** work with partners and local organisations to launch a one-stop information service which links and signposts to support and advice across all areas of the Plan for Net Zero and address the cost of living crisis
- 2: We will** implement the Fairer Scotland Duty in all our decision making and actions in response to the climate emergency to ensure all decisions and actions help to tackle inequality as well as reducing emissions
- 3: We will** embed community wealth building into our procurement practices to ensure a local-centred approach which redirects wealth back into the local economy and provides opportunities and benefits into the hands of local people
- 4: We will** work with our communities to identify opportunities for land and assets within their local area to develop local projects which benefit those who live there, e.g. community energy opportunities, food growing, wild flowering and tree planting, flood resilience – connecting people through regenerated local space and tackling inequality through community collaboration
- 5: We will** listen to all our communities to hear what their issues and priorities are in order to design local solutions which meet the needs of all our local citizens fairly, with a focus on those who are most vulnerable, to contribute to improved social outcomes, including assisting alleviation of fuel poverty; reducing health inequalities; and reducing adverse climate change impacts, while keeping communities updated on action and initiatives being proposed locally

We want to enable participation in the Plan for Net Zero, so that everyone is involved in shaping just, fair and inclusive policies that address inequalities as well as climate change impacts. Solutions will recognise and reflect local differences and identify opportunities for collaborative and partnership working in a way that empowers communities and ensures that benefits are retained locally and that we meet the current and future local needs.

Periods of significant economic change (such as the pandemic) can end in younger people, low income households, disadvantaged communities and the most disadvantaged groups falling behind – we will work to ensure this is not the case through a just transition.

Think globally, act locally: Local food growing reduces transport miles and ensures fresher, seasonal food. People growing and eating their own produce not only has health, wellbeing and social benefits, it also maintains local green space. Buying from local producers also helps the local economy and protects local jobs.



RESILIENT PLACE: We will optimise biodiversity and nature locally to enhance our natural environment and maximise green economic opportunities, while planning and preparing for impacts of climate change

We want to ensure connected communities and resilient places across Renfrewshire. The COVID-19 pandemic highlighted and exacerbated inequalities and exposed the vulnerability of many of those within our communities, which has further emphasised the need to build resilience within our communities and economy.

Through the Plan for Net Zero we will ensure our communities; blue, green and grey networks; buildings; and infrastructure are resilient and adapted to a changing climate to reduce the risks and vulnerability of unavoidable impacts, while connecting people and nature across Renfrewshire.

Severe weather and climate impacts are already affecting our communities - recent local storms and flooding events have again shone a spotlight on the importance of resilience and adaptation. We will incorporate resilience and adaptation into the Plan for Net Zero and work with local organisations and communities to identify climate risks to plan and prioritise actions and interventions that enable us to prepare, respond and recover from severe weather and climate change impacts. We also need to identify and seize opportunities from our transition to net zero.

WHAT DO RESILIENT PLACES MEAN FOR RENFREWSHIRE?

Whilst a number of significant challenges come with climate change, taking action to mitigate and adapt can bring multiple benefits for our local environment, society and economy. The Plan for Net Zero will identify and create new opportunities to promote sustainable local development, enhance quality of life, improve air quality, stimulate investment and innovation, create sustainable local jobs and reinforce stakeholder participation and co-operation.

The Plan for Net Zero will support inclusive growth and provide equality of opportunity through the creation of employment opportunities; and empowerment of communities through facilitation, skills development and education to ensure that economic growth and benefits are distributed fairly across society and that opportunities from the transition to net zero are created equally for all our residents.

Our green and blue assets (land and waterways) across Renfrewshire are full of opportunities and the Plan for Net Zero will look strategically at how our land is best used. This is not just about planting trees to offset emissions and locking up land for one purpose, but ensuring we're doing our maximum to reduce emissions before offsetting, e.g. bringing vacant and derelict land back into use for greening and rewilding in combination with renewable energy generation opportunities; identifying and building in co-benefits of interventions such as biodiversity, improved air quality, long term economic opportunities and benefits for local communities and building in access and recreation.

Some impacts of climate change are already 'locked in' and these need to be managed. Existing infrastructure and buildings may need to be adapted to prepare for these impacts. Early warning systems, such as flood monitoring and forecasting for local communities, are key in disaster management, as well as area-based emergency response plans and continuity plans. The Plan for Net Zero will enable local emergency response plans to be prepared in advance and reviewed, communicated and updated as required with all key stakeholders and our communities.

PRIORITY AREAS FOR RESILIENT PLACES

- 1: ensuring resilience:** of our communities, buildings and critical infrastructure to local climate impacts
- 2: protecting, restoring and enhancing existing habitats and species:** through prioritised nature-based climate adaptation actions including protection of ecosystem services, e.g. control of soil erosion and water regulation
- 3: a green recovery with community wealth building:** capturing the opportunities of a just transition to net zero, creating local green jobs, developing sustainable skills and nurturing a wellbeing economy
- 4: helping nature locally:** greening outdoor spaces and building footprints, as well as installation of bird feeders, hedgehog houses and insect hotels in public spaces to ensure everyone can enjoy and access nature
- 5: improving air quality:** through a reduction in emissions from energy, transport and industry, alongside increased greening of the local environment
- 6: sequestration:** maximising the carbon absorption potential of our natural environment through activities such as the restoration of our peat bogs; tree planting; and improved land practices

Inclusive growth is a key focus of the Plan for Net Zero: opportunities for community-led activity: creating jobs and developing local supply chains; re-training and upskilling of local workforce; and creating thriving and innovative businesses with quality jobs and fair work for everyone.

