Leicester City Council's

Climate Emergency Action Plan

2023-28

CONSULTATION DRAFT

CLIMATE READY LEICESTER

Leicester City Council

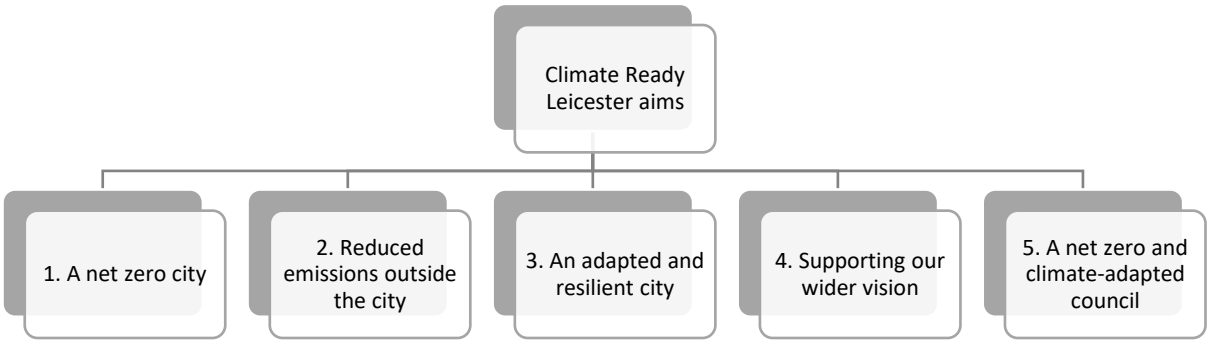
Contents

Executive summary

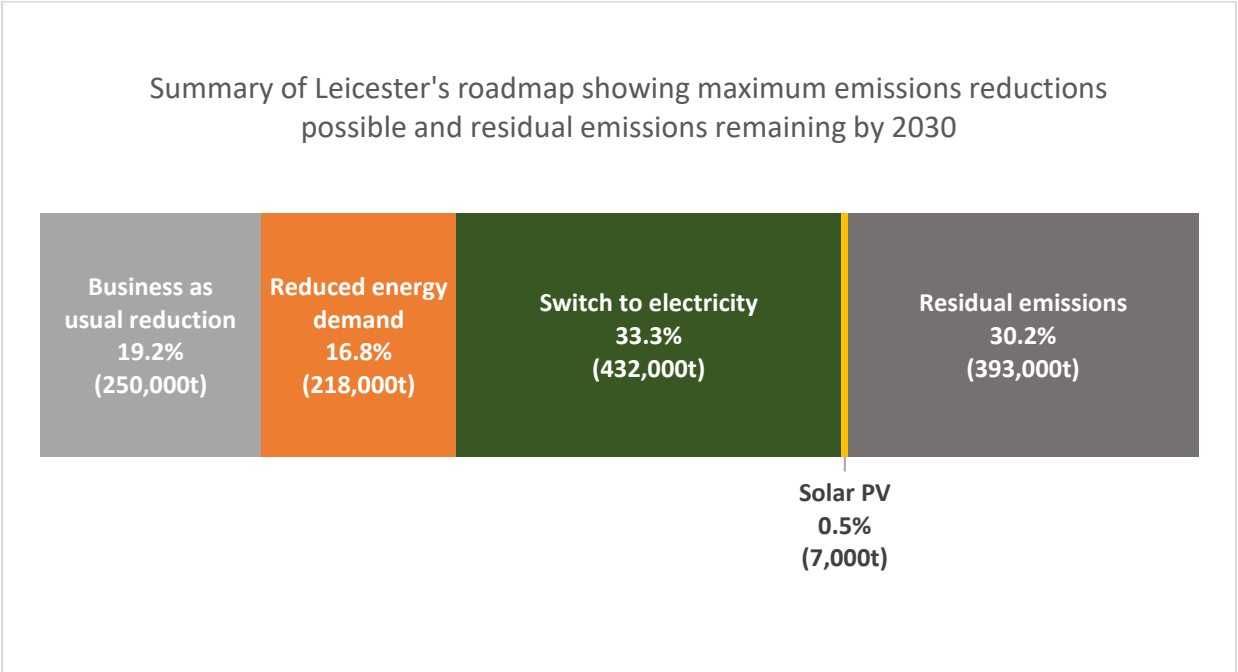
Leicester City Council declared a climate emergency in 2019 in response to the growing threat of climate change. It announced an ambition for Leicester to reach net zero carbon emissions by 2030, with government support, and to adapt to the climate change that's already happening. The council launched a strategy and action plan in 2020, delivering over 150 actions across areas including housing, transport, flood risk, nature and waste. Details of achievements from that plan are available on the climate emergency page of our website.

Our updated strategy

This is our second action plan, covering the period from 2023-28. It includes an updated strategy with five aims to make Leicester a 'climate ready' city:



Starting with our aim for a net zero city, the strategy has been updated based on a 'roadmap' study that identifies reducing the demand for energy and switching to electricity for heating and transport as the most important things to do, as the chart below shows.



For buildings, following the roadmap means adding insulation and other energy saving measures as well as replacing gas boilers with heat pumps. For transport it means a bigger role for walking, cycling and public transport, along with more online and local access to services to reduce trips and travel distances. It also means making buses electric and supporting the move to electric cars and vans by ensuring that enough charge points are available. The switch to electricity for heating and travel will need improvements to the electricity grid and 'smart' ways of dealing with peaks and troughs in supply and demand.

Leicester also has a big climate impact from the carbon emissions caused by the goods and services bought from outside the city, and by disposal of waste. Our aims include reducing these emissions too by choosing low carbon goods and services, reducing consumption of new resources and increasing reuse and recycling.

With the impacts of climate change already being felt in Leicester and expected to get more severe, our aims include adapting to these changes to protect people, nature and Leicester's infrastructure and buildings. Reducing flood risk is an important part of this work, as well as addressing the impact of heatwaves and drought.

We see this action plan as a big opportunity to improve quality of life in Leicester at the same time as we're reducing the threat from climate change. This is why the aims of this plan include supporting people and communities, promoting good homes and jobs; and reducing poverty and health inequality. Examples include helping people reduce their fuel bills by insulating their home, improving health by supporting more walking and cycling and creating new jobs in sectors including insulation, heat pumps, electric or low carbon vehicles and renewable energy.

Finally, it is important for us to lead by example in our own organisation, so our fifth aim is to achieve a net zero council by 2030 and to become climate-adapted - with government support.

Action plan

The actions in the plan are organised into seven themes and we have identified areas of focus in each theme based on our strategy and the areas where we have the most control or ability to influence and promote change in the wider city. The table below summarises the focus areas and more detail is provided in each theme section of the plan.

Themes	Focus areas
The council	• Overall delivery plan to reach net zero • Council's existing operational buildings and new construction • Fleet • Procurement • Resilience of services and assets to changing climate
Housing	• Reducing fuel poverty • Council housing – energy efficiency, preparing for changes to heating • Private rented housing – enforcement of existing energy standards

	• Owner-occupied housing – promoting improvements and grants available • Seeking support to scale up action
Business, public services and community	• Council's commercial rented properties • Small and medium businesses • Schools • Young people – environmental and climate change education • Collaboration with other public sector organisations
Transport	• City-wide plans for low carbon transport • Bus service improvements and electrification • Promoting low carbon travel choices • Walking and cycling • Electric vehicles – enabling charging infrastructure and other support • Freight – fuel efficiency and reduced impact • Smart technologies • Making the case for rail improvements
Land and infrastructure	• Planning policy for low carbon, climate adapted development • Biodiversity net gain – application of new planning requirements • Council land and nature – manage for resilience to climate change • Flood prevention • Energy infrastructure – support transition to low carbon energy system
Consumption and waste	• Household and business waste recycling services • Strategy for low carbon future waste services • Council's waste • Reduce climate impact of food (including through Leicester's Food Plan)
Actions supporting the whole plan	• City-wide communications campaign and engagement work • Training • Seeking new funding sources to increase our action • Review of climate adaptation strategy and actions in light of latest details of climate change risks

Details of the specific actions can be found in the individual themed sections of the action plan. The plan will be updated each year, with new actions and further steps in existing actions added where we can. We will also publish information about progress and achievements.

Implementation of the actions and further additions to the plan, as well as progress in reducing emissions and achieving the other aims, will be managed by a Climate Emergency Programme Board of senior managers. The programme will be overseen by the lead councillor responsible for the council's climate change work.

The scale of the challenge we face

Climate change is one of the greatest threats facing the world today. Global heating is already happening and is having serious effects around the world. It is causing more extreme weather and worsening the catastrophic impacts of natural disasters such as floods, heatwaves, wildfires and storms. If urgent action is not taken these impacts will continue to get worse, threatening the lives and livelihoods of people across the world and doing massive damage to the natural environment.

Leicester will continue to feel the worsening impacts too. The city has suffered from flooding in the past and NHS figures show that just over 50 excess deaths occurred during the heatwave periods in the summer of 2022 (although it should be stressed that the figures don't prove a causal link).

The science is clear that this global heating is being driven by human activities which are releasing greenhouse gases, including carbon dioxide and methane, into our atmosphere. To avoid the worst impacts of further climate change, emissions of greenhouse gases (referred to in this plan as 'carbon emissions') need to start falling. The total emitted from now on will need to stay within a strict limit, called a global 'carbon budget'. 219 countries signed the Paris Agreement on climate change in 2015, aiming to limit global heating to 1.5°C above pre-industrial levels. The UK is one of the signatories to the agreement and has set a target to reduce its emissions to net zero by 2050. However, despite these national commitments, global carbon emissions are still well over the levels needed to keep within the global carbon budget and are not yet starting to come down.

Cities have a particular responsibility to act. They produce more than 60% of the carbon emissions from human activity and need to reduce their emissions quickly and at scale. In common with other cities, Leicester's carbon 'footprint' includes emissions from the energy and fuel consumed within the city, but also those caused by the production of the goods and services we use and the disposal of waste we produce. As a city in a developed country our emissions are significantly higher per person than the global average, so it is especially important that we play our part in tackling this challenge.

Leicester will also need to take action to adapt as the climate changes, protecting its people, buildings, critical infrastructure and natural environment against the impacts that are already occurring.

All of this needs to be part of our broader vision for a proud, dynamic, diverse and innovative city in which the injustice of social and economic inequality is tackled alongside the climate emergency to create a safer, happier, fairer place to live and work.

Steps on the journey so far

Here are just a few of the achievements and milestones so far towards tackling climate change in Leicester and worldwide. More information about our past achievements locally is available on our website. Refer to the section on Further information and enquiries later in this plan for a link.

1990	Leicester becomes Britain's first Environment City.
1994	First Energy Action Plan published.
2002	Launch of environmental support programme for schools – later to become Sustainable Schools and Eco-Schools award.
2006	First Climate Change Action Plan – with target of halving council's and city-wide carbon dioxide emissions by 2025.
June 2012	First phase of Leicester's new district heating scheme begins operation.
2013	Council begins White Lights project to replace 33,000 streetlights with LEDs – more than halving their electricity use.
December 2015	Paris Agreement adopted by 196 countries including the UK at COP21.
December 2016	River Soar works create Ellis Meadows, protecting 1,500 properties from flooding.
March 2017	Green BELLE small business grant scheme launches.
February 2019	The council declares a climate emergency and announces an ambition for Leicester to be net zero by 2030.
June 2019	UK sets net zero target by 2050.
November 2019	Council launches Leicester's Climate Emergency Conversation to hear public views during development of its first action plan for the climate emergency.
March 2020	Successful bid for £33m from Transforming Cities Fund to improve public transport, cycling and walking infrastructure.
May 2020	First Covid-19 Pop-Up Cycle Lane - London Road.
July 2020	More than 50 city schools achieve an Eco Schools Green Flag award for the first time.
October 2020	Council's first Climate Emergency Action Plan published.
November 2020	Green Homes Grant scheme opens for applications, funding energy efficiency works for local homes.
March 2021	Awarded over £24M from the Public Sector Decarbonisation Fund for energy saving, heating decarbonisation and renewable energy measures in schools and other council buildings.

May 2021	Leicester's first 11 electric buses introduced at three Park & Ride sites around the city.
November 2021	COP26 held in Glasgow.
January 2022	Newly refurbished charity Reuse Shop opens at Gypsum Close recycling centre, selling items saved from landfill.
February 2022	Launch of Leicester Climate Emergency Partnership
March 2022	Completion of planting almost 3,500 trees in local parks by Leicester Environmental Volunteers as part of the council's Climate Woodland Project.
June 2022	Newly refurbished St Margaret's Bus Station becomes the UK's first carbon neutral bus station in operation.
October 2022	Leicester's Enhanced Bus Partnership launched to improve bus services across the city.
November 2022	Launch of Carbon Neutral Roadmap study

Our strategy

In response to the threat from climate change, Leicester City Council declared a 'climate emergency' in February 2019 and announced an ambition for Leicester to reach net zero carbon emissions by 2030, with government support.

This is ahead of the UK target to reach net zero by 2050, reflecting our view that cities need to take a lead and move faster where possible– particularly in developed countries – if the 1.5°C Paris ambition is to be achievable.

So what do we mean by 'net zero'? Getting to net zero involves reducing emissions as far as we can and compensating for any remaining ('residual') emissions:

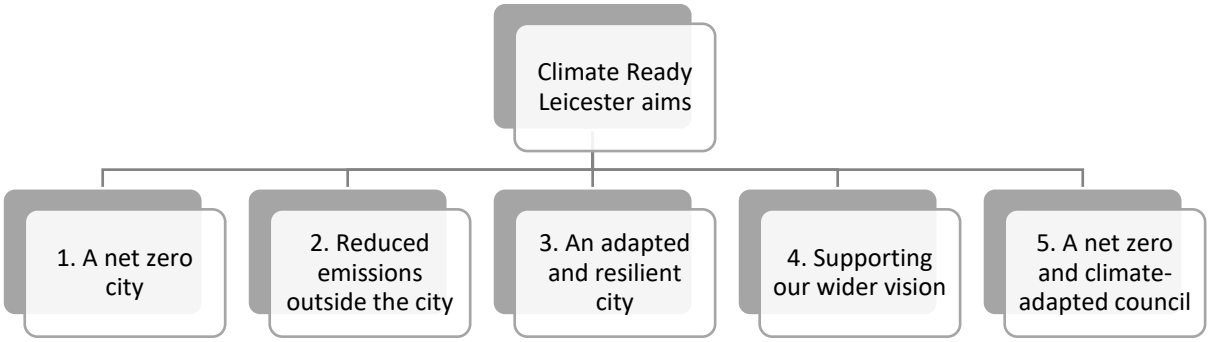
Our net zero ambition covers Leicester's direct emissions from sources within the city itself, including petrol or diesel vehicles, gas boilers and land use (known as 'scope 1' emissions) and those from generation of electricity and heat used in the city but produced outside it (scope 2 emissions).

