

A 10 Point Plan for climate action

WORKING DRAFT

Sheffield City Council

2021-2023



A Sheffield for people and for the planet

HOLDING SPACE FOR INTRODUCTION



Forward

This plan lays out a framework for how the Council proposes to work with the city to address the shared challenge of the climate crisis. It is fundamentally a Council document, and it focuses on our approach to moving forward, but at the heart of it is the recognition that we can not do what is needed alone.

It might be helpful to lay out what the plan is and is not:

This plan is:

- A framework for how we will act in the short term as we increase our work with the city and with others.
- Built on the evidence that we currently have available to us. There are gaps in our understanding and more work will need to be undertaken over time.
- Integrated. It covers both direct and indirect carbon emissions as well as climate resilience.

This plan is not:

- Perfect. We are facing a climate emergency and this plan is a next step.
- Static. The field is fast changing – policy, finance, technology, the markets and public opinion are all changing, and our plans will need to adapt as the world around us changes. This means that we do not have all the answers now, and we will need to work with uncertainty.
- A fully costed delivery plan which details the exact route for the city to 2030. The plan commits to developing more detailed delivery plans that will involve people, businesses and organisations and will be consulted on. Even these delivery plans are unlikely to be fully costed at the start: the scale and pace of change means that we will need to think differently about our approach to strategy and action.
- A commitment by the Council to fund or deliver all the changes that need to take place to bring the city to net zero, or to expect the city to fund it all.

We are ambitious and committed to act, because it is the right thing for the people and future of the city, but we are clear that Sheffield City Council is not in a position to finance everything that is needed, does not have the powers that are needed and does not have the responsibility to do everything that is needed within the city.

We are clear that Government will need to play its part in enabling finance, empowering local authorities and intervening in markets that currently do not work as they need to meet this challenge. We will need Government to recognise and actively support the ambition and potential that cities have to move ahead of government timescales.

We will work with the South Yorkshire Mayoral Combined Authority, our fellow local authorities in Yorkshire and the Humber and other Core Cities to encourage ambitious and coordinated action at the right level and increase the potential for attracting the interest of investors.

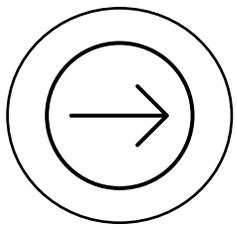
Ten areas for action

The framework includes 10 key commitments for action which we will focus on in the short term. Under each commitment there are a number of priority actions.

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1. We will put climate at the centre of our decision-making
 2. We will be proactive in finding ways to resource the action that is needed
 3. We will take action to reduce carbon now
 4. We will work towards reducing Council emissions to net zero by 2030
 5. We will work to bring the city together to make the changes we need
 6. We will work with the city to develop delivery plans for the areas where change needs to happen
 7. We will work with and support people, businesses and organisations to take the action that is needed
 8. We will work to build the skills and economy we need for the future
 9. We will work to ensure we have the planning and infrastructure we need for the future
 10. We will prepare the city to adapt for a changing climate