RENFREWSHIRE PEAT BOGS

Renfrewshire's has a wide range of biodiversity habitats, including extensive peat bogs. While healthy peat bogs which can capture and store huge amounts of carbon; reduce flooding; and provide a home to a wide range of plants and animals, degraded peat bogs emit carbon. The Council is working with public partners and tenant farmers to restore our peatlands to reduce emissions and lock up carbon; and protect and enhance these diverse and unique local wildlife habitats.

While some land in Renfrewshire is a carbon sink, the net effect of all land use currently makes up 2% of total area emissions.

OPPORTUNITIES FROM RESILIENT PLACES

The Plan for Net Zero will see action taken that:

- increases our communities' resilience to climate change impacts
- raises public awareness of and combats local climate change and biodiversity loss issues
- supports organisations to become climate ready
- helps local supply chain and manufacturing businesses and our local workforce plan for what is on the horizon through our route map and project pipeline – attracting investment, supporting business growth and retaining and creating local, sustainable employment opportunities with a skilled workforce



YOU TOLD US: more trees need to be protected so developers and landowners would need permission to remove them.

WE WILL: ensure trees are recognised as valuable assets, optimising the benefits and significant contributions trees make to our area by improving the quality of planting and maintenance and establishing trees as critical infrastructure with high amenity value, that improve landscapes in line with criteria of tree preservation orders (TPOs).

HOW THE COUNCIL WILL LEAD & ENABLE TO ENSURE RESILIENT PLACES:

- 1: We will** work with colleges, schools, universities, local training providers, apprenticeships and staff training, to ensure that the courses and training opportunities exist for the stable and sustainable, quality jobs that will be created to ensure every person is able to reskill and upskill to participate in a just transition to net zero
- 2: We will** carry out an inventory of all Council land and assets, including vacant and derelict land, to explore how we can store more carbon on our land than we produce – identifying appropriate locations and measures to increase the carbon stored on land we own and increase biodiversity on public land assets, e.g. restoration of peat bogs; greening public spaces; and wild flowering instead of using lawnmowers on verges where safe to do so
- 3: We will** encourage change – supporting development of 20-minute neighbourhoods/rural hubs so that citizens can access the services they need locally; ensuring sustainable transport infrastructure; and increasing local renewable energy generation (both new development and using existing infrastructure).
- 4: We will** produce a proposed pipeline of our major infrastructure projects in order to link with skills transition and local employment opportunities and identify skills gaps, shortages and requirements ahead of time. This proposed pipeline will build on work that is already underway to encourage investment in local areas; enable local supply chain and manufacturing opportunities to be identified; de-risk private sector investment; and bring about regeneration of local areas.
- 5: We will** undertake proactive measures: adopt an early warning system to prepare for extreme weather events such as heatwaves and flooding; identify "grey" and "nature-based" flood protection measures; put in place local emergency response plans; and undertake a climate risk register of all public assets to ensure all our infrastructure and buildings, including historic buildings are resilient to the impacts of climate change

As a Council, we have a key role in the transition to net zero – we only make up around 2.5% of Renfrewshire's emissions, but we can influence around a third of emissions in the energy, waste, land use, residential, transport and other sectors that are directly shaped or influenced by Local Authority practice, policy or partnerships.

Working collectively with all our local stakeholders, the Plan for Net Zero will take a place-based approach, ensuring the positive wider impacts, benefits and opportunities are distributed fairly across all our places and people, addressing the twin challenge of climate emergency and biodiversity loss.

One small action: with a massive impact is helping nature locally – wildflowers, bee bombs, hedgehog houses, bird feeders, insect hotels, real grass in gardens - all make a difference to our local nature and biodiversity and make our communities more attractive places to live.