In terms of the carbon emissions caused outside the city in producing the goods and services we all consume and dealing with the waste we produce (scope 3 emissions), the council is committed to encouraging their reduction as fast as possible too. However, due to the difficulty of measuring those emissions at the city-wide scale and the more limited ability to influence many of them, we have not set a net zero date for them.

Of course, reducing emissions is only part of what is needed to tackle the climate emergency. The climate is already changing, and this will continue, so this plan also addresses the need for the city to prepare for and adapt to the changes – to protect people and nature from the impacts.

And finally, but most importantly, our response to the climate emergency is part of a wider approach to creating a sustainable city, based on the United Nations Sustainable Development Goals. This means that our climate action will aim to create a 'fair transition' to net zero that supports people with the changes needed and aligns with our aims to tackle poverty and inequality, improve health and create jobs and economic opportunity.

Based on the priorities outlined above, we have set the following overall aims for this plan. The first four aims cover the change that's needed across the city and our work to encourage and support that change to happen, while the fifth aim is for the council itself to lead by example in its own operations, including its buildings, vehicles and land:

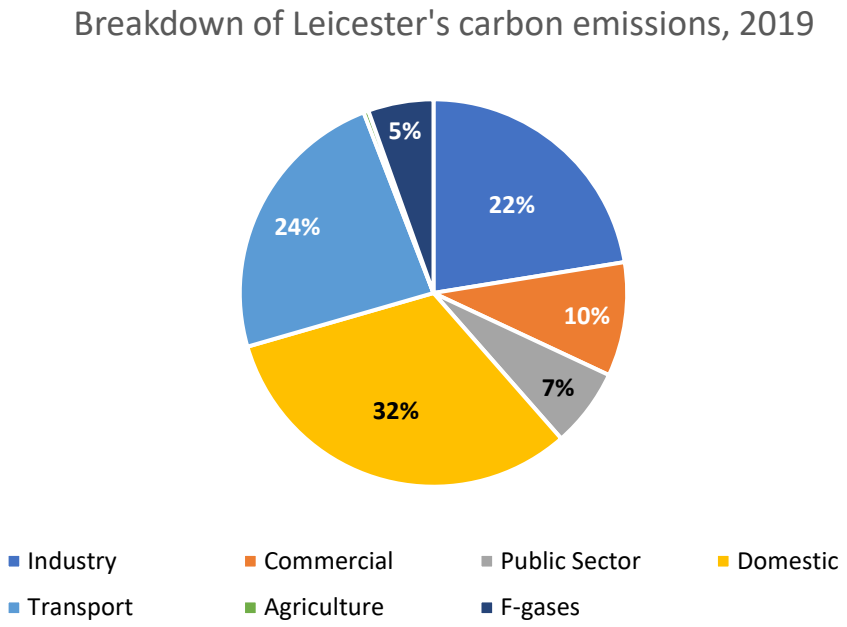


Aim 1: A net zero city

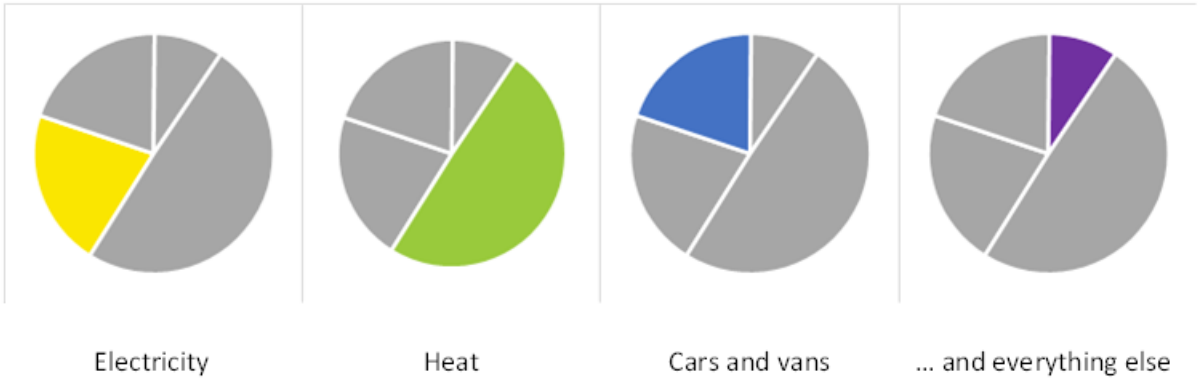
To inform our approach to achieving the 2030 net zero ambition, the council commissioned a study by consultants Ricardo Energy and Environment in 2021[1] to develop a Carbon Neutral Roadmap for the city.

[1] Leicester Carbon Neutral Roadmap – Recommendations for achieving carbon neutrality. Ricardo Energy and Environment.

The study identified that Leicester had a carbon footprint of around 1.3 million tonnes of carbon dioxide equivalent[2] (CO_2e) in 2019, with domestic, industry and transport accounting for about three quarters of those emissions, as shown in the chart[3].



When the figures are broken down differently, it is also clear that the need for heat – to keep buildings warm, to provide hot water and to provide heat for industrial and manufacturing processes – accounts for nearly half of the emissions. So, the decarbonisation[4] of heat must be a key part of the roadmap.



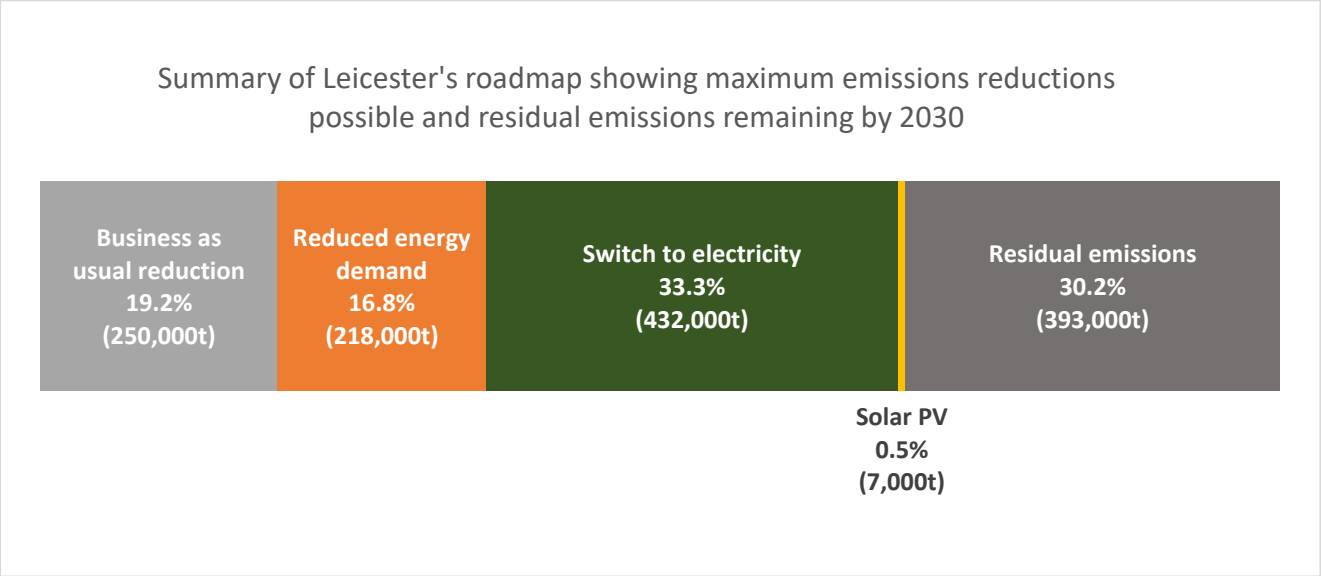
[2] Except where it says otherwise, wherever we refer to carbon emissions or greenhouse gas (GHG) emissions in this plan, we express any figures as 'carbon dioxide equivalent' emissions - summarised as CO_2e. This means that any emissions of GHGs other than carbon dioxide are converted into the equivalent amount of CO_2 that would have the same impact on climate change. This allows all the figures to be compared on the same basis.
[3] Emissions from agriculture are 0.004% of the total, which is too small to show up on the chart.
[4] Where we use the term 'decarbonisation' we mean changing something or doing something differently to stop or reduce the carbon emissions it's causing.

The roadmap study modelled what would happen to Leicester's emissions under 'business as usual' and how close we could get to net zero by 2030 if more ambitious action was taken to reduce emissions. It estimated that emissions could be reduced by an absolute maximum of about 70% by 2030 if all technically possible measures were implemented. The study recommended that Leicester adopts a roadmap based principally on two priorities:

- reducing energy demand, and
- switching to electricity for heating, hot water and most transport.

While the study identified electric technologies as the main realistic option to replace fossil fuels between now and 2030, it also considered alternatives to electric technologies for transport and concluded that low carbon hydrogen (also known as 'green' hydrogen) may be needed for heavy goods vehicles. This is unlikely to be readily available before 2030 so these vehicles will need to be decarbonised later. It also considered hydrogen for use in heating buildings. Again, this is unlikely to be readily available before 2030 and many experts think it will need to be prioritised for use in heavy industry and freight transport. That is why the study recommended electric technologies.

The study also looked at the role of renewable energy generation in Leicester. It concluded that solar PV panels are the most suitable technology in the city, and that they could make a small but significant contribution to reducing carbon emissions in the short term. In the longer term the carbon savings they achieve will reduce as the electricity from the grid that the locally generated renewable electricity is replacing gets closer to net zero carbon itself. That is why they are estimated to be saving only 7000 tonnes of emissions per year by 2030 in the chart below.



Reducing energy demand involves insulating buildings to a high standard and reducing both the need for travel and the role of cars in people's travel. The switch to electricity involves replacing gas boilers with electric heating and the study recommended using heat pumps wherever possible due to their very high energy efficiency. This would ultimately need to include Leicester's district heating network, which supplies about 2,500 homes, as well as other buildings, with heat and hot water, and currently uses gas combined heat and power

(CHP). It also involves replacing petrol and diesel cars and vans with fully electric models. This switch to electricity will require the electricity grid and the way it is used to be improved considerably to meet the extra demands on it. This includes using 'smart' technologies, local battery storage – including use of electric vehicles - and consumer incentives to reduce demand and increase supply at peak times.

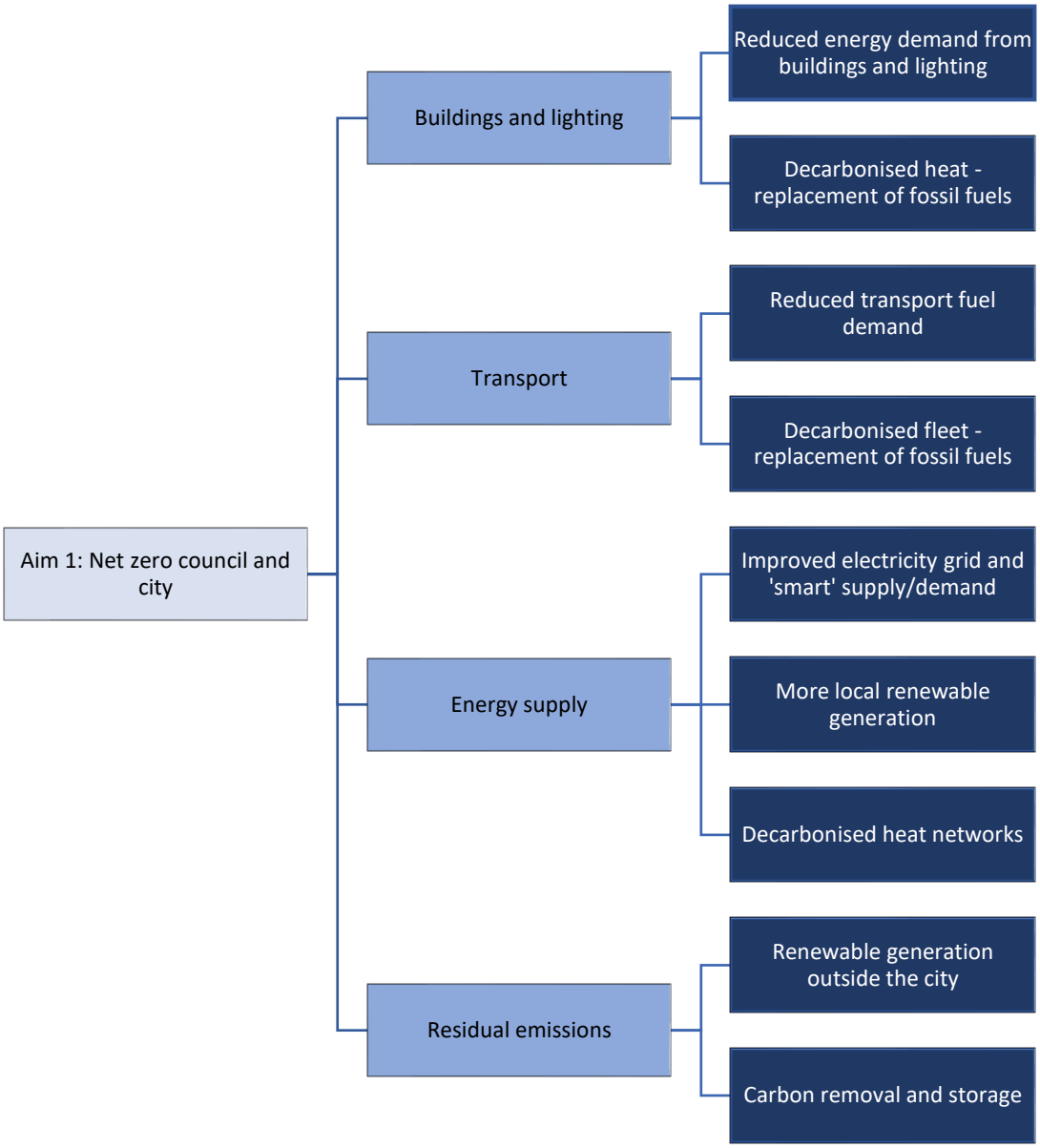
The roadmap shows that the speed and scale of change needed will be extremely challenging. The study estimated that to achieve the maximum emissions reductions in the roadmap would require, for example:

65,000 buildings raised to a very high standard of energy efficiency	**50%** journeys by walking or cycling	**100%** cars, vans and buses electric
12,000 heat pumps installed per year	**Tripling** of bus use	**6000** solar PV panel installations per year

All this could cost up to £1bn per year, with investment across all sectors, but could create up to 10,000 jobs, reduce energy and fuel bills for thousands of households and small businesses and reduce levels of respiratory and other illness by improving housing conditions and air quality.

To reach net zero by 2030 would also involve doing something to balance or offset the residual emissions. This could involve removing and storing an equivalent amount of greenhouse gases from the atmosphere, for example by planting trees. The study showed that tree planting in Leicester itself could only offset a maximum 1% of emissions – and even that would involve filling all green spaces with trees. So, to reach net zero would require large scale tree planting or another form of carbon removal from the atmosphere to happen outside the city. In due course the council will need to consider the options for balancing the residual emissions and decide its stance and this is included in theme 7 of our action plan.