Our principles for acting

<p>A just and fair transition</p> <p>We do not all contribute equally to climate change and we will not all be impacted equally by its effects. The action that we need to take will not always be easy and we will not let those least able to respond be left behind.</p> <p>We must do everything that we can to ensure that the actions that we take consider inequalities and have a positive rather than negative impact on those who are already disadvantaged.</p>	<p>Focused on impact</p> <p>The Council has a wide range of responsibilities and limited resources. We will need to be pragmatic and prioritise the actions that we take to maximise the value and impact that we can have.</p> <p>We will use evidence based interventions and focus our work on the areas where we can have the most impact.</p>	<p>Collaborative</p> <p>The city and its people are central to our success. We know that to succeed we have to bring the city with us, and that we cannot make the changes that are needed alone.</p> <p>We will work with the city's people and organisations, both to ensure that the action that we take is designed to maximise success and to enable others to act. We will also work with regional partners and government</p>	<p>Creating resilience</p> <p>Climate change and the changing economy will impact on all of us, from the weather we experience every day to the jobs that are available for us to work in.</p> <p>We will look to act in a way that reduces the impact of climate change and also increases our resilience and helps us to adapt and thrive in the circumstances that we find ourselves.</p>
<p>Positive benefits</p> <p>We will design interventions that allow us to have not only a significant positive impact on reducing our carbon emissions, but also have other positive impacts.</p> <p>This will require us to work across our organisation and with partners, to think strategically and long term. It may mean that action is sometimes slower but we will work to achieve a balance.</p>	<p>Long term</p> <p>The climate emergency can be hard to respond to because the payback from our actions is not always immediate, and there are crises that impact on us now.</p> <p>We will look to the long term where appropriate when we take our decisions, considering the future cost and implications of our decisions and take our role of stewardship seriously.</p>	<p>Innovative and creative</p> <p>We are faced with the most ambitious task of our lifetimes, with great uncertainty and with monumental challenges. The behaviours, organisations and technologies that we are used to are not designed for the future that we need to make.</p> <p>To succeed and to create opportunities to make our mark on the future, we will need to learn and experiment.</p>	<p>Nature focused</p> <p>We are not only in a climate emergency, but an ecological and nature crisis. The two crises are interrelated and the solutions for each can benefit the other. Nature is also vital for our wellbeing.</p> <p>We will seek to act in ways which maximise our emissions reductions and addresses the nature emergency and uses nature based solutions.</p>



The story so far

The action that we take must build on the progress that we have made already over the years. Whilst there is a long path ahead, we are not starting from a blank sheet. It is important to recognise what has already been achieved. Built environment, housing and infrastructure projects that cost many millions of pounds and include complex technical expertise and challenges, can often take years of planning and complex negotiations to deliver. Work being delivered today is usually the result of consistent effort. And Sheffield has a history of innovative and forward thinking work on environmental issues which stands us in good stead to scale up our ambition, from being the first city in the country to implement the Clean Air Act to our award-winning sustainable urban drainage scheme.

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The Green Commission brought together representatives and experts from organisations across the city, resulting in the Green City Strategy, and the Green City Partnership Board. Our story so far includes innovations such as:



District Heating Network

Sheffield was one of the first places in the UK to build a district heating network in the 1980s, and has supplied heat to over 2,800 homes and 140 public and private buildings. Its expansion will be a key part of our decarbonisation.



Ann's Grove Primary School

The environmentally innovative school commissioned in 2003 included insulation made of recycled denim and maximised the use of timber and natural light and ventilation.



Heart of the City

Ensuring viability of developments is an ongoing challenge in a city where prices of property and office space are relatively low in comparison with many places in the UK, but the Heart of the City development has high environmental standards and includes a landmark net zero ready office building.



Electric vans trials

Our hugely popular electric van trial scheme uses behavioural change insights to tackle one of the key barriers in switching to electric vehicles: uncertainty about new technologies and benefits.



Grey to Green

Our internationally acclaimed Grey to Green scheme, now on its third phase, has vastly improved the experience of walkers and cyclists, as well as businesses and residents in the areas around Kelham and Riverside and provides sustainable urban drainage as well as flood resistant planting for biodiversity.



Maximising the benefits for Sheffield

The challenge is huge, but there are also benefits and opportunities that will come from the action we take as we transition to a net zero council, economy and society. We will focus our efforts on those interventions that will improve our people's wellbeing, including through building an inclusive and sustainable economy.

Communities and neighbourhoods

- Projects that increase community pride, connection and wealth building.
- Supporting the creation, protection, enhancement and accessibility of sustainable green infrastructure to provide a natural environment for people to enjoy and contribute towards their health and wellbeing.
- High quality retrofit schemes that regenerate communities and improve wellbeing and sense of pride for residents.
- Neighbourhoods and communities which make it easier for people to walk and cycle, reducing crime and increasing a sense of community.