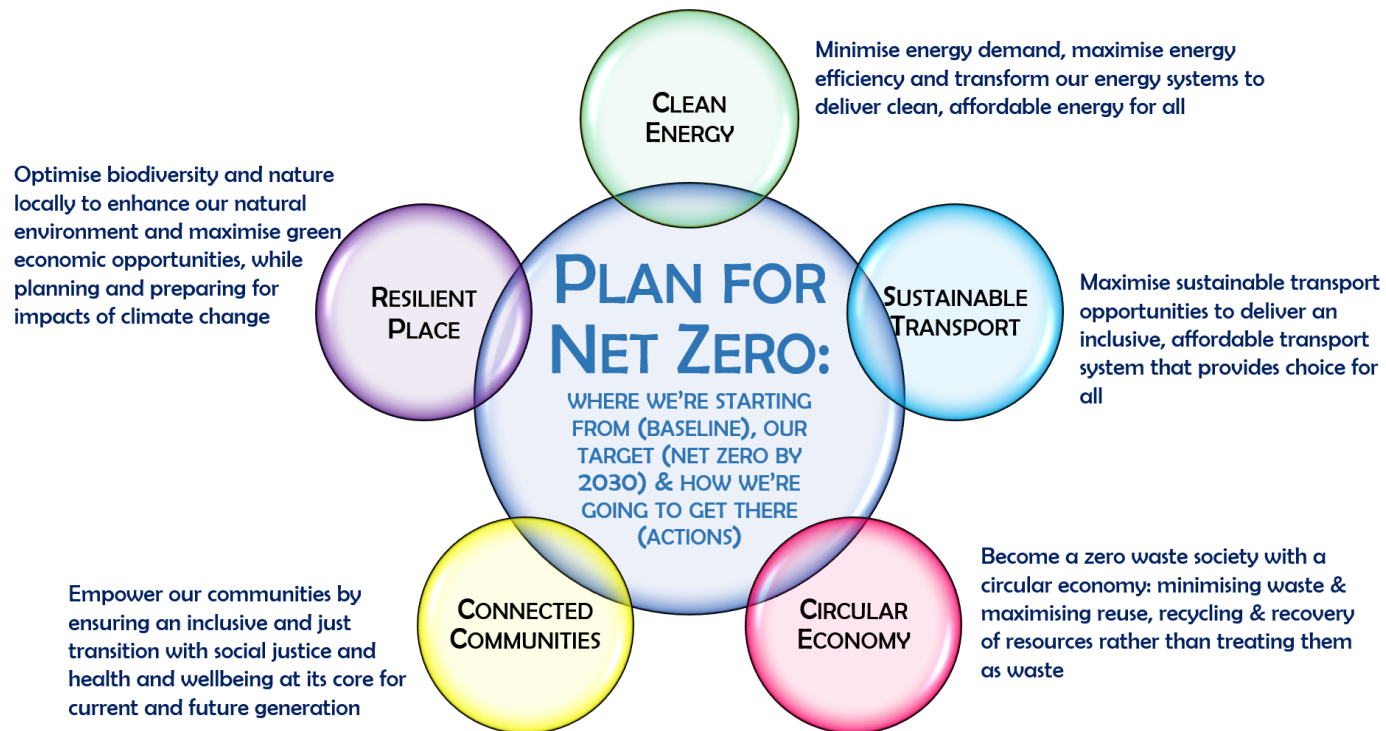
RENFREWSHIRE IN 2030 & BEYOND

What will a net zero Renfrewshire look like?



A net zero Renfrewshire will be a place where we minimise our greenhouse gas emissions - meeting our energy and transport needs through renewable and low carbon means, while offsetting any emissions which we are unable to remove through greening our local spaces, reforestation, wild flowering, tree planting and restoring and enhancing our peat bogs.

It will be a place with clean air, with safe and accessible sustainable transport options meaning more people walking, wheeling and cycling than in cars. The transition to net zero will create opportunities for local job creation and upskilling of local workers with increased quality, sustainable jobs and investment in the local area. Fuel poverty will be alleviated and, by placing social justice and a just transition at the core of our Plan for Net Zero, the quality of life of all our residents will be improved.



It will be a place where we enable and meet the demand for local food growing, transforming under-utilised spaces; a place where we optimise biodiversity locally to enhance our natural environment, making our centres attractive places to spend time in while also providing shade and shelter; and a place where we empower our communities, collaborate and listen to ensure a just transition, where the benefits and opportunities of the transition are shared fairly across everyone in society.

 **NEXT STEPS:** We will continue to engage with all our stakeholders as we head into the next phase of the Plan for Net Zero and build on existing activities and identify new opportunities to accelerate change

The Plan for Net Zero will be a result of collaborative work - led by the Council, but co-designed with public, private and community organisations and with us all working together on an area-wide effort to bring about increased quality of lives while living within a smaller carbon footprint overall.

The good news is that we're not starting from scratch – a solid foundation has been created and we're building on existing activities and knowledge across all partners in order to ensure we'll have cleaner air; affordable energy; be supporting sustainable jobs; have increased sustainable transport options; have resilient communities; and be building back and designing systems in a way that creates a better place for us all to live, work and spend time in.

Given the significant impact on emissions of transport and residential energy use within Renfrewshire area, early intervention, particularly developing projects with partners that have a public engagement focus, will be vital if we are to work towards net zero by 2030

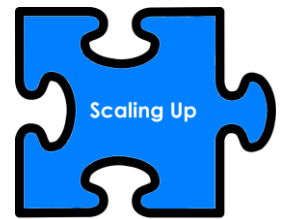
Baselining our area emissions and estimating future emissions, has provided a clarity on the challenges; the key areas and activities that we need to focus on; as well as the scale of action needed in order to work towards net zero by 2030. This increased understanding of our climate targets will also help to inform current and future policy and ensure that the climate emergency is at the forefront of decision making.

THE KEY PHASES TO NET ZERO



2022: we are here During the groundwork phase we are undertaking engagement with citizens and key sectors; identifying necessary areas of focus, setting annual targets and developing the phased road map to 2030; developing tools to measure and monitor our progress to net zero; implementing early wins and key projects which can be delivered quickly and/or replicated easily; making operational changes to lead by example; investigating funding streams and innovative ways to finance projects; and building new partnerships and strengthening existing partnerships.