Based on the roadmap conclusions outlined above, our objectives for achieving a net zero city are set out below in the boxes on the right.



Aim 2: Reduced emissions outside the city

Leicester's consumption of goods and services from outside the city, as well as disposal of the waste produced in the city, are also major sources of carbon emissions. Studies from other cities suggest they could add more than another 50% on top of the direct emissions from energy and fuel use. The chapter on Consumption and Waste later in this plan discusses this further.

All goods and services coming into the city, whether they are bought by individual consumers or by businesses and other organisations, will have their own carbon footprint[5]

[5] The 'carbon footprint' of a product or a service means the carbon emissions caused in making and delivering the product, or in providing the service. It is a way of comparing the impact of different products or services.

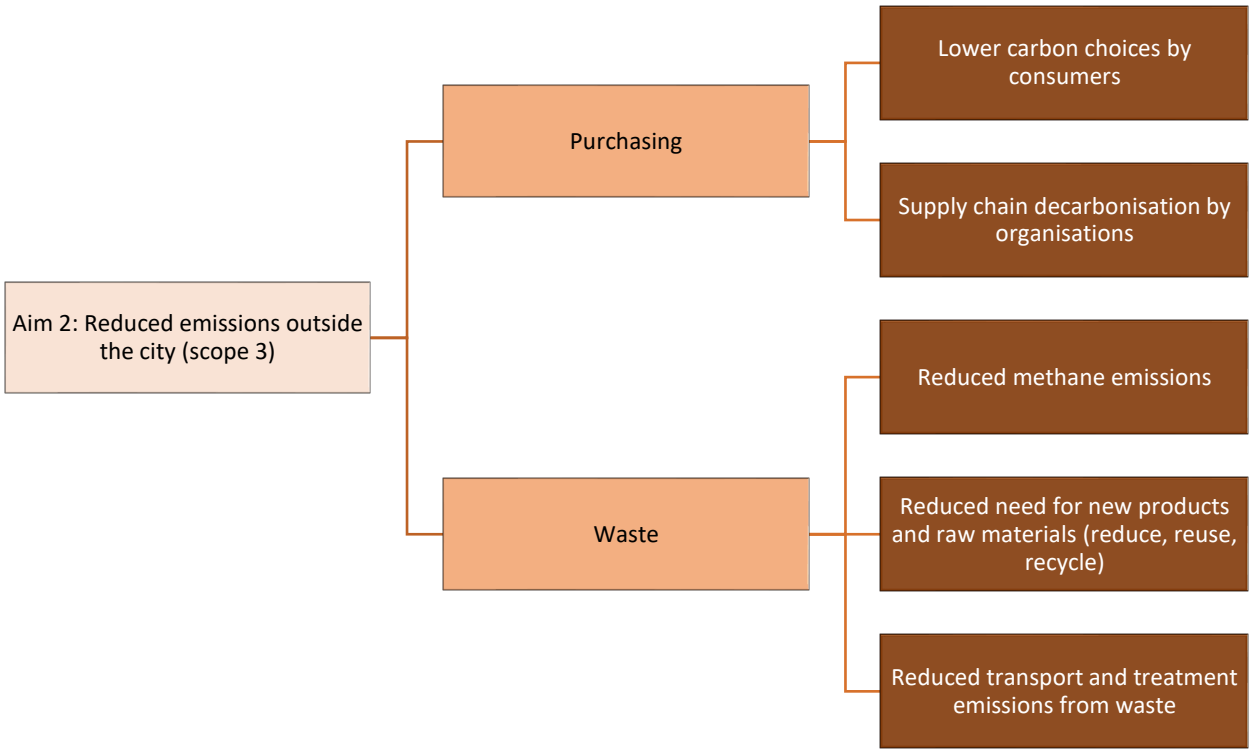
from their production and transport. Examples range from products such as food, textiles and electrical goods to services including data storage and banking.

There is a quite a big range in the carbon impact of different products, with some having a larger carbon footprint. Examples of higher impact products can include food, electrical goods, steel and concrete. As new homes continue to be built in the city and existing areas are regenerated these emissions caused by construction products are an important area for Leicester to tackle.

Food waste can also be a major source of emissions. When food waste breaks down in landfill it produces the potent greenhouse gas methane – which is ten times more powerful than carbon dioxide in causing global heating. Both individuals and food manufacturing and retail businesses can do something about this by reducing wastage. In Leicester, the impact of food waste from households is also being reduced by separating it from other waste in a treatment plant and using it to produce energy and soil conditioner.

Looking at what Leicester can do to reduce emissions from its consumption and waste, action can be taken by both individuals and organisations, including the council. This involves choices about what and how much to buy, along with efforts to minimise waste and prevent food waste from going into landfill.

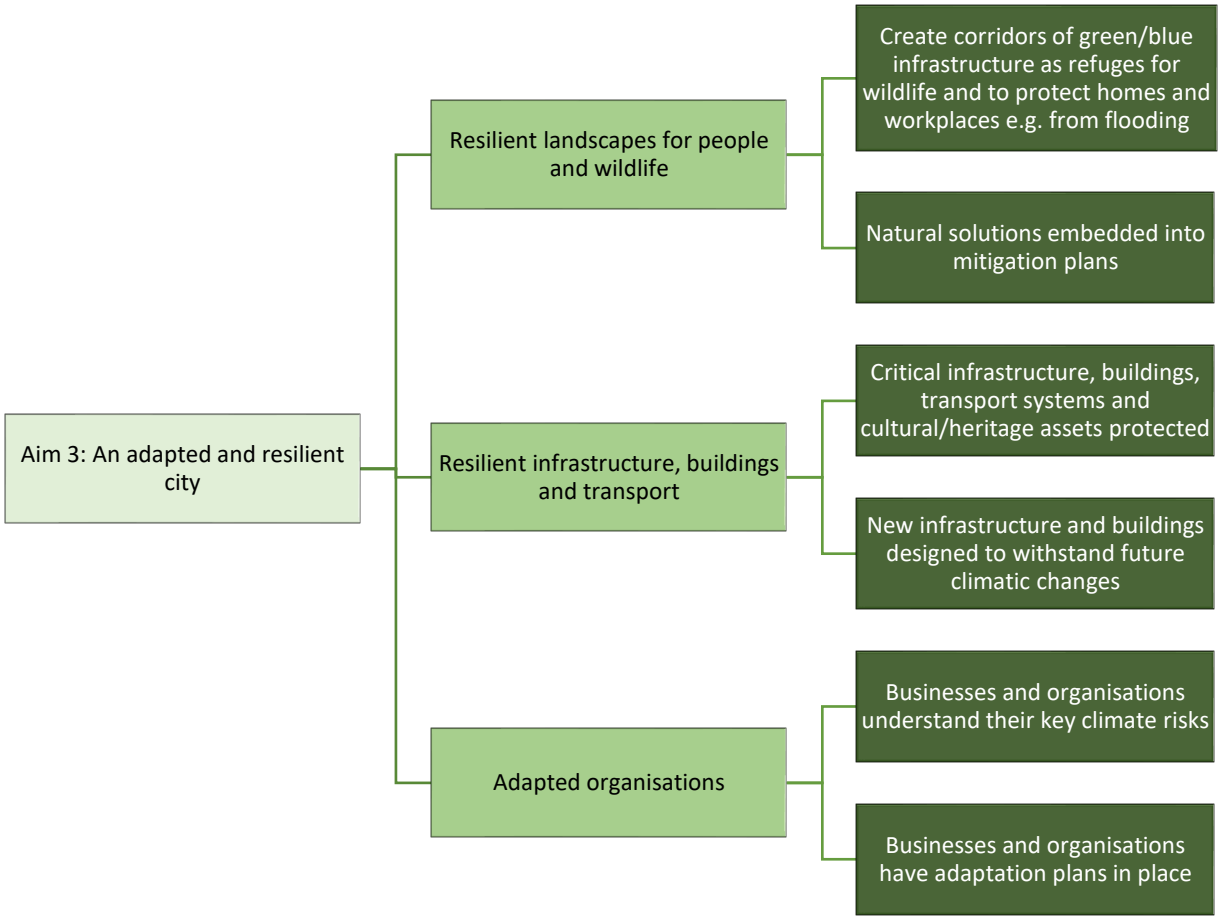
Based on this, our objectives for reducing emissions caused outside the city are set out below on the right-hand side of the diagram:



Aim 3: An adapted and resilient city

Leicester is being affected by climate change, like everywhere else. In the UK, summers are becoming hotter and drier on average and winters warmer and wetter, but with increasing variability. Impacts from these changes will include more heatwaves and dry spells, as well as more frequent intense rainfall. This increase in extreme weather will present threats to public health in the city, cause increased damage to buildings and infrastructure, and disrupt businesses and public services. Wildlife is also facing increasing pressures, with many species struggling to adapt and evolve to a changing climate at the rate needed. Global climate impacts will also affect the city, for example through disruption to the production of the food and goods we import, as well as impacts on our family and friends across the world.

In order to adapt to the changing climate and protect people and nature from its negative impacts, our objectives for an adapted and resilient city are set out on the right-hand side of the diagram below:



Aim 4: Supporting our wider vision

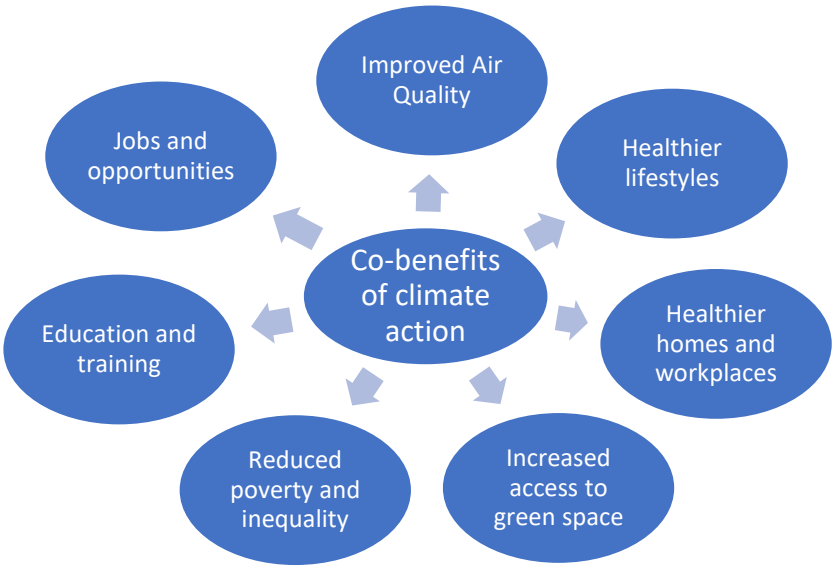
Our fourth aim is to address the climate emergency in a way which also delivers on our wider vision and priorities. This includes supporting people and communities, promoting good homes and jobs, addressing poverty and health inequality, and increasing the quality of life. Together, this all forms part of our wider vision for a proud, dynamic, diverse and innovative city, aligned with the United Nations Sustainable Development Goals:

The scale of the changes required to achieve a Climate Ready city means that it is vital to ensure we achieve a 'just transition'. This means taking action in a way that is fair and inclusive, ensuring that decarbonisation and adaptation benefits everyone and making sure that the need for change won't put an unfair burden on anyone. It also means that engaging with Leicester's diverse communities is vital, to understand the particular challenges they face and the outcomes they want to see – in order to build support for change.

With the UK currently facing a cost-of-living crisis in which households, businesses and public services are dealing with unprecedented pressures, many of the actions needed to address climate change can also help address these pressures too. For example, increasing energy efficiency in homes and businesses will help reduce energy bills, while improving bus services and walking and cycling facilities will ensure that those unable to afford a car can still access jobs and facilities.

The diagram below illustrates some of the main ways in which we can support people, provide economic opportunity and improve health and wellbeing in the city as part of our climate emergency programme. We will aim to maximise these 'co-benefits' through the

actions we choose and the way we deliver them. Where possible, we will measure and report the co-benefits achieved, as well as the carbon reduction and climate adaptation achievements.



Aim 5: A net zero and climate-adapted council

If we're to successfully encourage and inspire the changes needed across the city, it is important that we aim to lead by example. Our ambition for our own organisation is for Leicester City Council's estate and operations to reach net zero carbon emissions by 2030, with government support.

This covers our direct carbon emissions, the emissions caused by our purchase of electricity and heat and those caused by our business travel.

We also aim to

- bring down the emissions caused in our supply chain from providing the goods we buy and the services we commission, as well as those from dealing with the waste we generate, and
- make sure our services, buildings, land, vehicles and the way we work are all adapted for a changing climate.

For this reason, the first theme of the action plan later in this document focuses on the council.

Widening involvement

Whilst the council is committed to showing leadership on responding to climate change in Leicester, it is important to emphasise that no single organisation can solve this challenge alone. The scale of changes that are needed will mean everyone working together to play their part, including other public services, energy network operators, businesses, voluntary organisations, community groups and individuals. There is more detail provided about who will need to be involved in each of the theme chapters later in this plan.

We already work closely with partners on a range of climate change issues. An example is our work with local bus companies to set up the Leicester Enhanced Bus Partnership and launch the Leicester Bus Plan to improve and decarbonise local bus services. Another example is our work with the Environment Agency to reduce flood risk through the Integrated Flood Risk Management Strategy.

In 2022 we jointly launched the Leicester Climate Emergency Partnership to promote even greater collaboration towards the shared goal of a net zero and climate adapted city with the partners listed below:

Leicester Climate Emergency Partnership

De Montfort University	Leicester Council of Faiths	NHS Leicester City CCG
EON Energy	Leicester and Leicestershire Enterprise Partnership	Pick Everard
Environment Agency	Leicestershire Police	Severn Trent Water
Leicester Bus Partnership	Leicestershire and Rutland Wildlife Trust	University Hospitals Leicester NHS Trust
Leicester City Council	Midlands Net Zero Hub	University of Leicester
Leicester College	National Grid	Voluntary Action LeicesterShire

A particularly important partner we need to work with us is central government. The Carbon Neutral Roadmap study has identified the huge scale of change that's going to be required and the accompanying investment. Without the right level of government support, Leicester can't achieve the speed of change that the science tells us is needed. For this reason, we will take every opportunity to engage with the Government to make the case for support.

As well as attracting more government investment into our climate emergency programme, we are also looking to attract more investment from other sources including private investment. This is covered later in the plan.

Delivering, updating and reporting back on this plan

We have clear arrangements in place to oversee the delivery of all the actions in this plan, and to monitor and publicly report what they achieve. This is overseen by the Deputy City Mayor responsible for climate, economy and culture via quarterly Net Zero Lead Member Briefings. A board of directors will receive regular progress reports from divisions.

The actions in this plan will be reviewed and updated annually, allowing new actions to be added and changes to be made to existing actions where necessary. This might include actions being extended if more funding is identified, or actions altered in light of changing circumstances.

Updates on progress and results achieved, along with additions to the plan will be published regularly. We will also continue to annually monitor and publish changes in the council's overall carbon footprint, and publish details of changes in Leicester's carbon footprint.