Education, health and care

- By decarbonising our transport and industry we can improve air quality and so improve health and reduce the number of deaths associated with poor air quality.
- Increased numbers of people to travel by walking and cycling (including increasing access to electric bikes to tackle our hills and make cycling an option for more people) increases fitness and health for our people.
- By acting we can reduce biodiversity loss and help mitigate the consequences of food shortages and the impacts this will have on our health and food security.
- By taking action to mitigate and adapt to climate change we will reduce the risk of harm to people e.g. from extreme weather such as flooding and heatwaves.

Economy and development

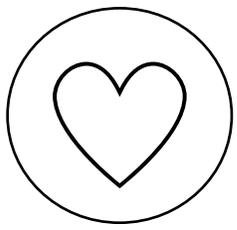
- By creating a more sustainable economy we will support our city and its businesses to thrive in the world that we find ourselves in. Sheffield changed the face of the world in the industrial revolution, and we can do that again, accelerating the business and economic opportunities that will arise from the move towards a low carbon future, including renewable energy, sustainable transport, smart technologies, research and development. Sheffield and the surrounding region are perfectly positioned to thrive, and to create thousands of new jobs. We must work together across the public and private sectors and across geographies to seize this opportunity.
- Businesses can often reduce costs by improving their energy efficiency, and by reducing the impacts of climate change, we can help minimise impacts on our local economy including reduced worker productivity or service demand.
- By supporting the valuable contribution that the natural environment makes we will help our local economy, particularly the rural, leisure and tourism sectors. We can protect the natural environment that is crucial to us as The Outdoor City.
- By making it easier for people to improve and futureproof their homes, we can help people to maintain or increase the value of their homes.
- Community energy creates the potential for community wealth building.

Our Council

- The actions that we take to reduce our climate emissions such as having safe warm and beautiful homes, can support us to achieve our other strategic outcomes.
- Investing in renewable energy and energy efficiency, particularly in combination with accessing government funding, can provide energy efficiency savings and revenue in the short and long term.

The Plan

A framework for climate action, and our next steps



1 We will put climate at the centre of our decision-making

Whilst there are clear actions and investments that we need to take to reduce our emissions and those of the city, the majority of our decisions and the money we spend has other aims and purposes. At the same time as delivering our statutory functions, delivering services for Sheffield and commissioning, we have the potential to impact on our carbon emissions and on nature and biodiversity, either positively or negatively.

Internally within the local authority we need to ensure that the funding that is available to us works as hard as it can to reduce our emissions as well as allowing us to continue to fulfil our statutory obligations by making sound and informed decisions and using priority-based budgeting. We will ensure that the money we spend on products and services has a positive impact by looking to make sustainable choices.

We will focus our effort where we can have the greatest impact, on our largest contracts where we have the potential to influence supply chains significantly, and on those with the highest carbon footprint.

We have already:

- Included climate impact questions in our decision-making paperwork and processes, including our Capital decision-making.
- Provided climate awareness training to over half our elected members (ranging between two hours and a full day of training).
- Trained the most senior levels of officers in climate awareness and action.

1. Investing in our climate education and training

- Training our remaining elected members in climate awareness, in particular ensuring that committee members have the appropriate climate training for their committee responsibilities.
- Developing and delivering a training programme for officers.

2. Making climate aware decisions

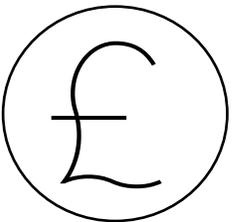
- Raise colleagues' awareness of climate issues so there is shared ownership of the challenge when commissioning or procuring goods, works and services.
- Ensure that new Governance arrangements incorporate climate effectively.
- Design and implement effective climate assessment tools and embed throughout decision making and scrutiny processes.