2023: Scaling Up Action Moving to a delivery focus – identifying and initiating projects that provide the biggest carbon savings; completing smaller exemplar projects and using lessons learned to scale up and replicate; aligning supporting policies with targets; setting out area-based schemes for energy efficiency and potential heat networks as a key priority to improve lives and alleviate fuel poverty; test new technologies and innovative delivery methods; identify opportunities for partnership delivery; longer term projects such as reforestation and tree planting will be implemented during this period; initial reporting of progress and assessment of targets



2024 onwards: Accelerating Action Accelerating further development of projects and initiatives; smaller schemes gaining momentum (e.g. energy efficiency retrofits); community energy projects are underway; nature-based solutions such as tree planting and peat bog restoration being undertaken at pace; assessing, monitoring and reporting progress annually against targets; larger-scale projects such as district heating and large-scale solar farms being completed; activity focuses on phasing out the remaining greenhouse gases and ensuring offsetting is sufficient to absorb the balance; a range of social, environmental and economic benefits being realised; resilience to future impacts of climate change to our communities, buildings, land and wildlife addressed during this period.



Consultation with all stakeholders is essential across all phases in the design and delivery of the Plan for Net Zero. Two-way communication channels will remain in place as projects and activities are implemented to ensure everyone is informed of progress and can provide feedback on our collective journey to net zero. This will include:

- focused engagement to identify barriers for our citizens and local businesses in order to find solutions and ensure everyone benefits from the transition to net zero;
- stakeholder engagement with key groups, such as housing developers, energy companies and network providers; transport providers; land management agencies; and education and training providers, not only to understand their influence but also their role in progressing to net zero; and
- a final round of consultation and engagement to gain feedback and prioritise the long list of actions.

In addition to ongoing stakeholder engagement, our 5 key actions for Phase 2 are:

1. Detailed Phased Road Map to 2030: we will look strategically and holistically across the whole Renfrewshire area to identify opportunities and solutions and to set targets, which will be highlighted in the form of a road map with to aid communication with all our stakeholders. The detailed Net Zero road map will be broken down into clear annual phasing and will highlight the interim carbon emissions reduction target for each year and will show how the Renfrewshire area as a whole, and Renfrewshire Council as an organisation, will fare in relation to these targets if the proposed interventions and projects are implemented. The target setting will take into account both national and local policies and will outline the actions that can be taken to meet our long-term and near-term targets. **Projected Completion Date: 31st March 2023.**

2. Quantified Delivery Plans: we will set out costed, area based phased delivery plans with benchmark capital costs for each period of the Net Zero road map and will quantify and consider all impacts of the proposed delivery plans. The Plan for Net Zero will deliver multiple outcomes simultaneously (not all of which can be monetised, e.g. carbon reduction, fuel poverty alleviation, job opportunities). We will undertake area-based socio-economic impact assessments to identify and evaluate direct and indirect impacts and benefits of the proposed strategic interventions and projects to be implemented through the Plan for Net Zero. Viable and replicable projects and low regret options will be prioritised, and appropriate zones for priority area-based delivery programmes will be designated across the Renfrewshire area. **Projected Completion Date: These costed delivery plans will be prioritised and phased for completion between 31st March 2023 and 31st October 2023.**

3. Verifying, adopting and updating our emissions modelling tool: we will quantify the impact of the phased actions, to inform future targets and present data in an interactive way. Good quality data is key in order to track proportional progress to net zero. Updating the tool in line with the road map as projects are implemented or as new technologies arise will give a running total of carbon savings within each phase, correlating with amounts of sequestration required in order to work towards net zero by 2030. **Projected Completion Date: Annual updates from 1st November 2023 as projects and new technologies are delivered.**

4. Developing a carbon budget for Renfrewshire Council: and encouraging other organisations across the Renfrewshire area to prepare carbon reduction plans. Setting an annual carbon budget works in the same way as setting a financial budget and will help us to meet our net zero targets as an organisation. Identifying our emissions by service area will be key in improving our understanding of how our emissions relate to the services we provide and the reductions we need to aim for in order to adapt to delivering the same high quality local services in a way that is fit for a resilient, net zero future. We recognise that delivering the carbon budget will require investment and changes to the way in which resources are deployed, but believe that an annual carbon budget and trajectory, calculated in line with each financial year, will contribute to keep us on track to reaching our net zero target as an organisation. **Projected Completion Date: 6th April 2024.**

5. Developing an Adaptation Plan for Renfrewshire: Developing adaptation solutions and implementing a phased programme of priority actions which are designed to respond to and address the local impacts of climate change that are already happening, as well as prepare for future climate risks across the Renfrewshire area. These actions will be centred around communities, security and resilience, infrastructure and our local environment. **Projected Completion Date: 31st October 2023.**

Transparency and openness: ensuring all stakeholders can access modelling tool using an open data platform. In recognition that we need coordinated action across areas and sectors to deliver the scale of change required, our emissions modelling tool and reporting will be used to inform future targets and to present data in an interactive way. We will share our spatial mapping emissions modelling tool which quantifies the impact of climate actions, in order for stakeholders and developers to model scenarios and impacts of potential projects across the area. The model will be updated by the Council as evidence bases improve; new technologies and behaviour changes arise; and as projects are implemented.