Further information and enquiries

To find out more about our climate emergency work you can:

- Visit our website
- Follow us on twitter: @GreenerLeic

If you have an enquiry about our climate emergency work, you can email our Sustainability Team at sustainability@leicester.gov.uk

To find out more about our work towards a sustainable Leicester visit the following website pages:

- Air Quality
- Connecting Leicester Projects
- Energy Efficiency
- Green Infrastructure Strategy
- Leicester's Food Plan
- Local flood risk management strategy
- Planning and development
- Promoting biodiversity
- St Margaret's Bus Station
- Transport and streets
- Tree Strategy

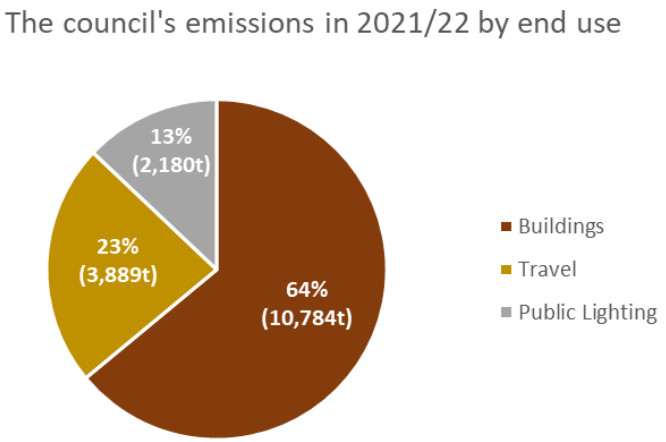
Action plan

1. The council

The challenge

Looking first at our net zero ambition, the council is directly responsible for around 1.5% of Leicester's carbon footprint from energy and fuel use. Our operational emissions were just under 17,000t in 2021/22, with the sources being our buildings, our travel and the electricity needed for Leicester's street lighting and traffic signals. A breakdown is shown in the chart.

Our emissions reduced by 64% between 2008/09 and 2021/22 - or just over 2,300t per year on average. If this rate continued, the council could reach net zero for its own operations by 2030. However, several factors helped to speed up the savings during that period, including the rate of decarbonisation of the electricity grid, LED lighting becoming affordable (allowing all the street lighting to be upgraded) and a reducing need for office accommodation. These factors are likely to reduce going forwards and measures such as installing heat pumps will be more expensive. In addition, low carbon technology may not be available for certain areas such as our HGVs or specialist fleet vehicles before 2030. So, the remaining emissions savings will be much more challenging to achieve.



Turning next to the emissions the council causes outside the city from our consumption and waste, an analysis of the carbon impact of the council's procurement spend in 2011/12 indicated that our supply chain emissions, including waste disposal, were around 1.4 times the size of our operational emissions at that time. In other words, they were more than doubling our carbon footprint. While we don't have more recent estimates of our supply chain emissions, we think it is likely that they are still at least as significant as our operational emissions. This shows just how important to address our supply chain emissions as well as our operational footprint.

The estimate made in 2011/12 showed that, at the time, the level of emissions from each area of spending partly reflected the amount spent on each area, so health and social care came out top due to the large amount spent on this activity. However, certain areas such as waste disposal, construction and food and drink had a greater carbon footprint for every £ spent than others.

As well as reducing our carbon emissions, the council needs to understand how climate change will impact on our services, estate and fleet so that the risks to service users, service continuity, the council's estate and the wider city can be addressed. A risk assessment carried out in 2008 identified the top risks at the time as being flooding of the road network, buildings becoming unsuitable for use due to heatwaves and damage to buildings from subsidence caused by prolonged periods of low rainfall.

With climate change impacts now increasingly affecting Leicester and the UK, and updated Met Office predictions and a National Adaptation Risk Assessment available, there is a strong need to review our original risk assessment. We then need to update our plans for adapting council services and protecting the city. We've included this in section seven of this action plan.

How the council needs to respond

To reach net zero by 2030, Leicester's roadmap identifies two main priorities: reducing energy and fuel demand, and replacing fossil fuels with electric technologies. Installing more solar PV panels on roofs can make a small contribution too. Applying this to the council's own estate and operations, the following areas for action are identified – with energy efficiency improvements to our buildings and replacement of gas boilers with heat pumps judged to have the greatest potential impact if carried out across our estate.

Outline of roadmap to net zero for the council's estate and operations

Reduce buildings energy demand		Replace gas boilers		Fit solar PV panels		New council buildings 'net zero-ready'		Reduce transport fuel demand		Replace petrol and diesel vehicles		Reduce public lighting electricity demand
Retrofit of insulation, LEDs, controls Energy monitoring Behavioural measures	+	Heat pumps More connections to district heating*	+	Wherever buildings are suitable	+	All low energy with heat pumps + PVs where possible	+	Reduce need for travel More walking, cycling and public transport use Fuel-efficient driving	+	Replace cars and vans with EV Look for options for larger / specialised vehicles	+	Finish upgrading traffic signals** and any remaining lighting to LED
High impact		High impact		Lower impact		Medium impact		Lower impact		Medium impact		Lower impact

* If the district heating network can be expanded and, in the future, switched to a low carbon heat source. Refer to the section on Land and Infrastructure for more discussion of this.

** All street lighting has been upgraded already, so only traffic signals are left to complete. Hence, this area is assessed as lower impact.

Reducing emissions from our procurement and waste disposal needs to build on the work we have been doing over many years to procure and commission goods and services with a lower environmental impact. Staff already implement corporate guidance including the purchase of only certified sustainable timber, 100% recycled paper, energy efficient computers and peat-free compost. To continue to drive down our supply chain and waste disposal carbon footprint, we'll need to continue to raise our standards as lower-carbon products become available. We also need to target our efforts where there is the biggest potential to reduce emissions, and look at how we can start to measure the reductions we're achieving.

In terms of addressing the impact and risks from climate change for council services and assets, there's a need to update our risk assessment, while continuing with existing risk reduction programmes such as our investment in highways drainage infrastructure (see actions in section five, Land and Infrastructure).

Who needs to be involved?

While the council is primarily responsible for taking the above actions, central government support and funding is needed to speed up progress and remove barriers. This applies particularly to replacing gas boilers and funding of the more costly energy efficiency measures in buildings, where there is a much longer payback.

The involvement of the electricity network operator, National Grid, will also be needed to enable affordable upgrades of grid connections at our sites where they're needed to switch to heat pumps and to install EV charge points.

Focus areas

Taking account of the areas identified above and their potential impact, as well as other factors including the cost effectiveness of measures and the availability of low carbon products and technologies, our actions over the five years of this plan will focus in particular on the following:

Focus area	**Details**
Net zero 2030 delivery plan for the council's estate and operations	Developing the details of our roadmap up to 2030 to reach net zero for the emissions we report on in our annual carbon footprint statement. Using the roadmap to identify barriers and risks to reaching net zero, enabling more detailed work to be done on how to overcome them.
Operational estate – energy efficiency, heat decarbonisation and renewables	Based on the above roadmap, continuing to drive down energy demand through a combination of energy monitoring (to identify wastage), improved use of controls, investment in efficiency measures and promotion of energy-saving behaviours (including for home working). Systematically replacing gas boilers with heat pumps, other electric heating systems or district heating connection.

	Installing more solar PV arrays at council facilities, and considering battery storage/smart energy management systems and links to EV charging.
New council buildings – 'climate-ready'	Based on work undertaken during our first Climate Emergency Action Plan, introducing corporate energy efficiency and carbon standards – including targets for reducing 'embodied' carbon emissions in construction materials - when constructing new council buildings.
Vehicle fleet – replacing diesel and petrol cars and vans	Continuing to replace diesel and petrol cars and vans in the fleet with fully electric or plug-in hybrid equivalents. Planning for, and rolling out, the installation of EV charge points to recharge fleet vehicles.
Procurement	Continuing to drive down our supply chain carbon and waste disposal carbon footprint. Developing an approach to measuring supply chain carbon emissions, including reductions achieved.
Resilience of council services and assets	Updating our previous assessment of the risks and impacts facing council finances, services and assets from climate change. Using the information to identify the need for further action to avoid financial risks and maintain services and assets, including protecting the safety and wellbeing of service users and the public, as climate change worsens.

Actions for the council

No.	Action	Targets	Responsibility	Timescale
1.01	**Delivery plan for net zero council estate and operations** Following on from the completed city-wide net zero roadmap, we will develop a roadmap and delivery plan to net zero for the council's estate and operations. The plan will address how to reach net zero for the whole of the council's carbon footprint including our Operational Estate, fleet and lighting. The Operational Estate element will include further building energy surveys, energy management improvements and new governance arrangements, further energy efficiency measures and steps to replace fossil fuel-based systems with low or zero carbon alternatives.	Complete the initial development of the plan in 2023/24. Use the plan to develop a pipeline of projects and to bid for funding for them.	Estates and Building Services	2023/24 – initial plan development. Use of plan and its review / refining will be ongoing.

No.	Action	Targets	Responsibility	Timescale
1.02	**Capital projects - operational estate** These projects will aim to help reduce carbon emissions but also will help to make improvements to various operational sites. The improvements will include window replacements, heating systems and decarbonisation works.	Invest £1.26M into carbon saving improvements at sites/buildings within the council's operational estate.	Estates and Building Services	2023/24 – 2024/25
1.03	**Aylestone Leisure Centre re-roof and solar PV panels** Refurbishment of the roof at Aylestone Leisure Centre and installation of solar photovoltaic panels.	Generate approx. 270MWh of renewable electricity per year.	Estates and Building Services	2023/24
1.04	**Energy monitoring** We will increase the use of our buildings energy monitoring system to identify more opportunities to save energy and reduce carbon emissions, including through the building run-time project.	To be developed.	Estates and Building Services	2023/24 – 2024/25
1.05	**Energy and water monitoring systems review for improved building performance and efficiency** Complete the review of the existing Databird hardware and Stark/Dynamat software (begun as part of our first action plan) and develop an energy monitoring system and strategy that will enable improved monitoring of energy consumption across the estate.	Installation of new system, integrated with asset management system (CAFM), to capture energy usage in all buildings. Include portal for staff and dashboard to provide the data to plan for further energy use reduction.	Estates and Building Services	2023/24
1.06	**Building run time project** We will check the timer settings of heating and cooling systems across all our operational sites to ensure that they match their opening and closing times. We will adjust settings and, where necessary, upgrade timer controls, to reduce energy use and carbon emissions. Checks and adjustments will be repeated twice a year, in April and October, to align with the heating/cooling season.	To be developed.	Estates and Building Services	2023/24 – 2027/28

No.	Action	Targets	Responsibility	Timescale
1.07	**Heating and cooling system upgrades** Buildings identified as needing upgrades to heating and cooling systems and their controls in the building run time project to be considered for investment.	To be developed.	Estates and Building Services	2023/24 – 2027/28
1.08	**Lighting repairs** When old lighting is replaced, it will always be replaced with LED lighting if there are suitable fittings in place (and subject to permission from the conservation team if the site is a heritage site).	To replace all lighting with LED lighting by 2030, where possible.	Estates and Building Services	2023/24 – 2027/28
1.09	**Ways of working project** Optimise the use of space in our central office buildings so that we are able to close down buildings that we no longer need and reduce our overall energy use and carbon emissions.	Reduce floorspace by at least 10% over the next 5 years.	Estates and Building Services	2023/24 – 2027/28
1.10	**Reducing water wastage** Where we are replacing water-based systems (for example: toilets, urinals, sinks, pipework and storage tanks) we will use water saving fittings and aim to reduce water use by 15%.	Ensure water use is reduced by 15% on each project once all replacement works are complete.	Estates and Building Services	2023/24 – 2027/28
1.11	**Leisure centre energy action plans** Reducing energy consumption is a Key Performance Indicator in our Facility Business Plans for Leisure Centres. We will develop Energy Action Plans and Environmental Engagement Plans for each centre, setting out energy saving initiatives and 'good housekeeping' for all colleagues.	Consumption reduction targets to be set.	Sports Services	
1.12	**Reducing the environmental impact of cremation services** Explore options to reduce the environmental impact of cremation services through the reduction of gas use and CO2 emissions.	Develop a costed feasibility plan by December 2023.	Bereavement Services	2023/24

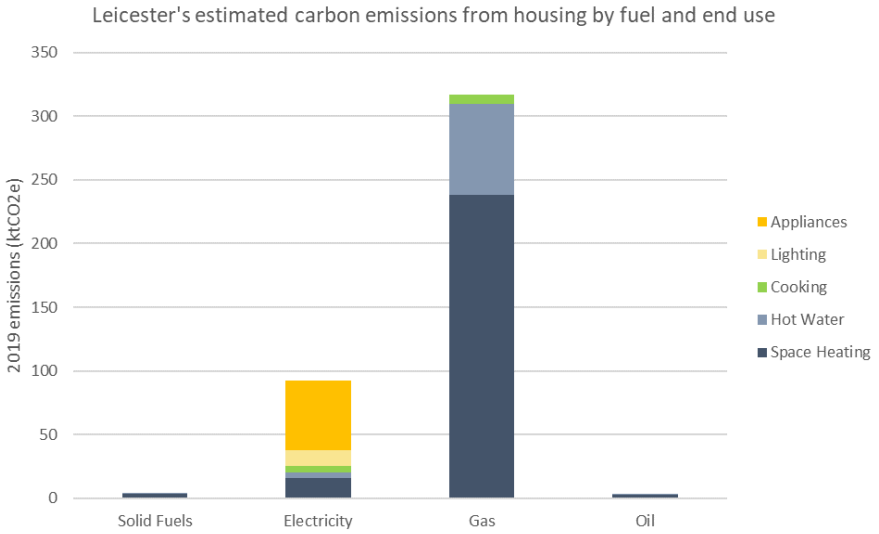
No.	Action	Targets	Responsibility	Timescale
		Target to reduce annual gas demand by 25% and CO_2e emissions by 50t if project is confirmed to be feasible.		
1.13	**Leicester market redevelopment phase three** Installation of green roofs and solar PV panels as part of the redevelopment.	To be confirmed.	Estates and Building Services on behalf of Economic Regeneration	2023/24
1.14	**Leisure centres strategic review** As part of a strategic review of our leisure centres to develop a viability plan, we will consider details of current energy efficiency and carbon emissions performance, including opportunities for improvement, alongside all other aspects of their current and potential condition, performance and contribution to leisure provision in the city.	Assessment of existing and potential future energy usage/efficiency and carbon emissions will form part of the review and options.	Sports Services	2023/24
1.15	**Climate toolkit for capital projects – feasibility and piloting** Support managers to pilot the new Climate Toolkit and to test the achievability of the proposed corporate low energy, low carbon, climate adaptation standards for our construction projects. Maintain a record of what is achieved for each project and lessons learned. The toolkit was developed in draft during our first Climate Emergency Action Plan.	Emissions reductions, energy savings and other metrics to be recorded for each project.	Energy & Sustainability	2023/24 – 2025/26
1.16	**Electric vehicle charging - council fleet** Plan for and install further EV charge points in the Operational Estate to enable charging of growing numbers of electric vehicles in the council fleet.	Develop an initial plan for EV charging infrastructure in 2023/24. Review and update the plan annually. Targets for numbers of chargers to be developed as part of the plans.	Estates and Building Services – Asset Strategy	2023/24 – 2027/28

No.	Action	Targets	Responsibility	Timescale
1.17	**Electric library book bus** Replace two existing diesel children's Library Book Bus vehicles with a new ultra-low emissions vehicle (electric) book bus. The branded vehicle will promote environmentally friendly services to young children and families across local Leicester neighbourhoods.	Reduce CO_2e emissions by 10t.	Neighbourhood Services	2024/25
1.18	**Supply chain decarbonisation** Develop the council's work on reducing carbon emissions from its supply chain. This work will be informed by a review of work elsewhere being carried out for us by De Montfort University in 2023/24.	The project will consider how we can improve the measurement and reporting of carbon emissions savings achieved in our procurement and look at the feasibility of setting targets.	Energy & Sustainability	2024/25

2. Housing

The challenge

Housing generates about a third of Leicester's carbon emissions, so decarbonising housing is essential to reach net zero.