3. Making climate action everybody's business

- Include climate action in service planning.
- Monitor all services on the progress that they make.

4. Improving our data

- Understand where our data is lacking and take action to improve it.
- Report our Carbon Emissions as an organisation and a city annually.



2 We will be proactive in finding ways to resource the action that is needed

The full scale of up front investment that is needed to fund the transformation required across the city is vast and difficult to fully quantify, but well into the billions. It falls at a time when the local authority, business and individual households face unprecedented financial challenges.

A conservative cost estimate to decarbonise housing in the city alone is £2-£5bn, costs which would significantly increase rents for tenants, or council tax if the council were to finance this in its entirety. Current government funding and policy mandates high numbers of new homes, rather than retrofitting existing stock, which presents a significant challenge. The cost for decarbonising the Council's non-domestic buildings is estimated to be at least £19m. These investments will increase energy efficiency and generate some income over time (estimated cost savings of £5.1 by 2030), but we are clear that these are not costs that the council or city can currently afford at a time when we cannot afford to bring our buildings up to safe and lawful standards.

But the status quo is not an option. The world, country and the economy are changing, and Sheffield must change too. All cities and local authorities face similar challenges to resourcing this challenge, which is particularly acute for areas like Sheffield that are seeking to move ahead of the government's 2050 target. National change is required to provide financial models that make mass retrofit affordable for home and property owners and landlords, as well as public sector organisations.

The financial and behavioural legacy of Covid is uncertain but likely to be significant and ongoing, requiring additional investment to support public transport in particular due to the exacerbation of long term decline in patronage.

We know that the cost of inaction or delay is likely to exceed the cost of early action, but we need to be creative and innovative as a city to find the funds that are needed. We also need to ensure that the gap between what we need to do and what we can afford to do or are allowed to is brought to the attention of Government, and we are working to do this with other cities in the Core Cities group.

1. We will have projects ready for investment

- Identify funding, invest in feasibility studies and develop outline business cases so that we are ready to respond to funding opportunities as they arise.
- Work creatively to package up 'investible propositions' and partner with other places and cities to access investment from both public and private sector.

2. Prioritising climate action in our budgeting

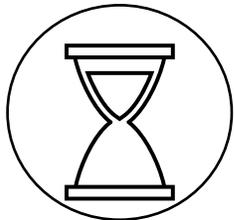
- Our budget setting process and Medium-Term Financial Strategy will take account of its climate impact (and consider appropriate mitigation measures).
- Work on our Investment Strategy will help us to prioritise and to identify funding and investment routes for our decarbonisation programme.

3. Apply for available government funding

- Continue to submit proposals to future funding rounds to support the decarbonisation of our fleet and estate, including Local Authority Delivery – Housing retrofit and Public Sector Decarbonisation Schemes.

4. Be creative and ambitious in our approach to investment

- Develop a robust understanding of innovative financing options, including exploring options for investors supportive of longer term returns on investment such as pension funds.
- Pilot multi-intervention, place-based Net Zero delivery models.
- Develop project proposals for national and regional funding opportunities which are aligned to our ambitions on climate change and to create a sustainable economy fit for the future.



3 We will take action to reduce carbon now

We need to plan for the future so that our decisions are strategic and allow us to maximise our carbon reduction, but are also taking action immediately and taking advantage of opportunities as they arise.

We have already shared that we are applying for government and regional funding opportunities as they arise, and turning these into action. We will, however, take a considered approach to applying for funds.

Some of the action that we are already taking across the Council that is reducing our carbon emissions immediately in our priority thematic areas includes:

Our homes and buildings

- We have bid this year for over £12m of funding to improve the energy efficiency of our homes and buildings, receiving almost £5m so far, with further decisions awaited.
- We are retrofitting approximately 800 homes through the government's Local Area Delivery fund and are bidding for future rounds of funding, delivering improvements to the homes of council tenants and people living on low incomes.
- We are carrying out work which will allow more private sector home owners, particularly those on low incomes, to benefit from ECO funding provided by private sector energy providers.
- We have secured funding for roofing works on 20 high rise buildings, which will include solar PV installation and battery storage to ensure generated power can meet periods of highest demand.
- We are delivering energy improvements to several Council non-domestic buildings over 2021/22.