CHALLENGES & OPPORTUNITIES: The challenge to reach net zero cannot be underestimated – but this transition and a green recovery from the pandemic bring great opportunities to design better systems to distribute benefits fairly

The journey to net zero will transform every aspect of our lives. Significant progress has been made in reducing carbon emissions, providing a solid foundation to build on – but many low hanging fruits have been tackled, meaning that remaining challenges may be bigger. However, this also presents huge opportunities – growing our economy through a green recovery; community wealth building and local job creation; improving health and wellbeing with cleaner air and increased active travel; policies which put social justice at their core; reducing health inequalities and alleviating fuel poverty through warm homes and affordable low carbon energy - while protecting and enhancing our natural environment. Key challenges include:

1. Finance

Challenge: The Council would be unable to solely deliver or fund all of the projects and interventions required to reach net zero, and so will require collaboration and commitment from all stakeholders in order to succeed. Long-term financial resources and large-scale investment are needed. It will require government at all levels to redirect and, in some cases, reprioritise finance to support the scale of change required and align investment with climate priorities.

Opportunity: The transition to net zero and a green recovery from COVID-19 brings opportunities through rebuilding, designing better systems and putting things back together differently. It brings opportunities to identify more innovative and collaborative ways to finance climate action across stakeholders, including new business models; joint ventures and partnership projects. The road map to net zero will outline a phased pipeline of projects which will enable investment to be aligned with key strategic programmes of work. There are also opportunities for knowledge sharing and collaboration across stakeholders, as well as with other local authorities, to understand different approaches, solutions and best practice.

From a householder or small business point of view - although low cost options can often bring savings upfront, costs can be a barrier; retrofitting is not suitable or viable for all buildings; and there are also barriers to making changes if you rent your home. The Plan for Net Zero will increase partnership working to signpost residents and businesses to advice, grants and financial support and maximise opportunities for programmes that prioritise those least able to pay who would benefit most from interventions.

2. Resources & Skills

Challenge: The scale of transformation may result in bottlenecks in delivery due to skills gaps/shortages and supply chain issues in key areas.

Opportunity: The road map to net zero will set out pipelines of projects enabling horizon scanning for manufacturers and supply chain businesses across all themes and will identify opportunities and potential innovation for local businesses to exploit where there are gaps. For the local workforce and training providers, investment in the upskilling and reskilling of our citizens in areas of skills gaps or demand offers sustainable career path and ensures that our local communities benefit from the infrastructure delivery. There is also potential for training for those in priority groups in order to ensure benefits are fairly distributed across society and opportunities are created equally for everyone. This approach will ensure community wealth buildings and local job creation across all aspects – installation, manufacturing, construction, maintenance, tree planting and biodiversity, circular economy repairs and waste reprocessing. Harnessing the enthusiasm many local people have to help on the journey to net zero will strengthen local volunteer networks which can alleviate social isolation and loneliness and also provide skills to assist on the path to employment.

3. Behaviour Change & Engagement

Challenge: Collective action will be key but some sectors more difficult to engage with and traditionally issues around commercial data being shared, leaving gaps in baselines, monitoring and progress and leading to potential missed project opportunities. Traditionally, there can often low success rates in engaging with the most vulnerable members of our society whose voices are key to ensure social justice is delivered and no one is left behind.

Opportunity: The COVID-19 pandemic has highlighted we can radically change and adapt quicker than we thought. There is a real opportunity to build on this momentum. As well as our representative Climate Panel and stakeholder consultation throughout the process to ensure communities are engaged and solutions are tailored to local needs, there is potential for innovative engagement methods and targeted engagement with traditionally under-represented groups which can then be utilised for future relevant Council consultations to reach across all demographics.



MONITORING OUR PROGRESS: It is critical that we have an open and transparent methodology for monitoring, evaluating and reporting progress annually

Having an open and transparent methodology for monitoring, evaluating and reporting progress is key as this ensures that, as the Plan for Net Zero progresses each year, we can:

- track and assess what has changed (both intended and unintended outcomes)
- understand the reasons for changes (what factors have facilitated/constrained change)
- interpret the changes and compare real versus modelled performance of projects

The monitoring and evaluation process of collective action will also enable us to:

- provide accountability and proof of impact of actions that are taken
- inform decision making processes for the Council and all our stakeholders
- learn lessons from successes and challenges which can be shared
- improve programme design and management through an iterative process

HOW WILL WE MEASURE SUCCESS?

Each focus area has its own metrics of success which can be quantified and measured in isolation, but which also combine to measure our journey to net zero. We will set annual emissions targets to align with our phased road map, and which are designed to measure progress to our net zero target. Initial metrics of success have been set out. These will be reviewed after the first year and updated as required as new technologies or improved reporting practices come on stream during the Plan for Net Zero.

OVERALL MEASURE OF SUCCESS:

WORKING TOWARDS NET ZERO GREENHOUSE GAS EMISSIONS BY 2030

What measures of success will we report for clean energy?

tonnes CO₂e emissions associated with energy use

% households in fuel poverty

% of total energy (including transport) generated locally from renewables

% buildings with Energy Performance Certificate (EPC) of C or better

% reduction in building energy demand

% buildings with low carbon heat supply

What measures of success will we report for sustainable transport?

tonnes CO₂e emissions associated with transport

% public EV charging demand met through renewables

% increase in public transport patronage

% reduction in car miles

miles of active travel paths constructed or upgraded

What measures of success will we report for circular economy?

tonnes CO₂e emissions associated with waste and recycling

% local authority collected waste sent to landfill

% household waste recycled, composted and diverted from landfill

tonnes waste generated per head of population

kWh energy generated from waste

What measures of success will we report for connected communities?