As the chart shows, gas boilers are by far the biggest source of emissions from housing, so the way that we heat our homes will need to change.

At the same time, many homes waste energy unnecessarily because of poor insulation and inefficient heating, lighting and appliances. Based on current Energy Performance Certificates, around a quarter of Leicester's homes have an energy rating of E or below and more than another 40% have a 'D' rating. This is contributing to the cost-of-living crisis and causing additional carbon emissions. So, energy efficiency needs to be improved.

With more frequent and severe heatwaves expected as the climate changes, summer overheating could become a problem for more homes. Overheating could create a risk to health for the vulnerable and push bills up further if people have to resort to air conditioning. There needs to be more understanding of which homes are most at risk of overheating, so that the need for action can be considered and advice can be targeted.

How housing in Leicester needs to change

For existing housing to become net zero, Leicester's roadmap shows that a city-wide programme of energy efficiency retrofit is needed as well as the replacement of gas boilers (and cookers) with an electric alternative. New housing must be built to be 'net zero-ready' i.e. highly energy efficient and all-electric[6]. Installation of solar PV panels to both new and existing housing wherever possible will also add to emissions reductions.

Heat pumps are the preferred electric technology for heating and hot water because they produce about three units of heat for every unit of electricity they use – making them much more efficient than direct electric heating such as electric panel heaters. However, some homes which can't be well insulated (such as historic buildings) may not be suitable for a heat pump and may have to have direct electric heating.

The diagram below summarises the roadmap for net zero housing: the measures needed, their scale and the impact on emissions.

Roadmap for net zero housing

Reduce energy demand		Replace gas boilers and fit heat pumps*		Fit solar PV panels		Make new housing 'net zero-ready'
30% reduced heat demand All homes with LEDs and heating controls	+	100,000+ homes	+	Up to approx. 34,000 homes	+	Highly energy efficient Heat pumps PVs where possible
Up to 10% city-wide emissions reduction 124,000t		Up to 14% city-wide emissions reduction 180,000t		Up to 0.4% city-wide emissions reduction 4,700t		Minimal or no new emissions

* Or decarbonised district heating. Refer to the chapter on Land and Infrastructure for more on the role of district heating.

[6] Unless government strategy changes to prioritise low carbon hydrogen as the preferred option for heating homes, with an associated package of policy and other measures.

In addition to the above, as climate change worsens, some housing may also need measures to prevent or reduce summer overheating. Wherever new housing is built, it will need to be designed to remain comfortable in hotter summer conditions without the need for air conditioning.

Who needs to be involved?

The council can improve its own housing stock and support changes in the wider city, but housing associations, private landlords and private homeowners have an important role too. The scale and speed of change needed won't be possible without substantial government financial support and incentives for insulation and fitting of heat pumps. Investment will be needed in the electricity network too, to cope with the extra demand. The table below summarises the different roles.

The council	Housing associations	Private landlords	Homeowners	Government	Electricity network operator – National Grid
Manages 14% of housing stock. Enforces minimum standards set by government. Sets local planning policies for new housing (within nationally set limits). Good channels of communication with own tenants and wider population.	Manage 8% of housing stock.	Manage 35% of housing stock.	Control 43% of housing stock.	Decides retrofit funding and incentives. Sets minimum standards for new and existing homes. Good channels of communication with households, businesses and public services.	Manages capacity of electricity grid to meet increasing demand. Housing switch to electric heating requires their help.

Focus areas for the council

Based on the net zero roadmap, and taking account of the extent and limitations of our powers, responsibilities, funding and influence – as well as the impact of energy costs on households and organisations - we have identified the following areas of particular focus for our actions:

Focus area	**Details**
Fuel poverty	Helping people through the cost-of-living crisis, including by supporting them to access funding for energy efficiency improvements.
Council housing – energy efficiency retrofit	Continuing with our programmes of insulation as fast as funding will allow. Working with Housing Associations where possible on retrofit, so that all social housing is improved.
Council housing – heat decarbonisation	Building up experience of installing and maintaining heat pumps – focusing initially on new council housing and major refurbishments where they can be combined with extensive insulation. Later in the plan, and subject to government announcements on heat decarbonisation, as well as the cost of heat pumps and readiness of the electricity grid, planning for their larger scale introduction, or for an alternative heat decarbonisation route.
New council housing	Ensuring that new council housing is built to be 'net zero-ready' and cheap to keep warm.
Private rented sector	Using our regulatory powers to make sure private rented accommodation meets at least the Minimum Energy Efficiency Standards. Promoting energy efficiency and decarbonisation funding opportunities to landlords.
Owner occupied housing	Promoting energy efficiency and decarbonisation opportunities, including funding available, to homeowners.
Support and investment	Actively engaging with the Government, National Grid and others to encourage the funding, investment and support needed to scale up energy efficiency retrofit and remove the barriers to mass replacement of gas boilers. (Refer to chapter on Actions to Support the Whole Plan for details of our Government Engagement Plan.)

Actions for housing

No.	Action	Targets	Responsibility	Timescale
2.01	**Leicester fuel poverty programme** Establish a two-year fuel poverty advice, training and education programme in partnership with NEA to delivery expert energy advice, education and training across the city.	Summary of key targets per year: ▪ Telephone advice to 2,400 people ▪ Train 100 frontline staff / volunteers ▪ 25 community events / roadshows ▪ 25 education sessions in schools ▪ Distribute £0.2M emergency funding	Public Health	2022/23 – 2024/25
2.02	**Warmer homes greener homes** A broken boiler replacement grant scheme available to homeowners who are vulnerable to the cold due to poor health.	Assist 50 households.	Energy & Sustainability	
2.03	**Council housing - fabric first** The second phase of our ongoing long-term strategy providing external wall insulation for solid wall properties to improve the thermal efficiency of our worst performing social housing properties. Aims to reduce energy consumption, lower energy bill and improve health for householders, while reducing carbon emissions.	140t reduction of CO_2e emissions and 100 homes insulated, subject to impact of rising costs.	Housing – Technical Services	2023/24 – 2024/25
2.04	**Council housing - loft insulation** Ongoing programme to ensure all our social stock has a fully insulated roof space.	75t reduction of CO_2e emissions and 75 homes insulated, subject to impact of rising costs.	Housing – Technical Services	2023/24
2.05	**Council housing - boiler replacement programme and heating control upgrades** Continue to invest £3M per year in our ongoing programme to replace boilers in council housing with modern, energy-efficient A-rated condensing boilers with heating controls.	550t reduction of CO_2e emissions and 730 boilers upgraded, subject to impact of rising costs.	Housing – Technical Services	2023/24

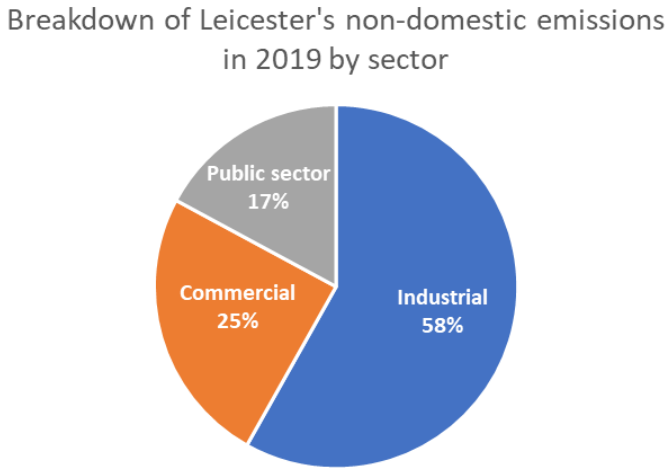
No.	Action	Targets	Responsibility	Timescale
2.06	**Council housing decarbonisation plan** Secure resources to develop a roadmap for decarbonising our council housing stock - covering energy efficiency and low carbon heating.	The roadmap will estimate carbon emissions savings and other potential retrofit programme targets we can achieve.	Housing – Technical Services	2023/24
2.07	**Stocking Farm** Deliver 50 new council homes and 5 refurb units at Stocking Farm. Project is an exemplar low-carbon, social housing led regeneration scheme on land owned by the Council.	Reduce operational and embodied carbon emissions through: • Low energy demand: operational energy use intensity (EUI) 35kWh/ m^2/year • Low carbon heating • Renewable energy generation • Reduced upfront carbon: <300kg CO_2/m^2 • Reduced total embodied carbon: <625kg CO_2/m^2.	Development Projects on behalf of Housing	2023/24 – 2025/26
2.08	**Selective licensing schemes** To bring into effect the licensing of private rented properties within designated areas of the city. To ensure that any private rented properties in the designated areas that fall below the Government's Minimum Energy Efficient Standard (currently an EPC rating of E) are brought up to the required standard.	All properties to meet the Minimum Energy Efficiency Standard. Carbon emissions reductions to be estimated for any properties requiring improvement to meet the standard.	Regulatory Service	2022/23 – 2027/28
2.09	**ECO4 flex** Continue to support this national energy efficiency retrofit scheme for domestic dwellings. The Energy Projects Team will assess households referred by certified installers against the national eligibility criteria.	Assess and respond to applications within 5 working days of receipt.	Energy & Sustainability	2022/23 – 2025/26
2.10	**Home upgrade grant phase 2**	Improve 159 homes.	Energy & Sustainability	2023/24 – 2024/25

No.	Action	Targets	Responsibility	Timescale
	A grant scheme for low-income households living in electrically heated properties with low EPC ratings. A range of energy efficiency improvements will be available.			
2.11	**Warmer Homes Surveys** Project will provide retrofit assessments to households, with the aim of providing impartial advice around the most suitable energy efficiency improvements for the property, and how to go about sourcing funding/grants, or installers if able to pay.	500 households advised per year. 300 homes improved per year following advice.	Energy & Sustainability	2023/24 – 2024/25

3. Business, public services and community

The challenge

Non-domestic buildings between them generate 39% of Leicester's carbon emissions from energy and fuel use. The breakdown of emissions between industry, commerce and the public sector is shown in the chart.



The sources of these emissions are more wide-ranging than for housing. They also vary considerably between the industrial, commercial and public sectors. A breakdown of emissions by sector is not available for Leicester specifically, but based on national data we can say the following:

Industry – many of the emissions are caused by heat generation but, unlike in housing, a lot of this heat is used in manufacturing and other processes rather than space heating.

Commercial and public sector – these sectors include offices, shops, hospitality venues, education buildings and hospitals. Space heating is a bigger source of carbon emissions in these buildings and uses predominantly gas at the moment. Other significant emissions sources include catering, lighting,

IT and cooling/ventilation. The energy demand for cooling and ventilation is likely to go up as climate change leads to higher summer temperatures and more frequent heatwaves – adding to carbon emissions and energy bills.

As well as the need to tackle these energy uses to reach net zero, there is also a pressing need to reduce energy bills. Businesses, public sector (including schools, colleges and universities) and voluntary and community organisations are all struggling with high energy costs. Leicester's economy is characterised by a lot of small and medium-sized enterprises. For some these in particular, high energy costs could be a threat to their survival.

How Leicester needs to change

The Carbon Neutral Roadmap identifies the same overall strategy for non-domestic buildings as for housing i.e. reducing energy demand as far as possible, switching from fossil fuels to electricity and fitting solar PV panels where possible. The diagram below sets out the maximum scale of action and the upper limit of emissions reductions possible from these steps by 2030. It is important to note that PV panels will save more carbon per year than shown here if they're installed now. However, due to grid electricity becoming steadily lower carbon, most of the carbon savings will occur early on. By 2030 PV panels will be saving less carbon – although they will still reduce electricity bills and help maintain a low/zero carbon national grid.

The replacement of fossil fuel use in manufacturing processes is not represented in the diagram, as there is not a 'one size fits all' approach available for this. Decarbonising some processes may rely on technologies or low carbon fuels that are not expected to be available or affordable between now and 2030, such as 'green' hydrogen. For other processes, it may be possible to switch away from fossil fuels by 2030. As these processes are likely to be a big source of emissions for the industrial sector, opportunities to support their decarbonisation before 2030, where possible, should be considered in addition to the roadmap measures below.

Roadmap for net zero non-domestic buildings

Reduce energy demand		Replace gas boilers and fit heat pumps		Fit solar PV panels		New buildings 'net zero-ready'
20% reduced heat demand All buildings with LEDs and heating controls	+	Switch from gas in all buildings Fit heat pumps in 95% of buildings	+	Up to approx. 6,100 buildings	+	All low energy with heat pumps + PVs where possible
Up to 3% city-wide emissions reduction 42,000t		Up to 6% city-wide emissions reduction 76,000t		Up to 0.2% city-wide emissions reduction 2,400t		Minimal or no new emissions

Who needs to be involved?

With support from the council where possible, it is businesses, public sector partners including education institutions, voluntary and community organisations who will need to drive change. As with housing, it will be critical for central government to provide funding and other incentives to make this possible and National Grid will be needed to facilitate affordable access to the increased grid capacity needed.

The council	Businesses, voluntary and community organisations	Commercial landlords	Public sector, universities, colleges and schools	Government	Electricity network operator – National Grid
Responsible for a significant amount of commercially rented floorspace. Responsible for enforcing Minimum Energy	Their buildings are responsible for 32% of Leicester's carbon emissions from energy and fuel use.	Responsible for much of the commercial floorspace in Leicester – have control over energy efficiency of building	Their buildings (including the council's) are responsible for 7% of Leicester's carbon emissions from energy and fuel use.	Sets Minimum Energy Efficiency Standards (MEES) for commercial rented property. Able to allocate funding and create incentives for retrofit	Manages capacity of electricity grid to meet increasing demand. Influences affordability of new and improved grid connections –

Efficiency Standards (MEES) for commercial rented property. Has opportunity to support these organisations through existing programmes partner relationships.	Where buildings are rented, the landlord will have control over some aspects.	fabric, but not always heating systems.		of non-domestic properties and investment in low carbon manufacturing processes.	sometimes required to fit heat pumps.