The way we travel

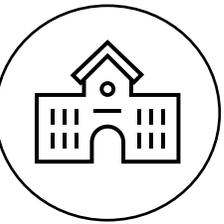
- We have agreed a Clean Air Zone which will lever in investment for decarbonisation of affected vehicles.
- We have installed 20 rapid charge electric vehicle charging points in the past year, with a further 7 forthcoming imminently.
- We are running electric van and taxi trials to allow businesses, organisations and taxi drivers to trial electric vehicles risk free.
- We are consulting on three Active Travel Fund projects to improve cycling routes and reduce traffic in local neighbourhoods by 2022 and delivering a city centre bike hub.
- We are providing a salary sacrifice scheme for employee electric vehicles and will proactively promote this and the bike and ebike salary sacrifice schemes.
- To decarbonise the council's travel, we have invested in 62 electric and ultra low emission vehicles, and are in the middle of a six year vehicle replacement strategy initially aimed at clean air compliance and prioritising electric vehicles. This will be reviewed annually.

Nature based solutions and the nature emergency

- We will continue to manage our trees and woodlands to protect the 22kt CO₂ per year carbon sequestration they provide.
- We have increased the amount of land that is managed naturalistically, and are increasing this further.
- We are committed to planting 100,000 trees on our land over the next ten years, and are on target to plant almost 14,000 trees this year with schools and community groups.

Skills and economy for the future

- We are delivering a £2.3m project to support SMEs across South Yorkshire to audit their energy efficiency and provide grants to reduce their emissions, saving approximately 830 tonnes of CO₂.



4 We will work towards reducing Council emissions to net zero by 2030

As a Council, we have made great progress in recent years with the condition and energy efficiency of our homes. A high proportion of our Council homes are already at EPC C (which is the usual level at which government funding for energy interventions currently stops). But we know this will not be enough to deliver the emissions reductions we need, or to protect our tenants from increasing fuel bills or the changing climate.

We have already outlined the condition and financial challenge posed by our estate, and those present a huge challenge to our ambitions.

We are one of the largest employers in the city, with over 8,400 employees. We have approximately 1,145 vehicles in our fleet, including those operated by our two principal contractors, Amey and Veolia. An employee survey in 2019 found that 29% of employees reported using their own vehicles as part of their job and an additional 32.4% use their car to travel to and from work.

As a large, committed, organisation, we have the potential to make a significant dent in the city's emissions, to inspire others to act and to stimulate demand, and so increase skills and capacity in local markets.

We will develop comprehensive routemaps to support our ambition to decarbonise the local authority by 2030 and will actively seek out funding, and will prioritise the following actions:

1. Decarbonising our homes

- We have commissioned work to identify technical solutions for decarbonising our housing stock.
- Further decarbonise our housing stock, through building fabric improvements, removing fossil fuels by connecting to district heating schemes where possible or switching to heat pumps and installing rooftop solar PV.

2. Using our land and assets to further our ambitions

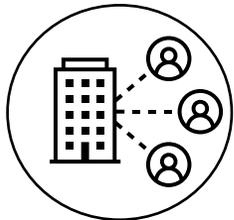
- Agree a Corporate Asset Management Plan and Strategic Land and Asset Plan and rationalise the Council's estate to enable investment. This includes how best to dispose of buildings which are in the worst condition.
- Continue to identify our worst energy performing buildings and prioritise those for future energy efficiency and low carbon initiatives as funding becomes available, including seeking alternative financing arrangements where existing funding streams are not sufficient.
- Work with Local Area Committees to review mowing and hedge cutting regimes, seeking opportunities to increase biodiversity and potentially reduce emissions.
- Assess the potential to increase the number of trees planted on council land.
- Identify opportunities for solar PV retrofit on our buildings and homes and renewable energy generation and storage on our land.
- Extend the district heat networks to provide heat to council buildings and homes.