MWh community energy generated

% m² covered by allotments/community growing grounds

% school and pre-school kids that have access to the natural environment as part of their education

% increase in grants, support and advice contact successfully made to public partners

number of community-led projects and initiatives taking local climate action

improvements in Scottish Index of Multiple Deprivation (SIMD) indicators across all local areas

increased life expectancy across Renfrewshire

What measures of success will we report for resilient places?

number of new trees planted locally per head of population (using right tree, right place principles)

% of residents with safe access to nature within 1km of their residence

% remaining carbon absorbed by natural environment to ensure net zero

air quality monitoring across all areas to evaluate and improve air quality

% m² public open spaces managed for biodiversity/number of projects to increase resilience to climate change

number of people supported to reskill, upskill or participate in training in skills required for the transition to net zero

APPENDICES

APPENDIX 1: INTERNATIONAL, NATIONAL & LOCAL POLICIES

Meeting our target will be challenging and a number of external factors will impact this, including national policies and their impact on local policies and initiatives, and our key partners

The Conference of the Parties (COP) is the main decision making body of the United Nations Framework Convention on Climate Change. The COP21 Paris Agreement of 2015 was massive – 196 countries signed the agreement, with the aim to hold the increase in temperature to below 2°C and to pursue efforts to limit the temperature increase to 1.5 degrees. It was hailed as equitable and ambitious, with each country doing its share to meet the 2°C goal.

The Glasgow Climate Pact was the agreement reached by nearly 200 countries at COP26⁵, held in Glasgow in November 2021 – so what did we learn from COP26?

- **Climate justice is critical:** The [Glasgow Climate Pact](#) includes a section on loss and damage which urges developed countries to “provide enhanced and additional support for activities addressing loss and damage”, increasing support for developing countries to help investment in green technology and for adaptation to impacts of climate change. The [Scottish Government pledged](#) £2m towards loss and damage during COP26 - [described as](#) breaking “the taboo” around direct financing for less developed countries facing climate consequences they did little to cause.
- **Acceleration of target dates:** There was agreement for all countries to revisit and strengthen their current emissions targets for 2030 by the end of 2022 in order to limit dangerous warming; and a pledge to halt and reverse deforestation and land degradation by 2030.
- **Annual reporting needed:** at the time of COP26, 2030 was only 9 years away, so agreed that annual reporting is needed for more accountability and to monitor progress closely to keep agreements on track.
- **Bold transformative action is required for mitigation (reducing emissions) and adaptation (adjusting to current or expected climate change impacts):** The Glasgow Agreement is the first time fossil fuels are explicitly mentioned in a UN climate agreement (the Paris Agreement didn’t specifically mention oil, coal, gas or fossil fuels) – signalling a shift away from fossil fuels, with phase down of coal and phase out of fossil fuel subsidies.

“We have kept 1.5° alive...but its pulse is weak”

Alok Sharma, COP26 President

5 key goals on clean energy have been dubbed the "Glasgow breakthroughs" and cover more than 50% of global emissions – these relate to:

- making clean power the most affordable and reliable option;
- zero emission vehicles to be accessible and affordable in all regions;
- near zero emission steel production;
- affordable renewable and low carbon hydrogen to be globally available; and
- climate resilient, sustainable agriculture to be the most attractive and widely adopted option for farmers everywhere



The UN’s 17 [Sustainable Development Goals](#) and associated targets were adopted by the world’s governments in 2015, highlighting both environmental and social challenges that needed to be addressed in order to achieve global sustainability and recognising that tackling climate change is essential (with many of the goals addressing the drivers of climate change).

Scotland was one of the first nations to sign up to the goals – in line with world-leading carbon reduction targets and climate action. At a local level, Renfrewshire Council is also committed to these goals through our Plan for Net Zero.



Figure 9: UN Sustainable Development Goals

In addition to international commitments, Scotland has a target of net zero emissions by 2045, five years ahead of the UK target of 2050, with an interim target of 75% reduction by 2030.

⁵ The 2021 United Nations Climate Change Conference (aka COP26) was the 26th United Nations international conference to discuss global action on climate change

APPENDIX 2: KEY NATIONAL & LOCAL POLICIES CURRENTLY FOR EACH FOCUS AREA

Enabling Legislation: The overarching legislation nationally is the [Climate Change \(Emissions Reduction Targets\) \(Scotland\) Act 2019](#), which amended the Climate Change (Scotland) Act 2009. This increased the ambition to commit to net zero by 2045, with updated annual emissions targets and embeds the principles of a just transition. The [Update to the Climate Change Plan 2018-2032](#) is Scotland's key strategic document, setting out the green recovery pathway to meet these ambitious national targets.