Focus areas

There are a number of areas where the council has more ability to support and influence change – for example due to existing relationships with businesses, other public sector organisations and the voluntary and community sector, or ownership of assets. These are the basis of our focus areas set out below, which will influence our choice of actions.

Focus area	**Details**
Corporate Estate (our commercial rental properties)	Reviewing our Corporate Estate and developing a programme of improvements to energy efficiency to meet increasing national minimum standards. Also exploring opportunities to introduce low carbon electric heating where heating is the responsibility of the council, and to install solar PV panels.
SMEs	Looking at how we can continue to help SMEs reduce their energy use and carbon emissions, following the completion of our EU-funded Green BELLE grant scheme. (See section four on Transport for action supporting SMEs with decarbonising transport and commuting.)
Schools – energy efficiency and carbon emissions reduction	Building on our existing energy efficiency and carbon reduction support services available to all schools – widening the number of schools we support and expanding our offer. Continuing to install energy efficiency and low carbon measures in council-managed school buildings.
Schools – environmental education	Continuing to support and deliver environmental education in all schools with a focus on climate change issues including energy saving, renewable energy, waste, sustainable drainage, biodiversity, transport and food growing.

Public sector and further/higher education	Collaborating with partners including the NHS, universities and colleges. Refer also to section seven on Actions Supporting the Whole Plan for more on partnership working.

Actions for business, public services and community

No.	Action	Targets	Responsibility	Timescale
3.01	**Compliance with MEES Legislation - Commercial Buildings (Minimum Energy Efficiency Standards)** Ensure that council commercial properties meet the Minimum Energy Efficiency Standards: • Currently an Energy Performance Certificate (EPC) rating of 'E' or above • Expected to rise to C or above by April 2027 and B or above by April 2030.	Initial target: complete EPC surveys for properties where we don't have a valid certificate during 2023/24.	Corporate Estate	2023/24 – 2029/30
3.02	**Energy saving in void buildings and spaces** Review and improve the way we manage energy to minimise wastage in void buildings and parts of buildings awaiting reletting.	Complete the review of our procedures and implement improvements during 2023/24.	Corporate Estate	2023-24
3.03	**Pilot House redevelopment** Complete the re-development of a complex of former factory buildings to create much-needed low-carbon office space and units for start-up and growing businesses.	To achieve a 'Very Good' BREEAM rating for the scheme and utilise the existing district heating system as an efficient heating source.	Capital Projects, on behalf of Economic Regeneration	
3.04	**DOCK 3-5** Deliver 4,000m^2 of new offices and 2,000 m^2 of industrial units to a low carbon standard well in excess of Building Control requirements.	Operational carbon footprint: • 14kg CO_2/m^2 – offices • 6kg CO_2/m^2 – industrial units	Development Projects, on behalf of Economic Regeneration	2023/24

No.	Action	Targets	Responsibility	Timescale
3.05	**Ian Marlow Centre redevelopment** Redevelopment of the former Ian Marlow Centre for employment use focusing on fabric performance and sustainable energy generation throughout the specification.	Achieve EPC 'A' rating.	Development Projects, on behalf of Corporate Estate	2023/24 – 2024/25
3.06	**UK Shared Prosperity Fund** The UK Shared Prosperity Fund commissioning plans to include climate emergency as a cross cutting theme across the programme.	To be confirmed	Economic Development	2023/24
3.07	**BESS Energy service for schools** Continue the Built Environment School Service (BESS) Energy for schools to provide energy monitoring and carbon footprint, plus additional support for enhanced schools.	2% reduction in operational carbon emissions per year for each participating school. Renew at least 60 schools in BESS Energy each year.	Energy & Sustainability	2023/24
3.08	**Capital projects - educational sites** These projects will aim to help reduce carbon emissions but also will help to make improvements to various educational sites. The improvements will include window replacements, heating systems, etc.	Invest £1.2M into carbon saving improvements at educational sites/buildings.	Estates & Building Services	2023/24 – 2024/25
3.09	**Energy efficiency measures through additional capital funding** Support schools to effectively utilise additional capital funding for energy efficiency measures.	Work with at least 30 schools. Carbon emissions to be measured on each project/activity.	Energy & Sustainability	2023/24 – 2024/25
3.10	**Eco-schools programme** Support schools to achieve their Eco-Schools Green Flag Award, an internationally recognised award delivered by Keep Britain Tidy - maintaining Leicester as the local authority in England with the highest number of Eco-Schools Green Flag Awards.	80 schools to achieve the internationally recognised award by March 2024. All schools to have achieved the award at least once in this time period by March 2028.	Energy & Sustainability	2023/24 – 2027/28

No.	Action	Targets	Responsibility	Timescale
3.11	**Carbon Literacy training for schools** Train school staff and governors in the externally accredited Carbon Literacy Training Programme - a one day course (or equivalent time) to understand carbon within a school setting.	Train at least 250 school staff and governors.	Energy & Sustainability	2023/24 – 2027/28
3.12	**Tiny forests** Engage with Earthwatch's Tiny Forest initiative on a programme of educational and citizen science activities leading to increased environmental awareness. Develop a funding bid to enable additional Tiny Forests to be planted in Leicester Schools. Plant additional Tiny Forests in Leicester Schools.	By March 2026, engage with 10 schools that have had Tiny Forests planted in winter 2022/23. Create at least one funding bid and submit by March 2024. Plant at least five more Tiny Forests by March 2028. Remove 1.27t CO_2 from the atmosphere per forest per year.	Energy & Sustainability	2023/24 – 2027/28
3.13	**Nature in school grounds** Develop a funding bid to work with schools to invite nature in and use their school grounds to enhance biodiversity.	Create at least one funding bid and submit.	Energy & Sustainability	2023/24
3.14	**Tree planting in school grounds** By 2023, support schools to deliver tree planting schemes within their school grounds and by 2028 undertake a desktop assessment and support all schools that have space and have expressed an interest to undertake tree planting in their school grounds.	Subject to demand, support at least four schools in the year 2023/24 to apply for funding. By 2028 undertake the desktop assessment and support all schools.	Energy & Sustainability	2023/24 – 2027/28
3.15	**Climate emergency information points** Develop information points in all city libraries to promote carbon reduction schemes to Leicester residents and community groups and to promote Leicester's Climate Emergency Action Plan. To include a	To be confirmed.	Neighbourhood Services	2023/24 – 2027/28

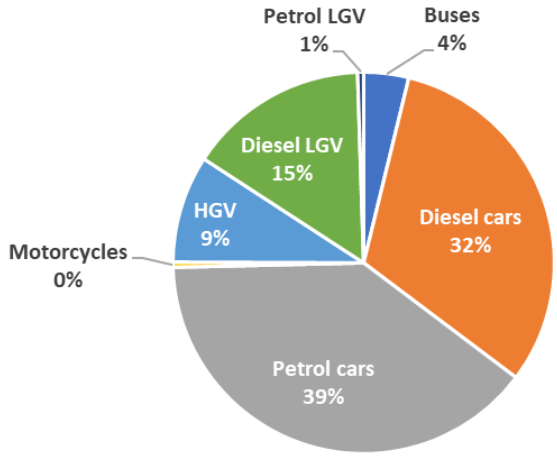
No.	Action	Targets	Responsibility	Timescale
	programme of energy saving/carbon reduction workshops working with a range of internal and external partners.			

4. Transport

The challenge

Transport is responsible for about a quarter of Leicester's carbon emissions from energy and fuel use, so it is a priority area to tackle.

Looking at where the carbon emissions from transport are being generated, the breakdown of fuel use in the chart gives a good indication. It shows that car and van (LGV) journeys account for 86% of fuel use – making these a priority to look at.



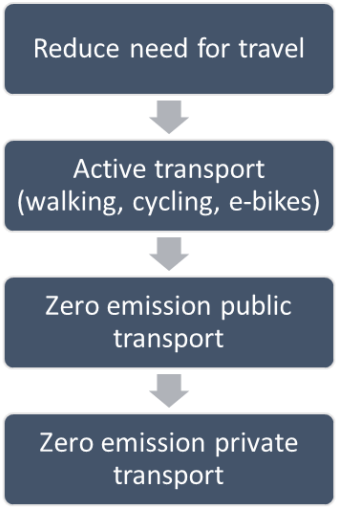
Breakdown of road transport fuel use by vehicle type in Leicester, 2019. Source: BEIS

While the obvious answer might seem to be to focus entirely on replacing petrol and diesel with electric or other low carbon vehicles, another important aspect of the challenge is to find a solution that meets everyone's transport needs in the city, including the 37% of households which don't have access to a car. So, if we are to have a fair transition, the approach to reaching net zero for transport needs to provide affordable, convenient, accessible and low or zero carbon options for everyone.

In terms of how climate change will affect transport, the heatwave conditions in 2022 showed how rail infrastructure can be affected by extreme weather and this will need to be addressed by Network Rail at a national level. At the local level, the risk from both heatwave conditions, drought (which can cause subsidence as soils dry out) and storms to the transport infrastructure and travel safety will need to be kept under review – with management and maintenance of the transport network adapted as necessary.

How transport in Leicester needs to change

To achieve a net zero transport system and great low carbon travel choices for everyone in Leicester we need to combine the two key priorities of the city-wide net zero roadmap: of reducing demand and switching away from fossil fuels, with the need to ensure that everyone can access services and facilities, and can travel as they need, regardless of whether they have access to a car. It is also important to reduce levels of traffic in order to tackle the negative impacts of congestion on the city. These include the impact of air pollution on health. All of this can be presented as a hierarchy of preferred sustainable transport options in the diagram below.



In practice, this means that the roadmap for net zero transport must combine measures to improve access and mobility without a car, and to reduce traffic, with those to support the uptake of electric and other low carbon vehicles. Based on the most ambitious set of measures modelled in the Carbon Neutral Roadmap study, the diagram below summarises the maximum that could theoretically be achieved by 2030, and what it would deliver in terms of carbon emissions reduction.

In practice, these levels of change are not realisable without a step-change in Government support – particularly to fund the level of improvement to bus services and to walking and cycling infrastructure needed for those modes of travel to match car travel in terms of attractiveness. They will also require investment in EV charging infrastructure and a substantial improvement to the electricity grid in the city, to meet the extra demand for charging electric cars, vans and buses.

It isn't expected that a viable low carbon technology for HGVs will be widely available between now and 2030, so the roadmap only assumes a small uptake of hydrogen fuelled HGVs by then, along with some fuel demand reductions.

Roadmap for net zero transport

Reduce travel demand		Increase role of active travel and public transport		EV cars and vans		EV buses		Freight and deliveries
Up to 5% fewer car trips – home working, virtual meetings, walkable local facilities	+	Up to 32% shift from car to walking and cycling	+	Up to 100% cars and vans EV + necessary charging infrastructure	+	Up to 100% buses EV + necessary charging infrastructure	+	10% mileage reduction 8% improved fuel efficiency 2% uptake of hydrogen
Up to 1.2% city-wide emissions reduction 15,800t		Up to 2.5% city-wide emissions reduction 32,700t		Up to 11.4% city-wide emissions reduction 148,200t		Up to 0.8% city-wide emissions reduction 10,400t		Up to 0.2% city-wide emissions reduction 3,200t

Who needs to be involved?

The table below presents some of the key stakeholders who need to be involved in the above changes to transport in Leicester, along with a summary of their role.

The council	Other employers and service providers*	Bus companies	Individuals	Government	Electricity network operator – National Grid
Responsible for transport and land use planning. Responsible for the highways network including roads, footways, sufficient number of EV chargers and cycle routes. Able to play a leadership role bringing partners together to plan and implement improvements. Ability to reach large numbers of people with information about sustainable travel options.	Influence travel choices of employees (commuting and business travel) and service users through decisions about what transport facilities to provide e.g. parking, cycle parking, EV chargers and where to locate e.g. local vs. centralised facilities, proximity to bus routes, etc. Ability to invest in EVs for own fleet vehicles.	Ability to invest in service improvements and introduction of electric or other low carbon buses.	Where affordable, convenient, accessible, low carbon travel options are provided as alternatives to car travel, their success relies on individual choices.	Determines level of funding for transport improvements locally including for walking, cycling and public transport. Sets regulatory requirements to ensure minimum standards for EV chargers. Determines UK strategy for transport decarbonisation including future role of low carbon hydrogen as a fuel.	Controls capacity of electricity grid to meet increasing demand. Needed to help determine locations of EV charge points based on grid capacity.

** Includes large employers in the city, education establishments, health facilities, sports facilities and others.*

Focus areas

Based on the roadmap outlined above, and taking account of the council's responsibilities, levels of influence and funding, the following areas will be a focus for action.

Focus area	Details
Transport planning for decarbonisation	Developing overall plans and associated targets for reducing carbon emissions from transport as part of the new Leicester Transport Plan and Leicester Local Plan
Bus service improvement and bus fleet decarbonisation	Continuing to roll out service improvements and introduce electric buses as part of Leicester's Bus Plan.
Behavioural change	Working with businesses, other employers, schools and other institutions to promote active travel and public transport for commuting journeys.
Walking and cycling	Continuing our ongoing Connecting Leicester programme and other measures to improve connectivity and support walking and cycling.
Electric vehicles	Planning for expansion of electric vehicle charging infrastructure in the city and facilitating its roll-out. Encouraging the uptake of electric vehicles including taxis.
Freight transport	Developing plans for improving the efficiency and reducing the impact of freight transport in the city.
Smart transport	Review future role for smart technologies in transport including autonomous vehicles.
Rail	Improvements to Leicester Station to encourage patronage. Lobby Government and Network Rail for electrification of the Midlands Mainline and other improvements

Actions for transport

No.	Action	Targets	Responsibility	Timescale
4.01	**Leicester Transport Plan** Development and adoption of a new Leicester Transport Plan which will include: ▪ Decarbonisation of Transport Strategy ▪ Pipeline of new schemes / initiatives with predicted carbon savings for each	Completion and adoption of all parts of the new plan. Targets/predicted carbon emissions reductions to be developed as part of the Decarbonisation of Transport Strategy.	Transport Strategy	Plan development completed in 2024/25. Plan delivery up to 2036.