3. Decarbonising our fleet

- Reduce fleet mileage through driver behaviour training, optimising route planning and journey consolidation.
- Switch cars and vans to electric vehicles through fleet replacement programmes.

4. Our role as an employer

- We will work to ensure that our electric vehicle salary sacrifice scheme is coordinated with other interventions to maximise its impact.
- We will understand the skills needed for our organisation.



5 We will work to bring the city together to make the changes we need

As a city, we have people and organisations with a wealth of skills, knowledge, experience and passion for acting on climate change, as well as many people and businesses who want to act but may not have the skills or confidence. As a city council too, we have a lot to learn and a long way to go to achieve our ambitions.

There is so much to be done for Sheffield to transition to a thriving and net zero city, that the Council cannot do all that needs to be done. We hope that not only will people and businesses act to reduce their own emissions, but that we can come together as a city to help and support each other to do more than each of us could alone.

We have already held an initial climate summit in March 2021 attended by over 200 people whose input has informed this plan, and worked with the Green City Partnership Board to develop the draft Local Plan and inform other policy. We now want to involve more people and our organisations as we develop our delivery plans and interventions, and to enable, support and celebrate others to act together.

1. Create a panel of advisors to help us develop our plans and interventions

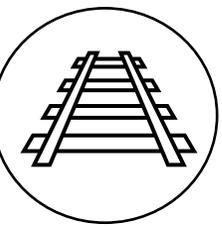
- Set up a panel of independent experts to give professionals, researchers and people and businesses who are already leading the way in reducing their emissions the opportunity to help us to develop policy and interventions that work for Sheffield and for the planet.

2. Encourage action and collaboration to allow action at scale

- Support children and young people to be part of developing our plans and taking action through our youth engagement and voice services.
- Work with our businesses and organisations to develop and deliver action and innovation through a partnership approach to working that is focused on action, working with existing networks and supporting the creation of new partnerships.
- Hold at least an annual event bringing people and organisations together to monitor our progress as a City and identify new action.

3. Create ways for people and businesses to invest in our future and create community wealth

- Explore the potential for crowdsourcing of projects and increase the amount of community owned energy generated in the city.



6 We will work with the city to develop delivery plans for the areas where change needs to happen

We need to take action now, but we also need ambitious, longer term plans. We will develop iterative, agile plans over the next 18 months, working across the Council and with organisations and individuals across the city to develop plans that will build on the Pathways to Decarbonisation work and identify the ways forward.

Given current resource and demand, developing plans for all areas at the same time will result in slower action across the board. We will initially prioritise the sectors where Council action can lead to the biggest impact and delay will be most detrimental due to locked in emissions or accessing funding.

- Decarbonising the council's fleet and estate.
- Domestic retrofit, buildings.
- How we travel, including decarbonising our vehicles and increasing the use of public and active travel.
- Decarbonising our businesses.
- Energy generation, storage and network capacity.

The way that we use our land, including carbon sequestration and nature based solutions to our changing climate is important, particularly given our proud status as The Outdoor City. Our Local Nature Recovery Strategy and response to the biological and nature emergency will incorporate our approach to using our land for carbon sequestration.

We have a section in this plan which identifies some of our next steps on creating skills and economy for the future. This is a key challenge for Sheffield and the South Yorkshire region, and for the country as a whole. We will need to work closely with national government, the South Yorkshire Mayoral Combined Authority and with local partners to ensure that the county is positioned to gain the skills that are needed.

Remaining areas of emissions, where the Council has less influence, where there are existing actors in the Council leading in the field or where national policy direction means that acting sooner would reduce access to much needed and imminent funding, will be given greater focus once earlier plans are developed and action is underway. This includes delivery plans on what we eat, buy and throw away.