CLEAN ENERGY

Key National Policies

Scottish Energy Strategy
Heat in Buildings Strategy
Fuel Poverty (Targets, Definitions & Strategy) (Scotland) Act 2019
Home Energy and Fuel Poverty

Key National Targets

100% homes EPC C or better by 2033
Equivalent of 50% of total energy for Scotland's heat, transport and electricity consumption to be supplied by renewables by 2030
<5% of households in fuel poverty by 2040
650,000 additional homes connected to heat networks by 2030
68% reduction in emissions from heat in buildings by 2030

Key Local Policies

Local Housing Strategy
Fuel Poverty Strategy
Renfrewshire Strategic Housing Investment Plan



SUSTAINABLE TRANSPORT

Key National Policies

National Transport Strategy 2 (and NTS Delivery Plan)
Draft Hydrogen Strategy (and Hydrogen Policy Statement)

Key National Targets

Reduce car kilometres by 20% by 2030
Phase out the need for new petrol and diesel cars and vans by 2030 (public bodies by 2025)
Equivalent of 50% of total energy for Scotland's heat, transport and electricity consumption to be supplied by renewables by 2030
5 GW installed hydrogen production capacity by 2030 and 25 GW by 2045

Key Local Policies

Renfrewshire Core Paths Plan 2022
Local Transport Strategy



CIRCULAR ECONOMY

Key National Policies

Developing Scotland's Circular Economy
Scotland's Zero Waste Plan
Circular Economy Bill
Developing a deposit return scheme for drinks containers for roll-out across Scotland in August 2023

Key National Targets

Ending landfilling of biodegradable municipal waste by 2025
By 2025, no more than 5% of all waste to go to landfill
70% recycling/composting and preparing for re-use of all waste by 2025
To reduce all food waste arising in Scotland by 33% by 2025

Key Local Policies

Improving recycling in Renfrewshire: Service Change



CONNECTED COMMUNITIES

Key National Policies

Community Empowerment (Scotland) Act 2015
Community Wealth Building Fairer Scotland Duty and Action Plan
Child Poverty Act (Scotland) Act 2017
A Connected Scotland Equality Act 2010 (Specific Duties) (Scotland) Regulations 2012

Key National Targets

1GW of community energy by 2020; 2GW by 2030
Less than 5% of children be living in persistent poverty by 2030

Key Local Policies

Renfrewshire Health & Social Care Partnership Strategic Plan 2022-25
Renfrewshire Council Food Growing Strategy 2020-25
Right for Renfrewshire
Social Renewal Plan



RESILIENT PLACES

Key National Policies

Cleaner Air for Scotland 2
Scotland's 3rd Land Use Strategy 2021-26
Climate Ready Scotland: 2nd Adaptation Programme to 2024
National Planning Framework 4
Climate Emergency Skills Action Plan

Key National Targets

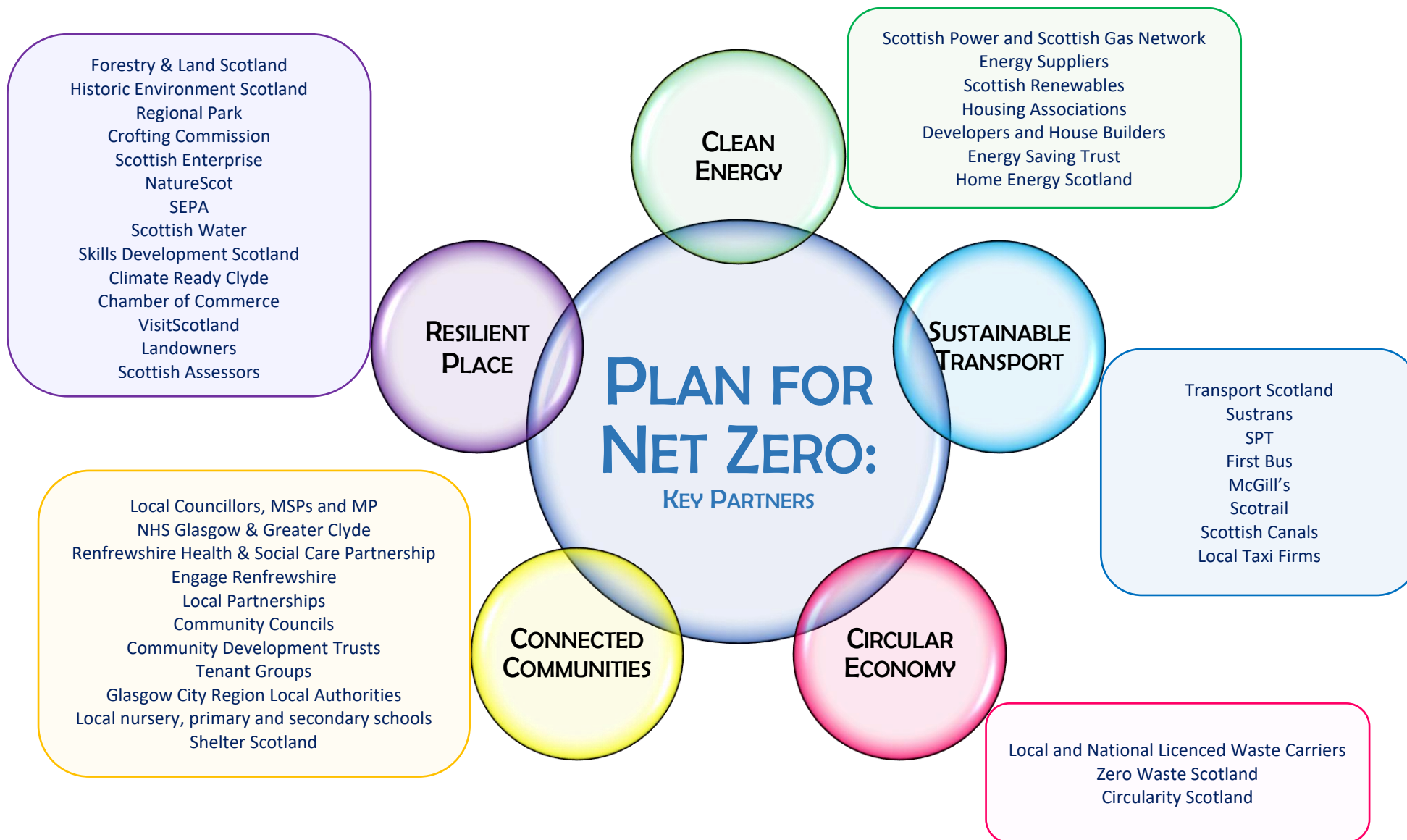
20,000 hectares of peatland restoration per year, at least 250,000 hectares by 2030
Create 12,000 hectares per year of new woodland in 2021-2022, up to 18,000 hectares in 2024-25
Restoring 15% of degraded ecosystems
Protect 30% of Scotland's land for nature by 2030