No.	Action	Targets	Responsibility	Timescale
	▪ Investigation into new sources of funding to deliver the future transport vision ▪ New Air Quality Action Plan ▪ New Transport Asset Management Plan			
4.02	**Review of options to deliver the LTP vision via demand management and funding support** Undertake a review of options such as road user charging, green bonds, workplace parking levy, green loans and bids to manage demand on the network and provide a source of funding for LTP schemes.	Complete the review by December 2023.	Transport Strategy	2023/24
4.03	**Review technological advances as and when available** A vast array of innovations is now coming to the fore, including autonomous/connected vehicles; drones and robots; integrated digital ticketing; sharing and hiring business models; micro mobility such as e-bikes and behaviour change initiatives. The city council will leverage new technologies and concepts to support and deliver transformational transport change.		Transport Strategy	Ongoing
4.04	**Behavioural change** Encourage - via promotion, engagement, or education - active and sustainable travel choices for journeys across the city for all modes; support access to and uptake of walking, cycling, passenger transport, and remote access services.	Engage five schools per year to adopt new travel plans. Undertake annual travel survey of top 100 largest employers - Mar 24 Develop Employer Transport Forum - Mar 23	Transport Strategy	Ongoing
4.05	**Speed limit management** The city council will ensure speed limits across the city promote smooth progression and stable speeds, contributing to a reduction in congestion and point emissions. In addition, the promotion of lower speeds on	Targets to be confirmed.	Transport Strategy	Ongoing

No.	Action	Targets	Responsibility	Timescale
	residential roads will further improve the environment and promote active and sustainable travel choices.			
4.06	**Leicester bus service improvement plan** The Enhanced Bus Partnership will deliver a number of improvements to increase patronage and also decarbonise the buses through electrification of the fleet.	Increase annual bus passengers across the whole network by over 10% over a ten year period. Electrification of the whole bus service fleet by 2030.	Transport Strategy	Ongoing to 2036
4.07	**Development of a 'modernisation of taxi industry' strategy** Develop a strategy to support the role of taxis in the city under the new transport vision, including supporting and accelerating the transition to electric or other zero emission technologies.	Target(s) to be developed.	Transport Strategy and Licencing	2023/24
4.08	**Taxis - vehicle licensing policy (hackney and private hire)** Review the vehicle licensing policy with a view to reducing emissions. This will look at the age and emissions standards for hackney carriages and private hire vehicles licensed by Leicester City Council. The new policy is likely to involve a sunset period for existing vehicles so the impact and benefits will be spread across a number of years.	For Leicester City Council to review the licensing policy and Taxi Strategy. Following review consideration will be given to developing a target for reducing emissions.	Licensing with Transport Strategy	April – Dec 2023
4.09	**Inter-city rail improvements** The city council is active in making the case for improvements to rail connectivity, to provide a more sustainable alternative transport for city residents and visitors. The council is working with partners to improve train services to Birmingham and Coventry and to electrify the Midland Mainline north from Market Harborough whilst encouraging a modal shift of freight onto rail.	Make a convincing case with partners by 2024, for Midland Mainline Electrification through Leicester. Working with partners including Midlands Connect and Coventry City Council to convince the Government to commit to the restoration of direct train services between Coventry and Leicester by 2026.	Transport Strategy	Ongoing to 2030

No.	Action	Targets	Responsibility	Timescale
		Make the case by 2024 for improved rail capacity through the Leicester area to remove a potential bottleneck on new train services on the National Network.		
4.10	**Connecting Leicester - city centre connectivity** Expanding Connecting Leicester – the existing Connecting Leicester programme has already been successful in making the city centre more attractive and safer for cycling and walking. This will be expanded to include links into the city centre from surrounding neighbourhoods and employment areas. This will assist in creating a cyclable and walkable city centre neighbourhood where travel is quick, convenient, safe and healthy - as well as low or zero carbon.	Targets to be developed.	Transport Strategy	Ongoing to 2030
4.11	**Walking and cycling improvements** In the light of the successes during the pandemic of rolling out pop-up cycle routes, the council intends to accelerate cycling and walking improvements in the city. The existing Cycle Action Plan 2015-24 will be updated and the Local Cycling and Walking Investment Plan will be used to prioritise new projects across the city. These will include both strategic commuter routes following infrastructure improvements and local links between development areas, employment areas and existing residential areas.	Targets to be developed.	Transport Strategy	Ongoing to 2023/24
4.12	**Active Leicester** Sports Services and Public Health will mobilise partners and stakeholders to work differently to help tackle inactivity across the city over the next five years as part of the new emerging physical activity strategy Active Leicester. This will encourage more uptake of walking and cycling in place of more carbon intensive modes of travel.	Strategy to be launched in 2023/24. We will explore including targets in the strategy which relate to encouraging lower-carbon lifestyles and behaviours.	Sports Services and Public Health	2023/24 – 2027/28

No.	Action	Targets	Responsibility	Timescale
4.13	**Electric vehicle charging points** An extensive electric vehicle charging network will be required to meet local and national targets and support increased uptake of electric vehicles. The council has been successful in securing initial funding of electric charging points for public car parks, Park & Ride sites and for on-street charging. The council will use its Electric Vehicle Transition and Infrastructure Strategy as a basis for seeking further investment into the public, workplace based and 'at home' charging network required.	Current no. s are: 47 fast, 1 rapid, 22 on-street residential. Target by 2025: 22 fast, 57 rapid, 423 on-street residential. Target by 2030: 44 fast, 132 rapid, 853 on-street residential.	Transport Strategy	Ongoing to 2030
4.14	**Move to zero emission vehicles** Initiatives to increase the uptake of zero emission vehicles to all as detailed by the Electric Vehicle Transition and Infrastructure Strategy.	Targets to be confirmed.	Transport Strategy	Ongoing to 2030
4.15	**Freight study and action plan**	Targets to be developed.	Transport Strategy	Ongoing, with completion 2023/24

5. Land and infrastructure

The challenge

Land use policies and city-wide infrastructure have a critical part to play in tackling the climate emergency. This includes the role of green spaces and drainage infrastructure, the challenges facing energy infrastructure and the need for land use policies and patterns of development that facilitate decarbonisation and climate adaptation.

Starting with green spaces and water bodies (referred to as 'green and blue infrastructure'), their main importance in addressing climate change in an urban area such as Leicester lies in the contribution that they make to reducing the impacts and risks of climate change for the city. Their contribution is summarised in the table below. As the city population continues to grow, requiring more housing, employment sites and facilities, it will be challenging to maintain and increase the climate adaptation role of green and blue infrastructure – which will be necessary as climate change worsens.

Role of green and blue infrastructure in protecting people and nature from the changing climate

BIODIVERSITY	FLOODING	HEATWAVES
Helping wildlife to withstand the pressures from a changing climate by providing a network of good quality habitats, linked by 'green and blue corridors'.	Slowing down and storing runoff after intense or prolonged rainfall to reduce the risk of flooding to homes and businesses.	Moderating the impact of heatwaves through the cooling effect of evaporation of water from trees and other plants (known as 'transpiration') and by providing shade.

In terms of carbon emissions, green spaces in Leicester (and land that's been built on) store a significant amount of carbon – mainly in soils. However, the limited amount of available green space means that little extra carbon could be stored by more tree planting in the city. So, to offset a significant amount of Leicester's carbon emissions through tree planting would need large scale planting outside the city boundary.

Looking at other forms of infrastructure, the Carbon Neutral Roadmap identifies that the need to replace fossil fuels is going to present some major challenges for energy infrastructure. In particular, as heating, hot water and transport switch to electricity and local renewable electricity generation increases, the grid will need to be strengthened to meet these extra demands on it. Leicester's district heating – which efficiently provides heat and hot water to homes and other buildings in parts of the city – also faces the challenge of switching from its current gas combined heat and power (CHP) to a

lower carbon fuel source. When the district heating began operation the gas CHP was much lower carbon than electric alternatives, but that is changing as the grid is being decarbonised.

Finally, turning to land use and development, becoming a net zero city will require a significant reduction in car travel as outlined in the section on transport earlier. Part of the ongoing challenge will be to create space for the alternative modes of travel: walking, cycling and public transport as part of the development and regeneration of the city.

How Leicester needs to change

To remain liveable as climate change worsens, Leicester's built environment will need to adapt – both to withstand the greater extremes and to continue to provide a healthy, safe environment for people. New buildings will need to be designed to remain comfortable in hotter summers and to incorporate 'sustainable drainage' that uses nature-based approaches such as permeable surfaces, green roofs and swales to deal with rainwater runoff without overloading existing drains. Many existing buildings may also need to be adapted.

The capacity of the city's green and blue infrastructure to support biodiversity, protect us from flooding and moderate heatwave conditions will need to be maintained and increased too, through a combination of protection from development and active management and enhancement. Further flood prevention schemes will need to be implemented in vulnerable areas, prioritising sustainable drainage methods wherever possible instead of 'hard infrastructure'.

In terms of energy infrastructure, the electricity grid will need to be strengthened to cope with the rapidly growing demand from electric vehicles and heat pumps, and to accept increasing amounts of renewable electricity from solar PV panels. The existing heat network will need to switch from gas CHP to a low carbon energy sources as soon possible and further district heating will need to be considered as a solution to providing affordable, low carbon heating – particularly where individual heat pumps are not feasible.

Becoming a net zero city will involve a reduction in car travel, so planning policies will need to deliver new developments that are easily accessible by public transport, by bike and on foot and everyday facilities will need to be available within walking distance in all neighbourhoods. Development will also need to be very energy efficient, with a heat pump and solar PV panels wherever suitable – as outlined earlier in the sections on housing and business, public sector and community.

Who needs to be involved?

The council has a major role to play in this area due to our responsibilities for both land use planning, flood risk reduction and drainage, along with the opportunities we have as the largest landowner in the city, including the majority of its 'green infrastructure'. However, there are many other stakeholders who have a role. Some of the most important ones are shown below.

The council	Environment Agency	Developers	Landowners	Electricity network operator – National Grid	District heating operator - Equans	Government
Responsible for setting and enforcing land use planning policies, and promoting sustainable drainage in new development. Lead Local Flood Authority responsible for developing Flood Risk Mgt. Strategy. Responsible for highway drainage. Largest landowner in the city – opportunity enhance climate adaptation benefits.	Key partner of LCC in developing Flood Risk Mgt. Strategy. Implements flood prevention measures directly. Funds feasibility studies and implementation of flood prevent schemes by others.	Responsible for meeting statutory requirements in design of drainage in new development. Have the opportunity to use Sustainable urban Drainage Schemes in new development.	Have opportunities to enhance the biodiversity, flood prevention and heatwave moderation benefits of their land.	Manages capacity of electricity grid to meet increasing demand. Needed to help determine locations of EV charge points based on grid capacity.	Has opportunity to plan for the introduction of low carbon heat sources into the network. Has opportunity to promote expansion of the existing network.	Sets national priorities and requirements for land use planning policy, including limitations on renewable energy infrastructure. Sets standards for energy efficiency, carbon reduction and overheating prevention in development via the Building Regulations.

Focus areas

Taking account of the changes needed to address the climate emergency, as well as our powers, areas of responsibility and opportunities, the table below summarises the main focus areas for our actions on land and infrastructure.

Focus area	Details
Planning policy and enforcement	Adopting a new Local Plan with policies designed to support the transition to a net zero city which is resilient to climate change. Applying climate change and related planning policies to planning applications to ensure that development supports the net zero transition and protects or creates critical infrastructure – including 'green and blue infrastructure' – required to address the climate emergency.
Biodiversity Net Gain	Applying new national planning requirements for development to achieve a net overall gain in biodiversity. Establishing a Biodiversity Enhancement Network where developer-funded measures can be carried out, where the net gain can't be achieved on the development site itself.
Management of the council's own land	Managing our own land to maintain and increase its contribution to tackling the climate emergency, including through biodiversity enhancement, sustainable drainage (to reduce flood risk), drought-tolerant planting and moderation of heatwave impacts.
Flood risk	As Lead Local Flood Authority, continuing to work with the Environment Agency and others to plan, co-ordinate and deliver actions to reduce flood risk to homes and businesses.
Energy infrastructure	Engaging with the organisations responsible for the electricity grid, district heating network and other energy infrastructure to support forward planning and key decisions for net zero infrastructure, and to promote the necessary changes.

Actions for land and infrastructure

No.	Action	Targets	Responsibility	Timescale
5.01	**Local Plan** Completion of the Local Plan consultation process and adoption of Leicester's new Local Plan. This process will involve:	Adoption of the Local Plan expected March 2024, enabling application of policies to new development, securing benefits including: ▪ energy efficiency	Planning	Ongoing. Plan will continue to 2036.

No.	Action	Targets	Responsibility	Timescale
	- a public consultation on the draft Local Plan and any major changes/revisions to this draft - submission of the draft Local Plan to the Secretary of State and Planning Inspectorate - an Independent Public Examination of the draft Local Plan - adoption of the new Local Plan by Full Council. The adopted Local Plan will include policies relating to the Climate Emergency Strategy and Action Plan, including those covering Climate Change and Flooding, The Natural Environment and Transportation.	▪ renewable energy ▪ improved air quality ▪ sustainable travel provision ▪ low emissions vehicles infrastructure ▪ biodiversity gain		
5.02	**Planning - green infrastructure** Use existing, or introduce new, planning policies which encourage the provision of green infrastructure and maximising the benefits it has to mitigate and adapt to a changing climate. Applying these policies in discussions and negotiations on relevant planning applications as part of the development management, and compliance and monitoring regimes, where appropriate.	Continued use of existing and then adopted new planning policies to secure the provision of benefits of green infrastructure for new and existing developments.	Planning	Ongoing.
5.03	**Planning - Biodiversity** Take opportunities to protect and enhance biodiversity and the natural environment in ways which mitigate and adapt to a changing climate. This involves updating guidance relating to climate change as part of the new Biodiversity Action Plan, and, following the details of the Environment Act (2021), an approach to achieving a net gain in biodiversity using the planning process, which includes new policies and protection/enhancement sites in the new local plan.	New policies, guidance and sites which protect and enhance biodiversity and the natural environment. Targets defined in Biodiversity Action Plan.	Planning	Ongoing.
5.04	**Tree preservation orders (TPOs)** Seek to retain TPO trees within applicable powers and guidance, or secure appropriate replacements should their loss be justifiable.	Optimised consideration of Tree Preservation Orders to contribute to maintaining the city tree stock.	Planning	Ongoing.

No.	Action	Targets	Responsibility	Timescale
5.05	**Climate Woodland** Manage our trees, hedgerows and woodland to maintain and increase their value for people and wildlife - as Leicester's 'urban forest' - in the face of growing pressures from climate change. Our focus in this plan will be on sustaining and enhancing the existing woodland and the area of tree canopy city-wide, including the new planting carried out during the previous plan. We will also continue to address tree disease and plan to replace any trees lost, based on our Tree Strategy commitment. We will consider new planting opportunities where appropriate funding is available that incorporates the cost of planting and long term maintenance.	20% of council sites with trees will be surveyed per year.	Trees & Woodlands	2023/24 – 2027/28
5.06	**Airwick Botanica Pollination Project** Creation of remaining nine bee road wildflower areas/parks pollination zones under this project. Continues and completes bee roads creation begun in our first Climate Emergency Action Plan.	Nine further wildflower areas / parks pollination zones created in remaining year of three-year project.	Parks & Open Spaces	2023/24
5.07	**Glyphosate Reduction Trials** Develop and implement an action plan to trial the reduction of glyphosate for weed treatment provisions.	Complete trial of non-glyphosate products within parks and recreation grounds in 2023/24. The result of the trials will be measured with a view to expanding use if feasible.	Parks & Open Spaces	2023/24 – 2025/26
5.08	**Reducing the environmental impact of new burial space** Explore options to include environmental sustainability in the design and mitigation in the development and construction of, a new cemetery.	Targets to be developed when the feasible options have been confirmed.	Parks & Open Spaces	2023/24

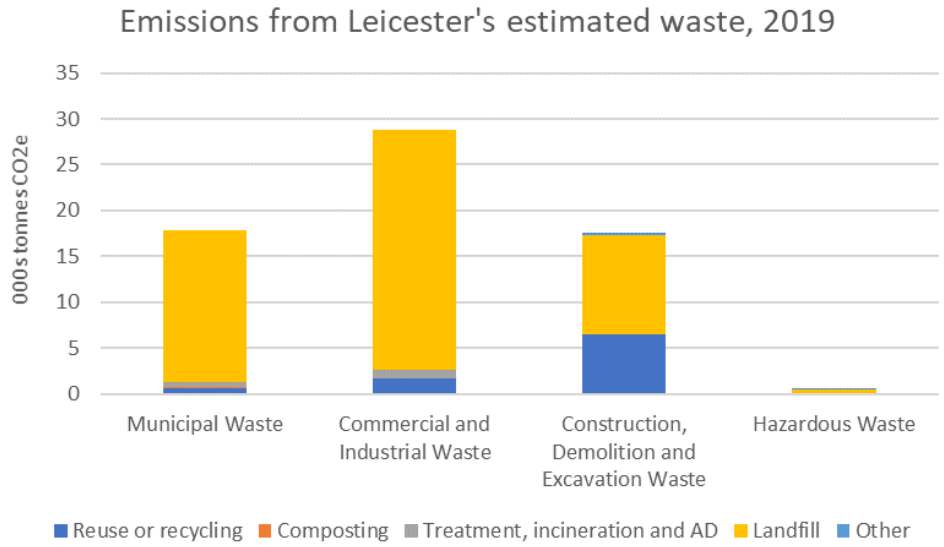
No.	Action	Targets	Responsibility	Timescale
5.09	**Highway drainage infrastructure investment programme** Carry out improvement works to the highway drainage infrastructure, such as replacing sub-standard road gullies, manholes, and pipework to make it more resilient to climate change. But also to look at low carbon options such as the use of sustainable drainage.	To invest £90k in highway drainage improvements. To include the replacement of 50 sub-standard road gullies.	Flood Risk and Drainage	2023/24
5.10	**Flood alleviation projects** To develop schemes through to feasibility to attract funding for design through to construction, that will reduce flood risk to properties, businesses and infrastructure in Leicester.	To complete feasibility studies for Evington Brook Flood Alleviation, Western Park Strategic SuDS and Leicester Royal Infirmary flood resilience measures next financial year and help deliver the Hol Brook project in partnership with Severn Trent Water PLC and Leicestershire County Council.	Flood Risk and Drainage	2023/24
5.11	**Promotion of sustainable drainage systems in new developments** To promote sustainable drainage systems on new development sites across the city by responding to all appropriate planning applications and establishing comprehensive adoption and maintenance processes.	Deliver presentations to at least two internal departments and develop guidance on the council website, working with adoption leads in the council.	Flood Risk and Drainage	2023/24
5.12	**Adaptation and resilience to flood risk in local communities** To engage with residential and business communities in areas of high flood risk to encourage and improve resilience to flood events. Help schools to become more climate resilient, with particular focus on flood risk, and respond to the challenges of changing climate and extreme weather events.	Develop and implement flood resilience initiatives in flood risk areas, working in partnership with the local community (residents and businesses) with support from the Emergency Management Team and the Local Resilience Forum in 2023 -2024. Support schools to become more resilient to flood risk and respond to the challenges it presents in 2024 -2025.	Flood Risk and Drainage with Emergency Management and Energy & Sustainability	2023/24 – 2024/25
5.13	**Council owned water courses investment programme**	Invest in the control and eradication of non-native species along our water courses. To control and eradicate three stands of Japanese	Flood Risk and Drainage	2023/24

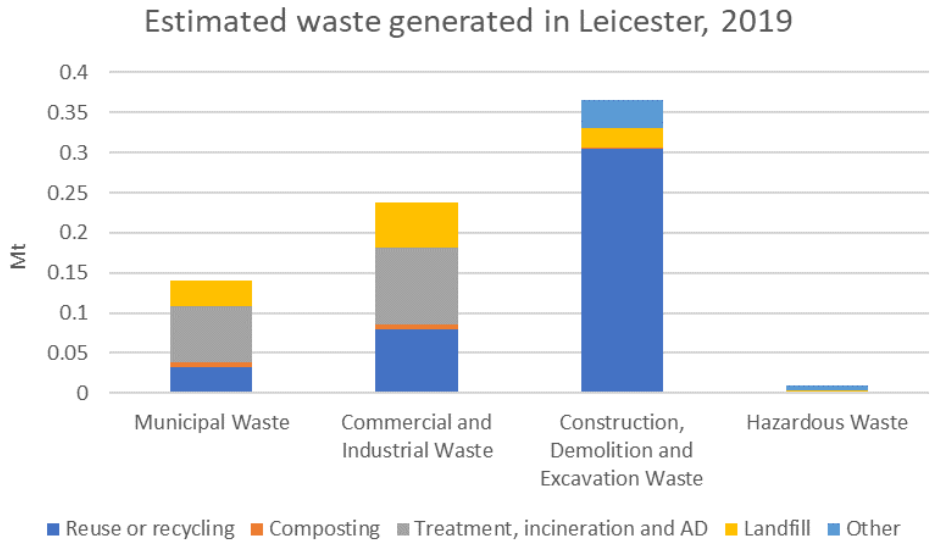
No.	Action	Targets	Responsibility	Timescale
	To respond to problems in watercourses which pass through land owned by the council - to help manage flood risk, increase biodiversity and manage the removal of non-native species.	Knot Weed on council owned watercourses. To mitigate against flood risk and improve the biodiversity along the watercourse.		

6. Consumption and waste

The challenge

While there are no figures available for the carbon emissions caused by the goods and services coming into Leicester each year, figures from a study elsewhere suggest they may add more than another 50% to a city's carbon footprint. This is because goods and services generate carbon emissions during their production and delivery. The emissions can come from the energy used to quarry and process raw materials, for example, and during manufacture and transport. Even services such as banking generate emissions, including through their storage of data on servers. As discussed earlier, some types of goods and services have a much bigger carbon footprint than others.





In terms of waste, it is estimated that disposal of Leicester's waste is adding about another 100,000t (or 7%) to the city's emissions each year too. The charts below show the estimated waste for 2019 alongside the estimated carbon emissions from its disposal. Between them, the charts illustrate that

landfill makes a disproportionate impact on emissions. This is due to the methane that's released when organic matter breaks down in landfill. Methane is a potent greenhouse gas, as explained earlier in this plan. In comparison, reuse, recycling and composting have a disproportionately low impact on emissions.

How Leicester needs to change

Leicester needs to be driving down the carbon emissions associated with its consumption and waste – making lower carbon choices in what to buy and reducing its need for new resources.

The city's consumption of goods and services, and the waste we all generate, are two sides of the same coin. The more efficient we can become in the way we use resources, the less waste we'll produce – and the lower our carbon footprint (and other environmental impacts) will be from both consumption and disposal. When combined with maximising recycling, composting and recovery of resources from the waste that can't be avoided, and minimising landfill, this is where we need to be headed.

The changes involved will need to be driven by the day-to-day choices made by individuals and organisations. This is reflected in our objectives for reducing the carbon emissions Leicester generates outside the city, set out earlier in this plan. However, the changes can be supported, and their impact can be maximised in several ways:

- **Raising awareness** - providing and signposting information to make individuals and organisations aware of the carbon impact of what they buy, and of lower carbon options available.
- **Targeting** - focusing information, support and other action more towards goods and services with the greatest opportunities to reduce carbon – for example those with bigger carbon footprints, or where low carbon alternatives are widely available.
- **Improving services and support** - continuing to improve reuse, recycling and composting services, and supporting voluntary initiatives.
- **Targeting food and other organic waste** - focusing strongly on reducing food waste and preventing its landfill through 'anaerobic digestion' and composting.

Who needs to be involved?

As with the other areas in this plan, the council has an important role to play, but needs the involvement of others locally, as well as central government. The table below highlights the main stakeholders and how they can influence emissions.

The council	Individuals	Businesses and public sector organisations	Voluntary and community organisations	Waste contractors	Government
Responsible for municipal waste collection and disposal, including recycling. Responsible for land use planning for waste disposal. Procures a large amount of goods and services each year. Ability to reach large numbers of people with information.	Make daily choices as consumers – affecting carbon emissions outside the city. Contributed to nearly 20% of Leicester's waste in 2019 via the Municipal Waste stream.	Make daily procurement choices – affecting supply chain carbon emissions. Collectively have a significant influence on suppliers. Service-based organisations can influence service users' carbon emissions e.g. catering business using reusable crockery.	Provide waste prevention and reuse services and projects e.g. charity shops, repair projects.	Have an opportunity to develop new and improved recycling, composting and reuse services for customers.	Sets targets and requirements for recycling, diversion from landfill, etc. Influences funding to local authorities for recycling and related services.

Focus areas

The following areas will form the main focus for our actions. They are based on the areas where we have particular responsibilities or opportunities, and where there is most potential for carbon emissions reductions.

Focus area	Details
Household and business waste services	Continued promotion of the existing recycling, composting and reuse services for household waste and for business waste (provided at Gypsum Close) to maintain and increase participation. Planning for reducing carbon emissions as part of future collection, treatment and disposal services.

The council's waste	Adding to and improving our existing waste reduction, reuse, recycling, composting and recovery activities for our own waste.
The climate impact of food	Raising awareness about lower carbon food options, including plant-based foods, and increasing choices in our school meals. * Supporting food redistribution activities, led by the voluntary sector, to address food poverty and reduce food waste. * Promoting local food growing to reduce 'food miles'. * Ensuring that planning for future municipal waste services prioritises the minimisation of food and other organic waste and prevention of it getting into landfill.
Council procurement	Refer to earlier section on The Council for details of our actions to reduce the climate impact of our procurement.

** Our actions for these areas are contained in our Food Plan.*

Actions for consumption and waste

No.	Action	Targets	Responsibility	Timescale
6.01	**Waste Strategy** Deliver a Waste Strategy that will shape the future of Waste Services for the city of Leicester. This will incorporate a 'Waste Prevention Plan' and will require calculating a baseline carbon impact of the current service.	To be established.	Waste Management	2023/24
6.02	**Waste & Minerals Local Plan** A spatial vision, spatial strategy, strategic objectives and core policies setting out key principles to guide the form of waste management development; development control policies setting out the criteria against which planning applications for waste management development will be considered; and a monitoring framework to examine the efficacy and effects of the core strategy and development control policies.	To facilitate waste management development in a sustainable manner, which addresses the need to produce less waste, to significantly increase levels of reuse and recovery of the waste that is generated and to move away from reliance on landfill as a means of disposal.	Planning	2023/24 – 2025/26

6.03	**Business centres recycling** Procure new waste collection and disposal services for our business centres, which aim to maximise levels of recycling and minimise landfill.	Complete procurement exercise during 2023/24. Recycling targets to be identified in the procurement specification.	Corporate Estate	2023/24
6.04	**Recycling in schools** All schools to be offered support to undertake a waste stream analysis and act to recycle the major waste steams (paper/card, plastic, metal and food waste).	All schools to have been offered and supported through programme.	Energy & Sustainability	2023/24 – 2025/26
6.05	**Plastic clever schools** Support schools to become plastic clever schools - a 3-step award which recognised a school's commitment to reduce single use plastic.	At least 50% of schools achieve the award (60 schools).	Energy & Sustainability	2023/24
6.06	**Allotments - climate change adaptations** Work with plot holders and allotment societies to: Encourage the use of rainwater harvesting on allotment sites. Reduce the rate of pesticide and herbicide use, encouraging green gardening and providing training and education reduce overall usage. Increase composting rates, exploring examples of good practice and investigating options to roll out to a wider audience.	Establish baseline to monitor against and investigate options by summer 2023. Investigate options and work with societies as part of Allotment & Community Growing Strategy. (Summer 2023). Roll out programme targeting: 10% water reduction by 2025 10% herbicide reduction by 2025 5% increase in composting by 2025.	Standards & Development	2023/24 – 2024/25
6.07	**Resource use in landscape schemes**	Establish baseline to monitor against and investigate options by summer 2023.	Standards & Development	2023/24 – 2024/25

	Landscape development and open spaces - investigate the use of reused and recycled materials in new landscape schemes.	Target to use 5% recycled / reused materials in each new landscape scheme (Jan 2024).		

7. Actions supporting the whole plan

The following actions will support what we are doing across all of the above themes. They focus on raising awareness, encouraging partnership and collaboration, seeking investment in the changed needed and making the case to central government for the additional support needed from them.

No.	Action	Targets	Responsibility	Timescale
7.01	**Communications campaign** Deliver a corporate communications and marketing campaign using new Climate Ready Leicester branding to raise awareness of the council's climate emergency response and inspire public audiences to act.	Increase in number of residents, businesses and community groups that are actively involved in local climate action	Energy & Sustainability	2023/24
7.02	**Community engagement** Deliver an annual programme of community engagement activities with key stakeholders, including developing a project with specific communities of interest to produce community climate action plans.	Increase in number of residents, businesses and community groups that are actively involved in local climate action.	Energy & Sustainability	2023/24 – 2025/26
7.03	**Generic carbon literacy training for all council staff** Develop a one-hour carbon literacy e-learning course to be provided on the council's learning platform as training available for all staff.	Training course to be available by April 2024	Energy & Sustainability	2023/24
7.04	**Internal climate change advisory service** Provide advice to council services to ensure that the climate emergency implications of all proposals and decisions are considered in advance, so that all relevant council activities are aligned with our climate emergency objectives. Advice to cover strategies and plans, reports, internal funding bids and other proposals with significant climate implications.	Provide a statement of the climate emergency implications for all decision reports, and for all other reports where requested. Advise on key strategies and plans being developed.	Energy & Sustainability	2023/24 – 2027/28
7.05	**Attracting new climate emergency funding** Investigate new sources of funding and how to attract them, including development of fundable project proposals and submitting bids.	Complete first phase of research in 2023/24.	Energy & Sustainability	2023/24 – 2024/25
7.06	**Adaptation planning**	Increased level of understanding and preparedness for known and projected climate risks.	Energy & Sustainability	2024/25 – 2027/28

	Review the council's climate risk assessment and produce an updated adaptation plan for the council and city based on latest climate scenarios and projections for Leicester.			
7.07	**Options review - offsetting residual emissions** Review the options available and make recommendations for addressing the 'residual' carbon emissions that can't be eliminated by the date of our net zero ambition. The review will cover both the residual emissions from the council's carbon footprint left by 2030 and those from the city's footprint remaining by 2040.	Bring forward options/proposals by March 2026.	Energy & Sustainability	2025/26