Key Local Policies

Renfrewshire Local Development Plan 2
Local Air Quality Management Plan
Civil Contingencies Service
Resilient Town Centres
Clyde and Loch Lomond Local Plan
District Flood Risk Management Strategy
Renfrewshire Biodiversity Action Plan
Vacant and Derelict Land Strategy

APPENDIX 3: KEY PARTNERS FOR EACH FOCUS AREA

Both the Scottish and UK Government are key partners across all focus areas, both in terms of policies and legislation but also potential funding opportunities. Locally, our Community Planning Partners are key across all focus areas, as are all community organisations, private, public and 3rd sector organisations, schools and colleges, training and further education establishments, local businesses and those who choose to live and work here, as well as visit the local area. Some of our key partners also link across multiple focus areas, but we have allocated to one main area, although they will be involved across more than one focus area.



GLOSSARY OF TERMS:

Adaptation: the process of adjusting economic, social or natural systems in response to current or expected effects of climate change to limit harmful consequences and exploit beneficial opportunities.

Carbon Dioxide (CO₂): the most abundant greenhouse gas (making up around ⅓ of greenhouse gases). It is naturally occurring but is also a by-product of human activities such as burning fossil fuels, land-use changes and other industrial processes and contributes to climate change and global warming. It is the reference gas against which other greenhouse gases are measured and therefore has a Global Warming Potential (GWP) of 1.

Carbon Dioxide Equivalent (CO₂e): a metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP).

Carbon Emissions: the release of carbon dioxide (CO₂) into the atmosphere.

Carbon Footprint: the total amount of greenhouse gases that are emitted into the atmosphere from activities each year by a person, building or organisation.

Carbon Offsetting: the process of compensating for carbon dioxide emissions arising from activities by participating in schemes which remove equivalent levels of carbon dioxide in the atmosphere, e.g. tree planting, carbon capture, peat bogs.

Climate Change: refers to any significant change in the measures of climate lasting for an extended period of time, including major changes in temperature, rainfall and severe weather patterns that occur over several decades or longer.

Decarbonisation: the reduction or removal of carbon dioxide (CO₂) into the atmosphere resulting from human activity, with the eventual goal of minimising emissions as far as possible.

Energy Performance Certificate (EPC): gives information on how energy efficient a building (including homes) is; how it could be improved; and an environmental impact rating to show CO₂ emissions. Buildings are rated on a scale of A to G, with A being the most energy efficient. An EPC is required for new buildings/homes; when you are selling a building/home; or when renting to a new tenant.

Fossil fuels: non-renewable energy sources formed from fossilised plants and animals over millions of years such as coals, oil and gas.

Fuel Poverty: defined as any household spending more than 10% of their income on energy after housing costs have been deducted.

Greenhouse Gases: any gas that absorbs infrared radiation in the atmosphere and contribute to global warming and climate change. Greenhouse gases include carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons, hydrochlorofluorocarbons, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.

Greenhouse Gas Emissions: the release of greenhouse gases (GHGs) into the atmosphere.

Landfill: a waste disposal site in which waste is generally spread in thin layers on an area of land, compacted and covered with soil to decompose, releasing greenhouse gases into the atmosphere

Low Carbon: an activity causing or resulting in only a relatively small net release of greenhouse gas emissions (CO₂ or CO₂e) into the atmosphere.

Mitigation: activities and intervention which lessen future climate change and its social, economic and environmental consequences by reducing the greenhouse gas emissions.

Net Zero Emissions: when greenhouse gas emissions are balanced by removals over a specified period.

Resilience: the capacity to anticipate, prepare for, respond to, absorb and recover from the stresses imposed by climate change from significant multi-hazard threats with minimum damage to social well-being, the economy and the environment.

Renewable energy: energy resources that are naturally replenishing such as biomass, hydro, geothermal, solar, wind, ocean thermal, wave action and tidal action.

Sequestration: the process by which trees and plants absorb carbon dioxide, release the oxygen, and store the carbon.

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