This does not mean that we will disengage on other topics: work that is already taking place will continue where it is a priority for portfolios, we will provide information on action that can be taken by individuals and organisations, continue to seize funding opportunities as they arise and where resources allow, and encourage and provide support to external organisations acting to achieve change.



7 We will work with and support people, businesses and organisations to take the action that is needed

This plan focuses on the actions that the Council will take, but if the emissions of the city are to reduce, people and businesses will need to act as well. We know from our climate summit and from conversations with people, businesses and other organisations working on climate change that people and businesses in Sheffield have different understandings of climate change. Whilst most people are increasingly concerned about climate change and want to act, they often don't know how or are concerned about the implications or costs of the changes that need to be made.

We need to work with our people and communities so that they understand what can and needs to be done. We need to understand their concerns and the barriers to them acting, so that the action we take makes it as easy as possible for people and businesses to do the right thing.

We will learn from our public health success in working and communicating with communities during Covid, and use the networks and techniques that we have developed to reach people in their communities.

The transition to a net zero carbon city needs to be a just transition. It is important that the people who are least well off, and who already contribute least to our emissions, can make the changes to their homes and transport that will both reduce their emissions and improve their health and wellbeing. At the same time, we need to enable and encourage those people who are most able to make changes to their homes and lifestyles to make those changes.

Businesses contribute around a third of the city's direct emissions, and access to finance and consumer demand is increasingly dependent on businesses improving their sustainability. Reducing energy consumption and waste also often reduces costs for businesses.

Our delivery plans will all include actions to support and enable people and businesses to take the action that is needed, but whilst these are being developed, we commit to delivering the following actions:

1. Understanding the motivations and barriers facing people and businesses

- We will work with Local Area Committees, people and businesses and use the information that we gather to inform and shape our services and interventions.

2. Providing information and inspiration

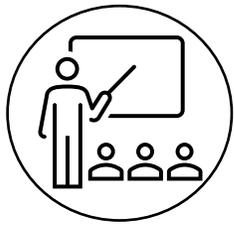
- We will improve the information and signposting that we make available to people and businesses to information through our website, social media and services.
- We will showcase the progress that businesses and individuals are already making to inspire action.
- We will provide business advisers and other key officers with relevant climate awareness training.

3. Maximising the funding available to businesses and individuals in the city

- We will lever in funding to support projects, such as the £2.3m ERDF Low Carbon Business Support project which provides free audits and grants for SMEs across South Yorkshire and the £3m Local Area Delivery Funding which allows us to directly deliver energy improvements to the housing of people on low incomes.
- We will publicise government and other funding opportunities to maximise take-up.

4. Finding ways to make it easier for people to take the action that is needed

- We will continue to deliver our highly successful electric van trial, roll out an electric taxi trial and explore the potential for other similar interventions that reduce risk and increase confidence to act.
- We will explore options to fast track planning applications for developments with the highest energy efficiency standards and other incentives to make it easier to do the right thing.



8 We will work to build the skills and economy we need for the future

The transition to a net zero future provides an opportunity for us to create an economy which is fairer and more sustainable. We already have a high level of “green jobs” in the city, and innovative businesses at the leading edge of the technology needed to create a sustainable economy for Britain, and this presents an opportunity.

It also presents us with a challenge to plan ahead, and to work with schools, employers and skills providers so that our businesses and people can adapt and thrive in a fast-changing world where some jobs and business models and processes will become obsolete within the next decade, whilst others will increase in demand.

It is crucial that young people have the skills and education that they need both to be citizens of the future and that careers advice and guidance and curricula take into account the changing world and economy.

At the same time, we also need our local businesses, industry and workforce to have the skills and capacity required for the scale and pace of change needed for us to decarbonise our homes and buildings, and our transport systems.

We need the work that is carried out to be of a high quality and using the most modern methods, materials and techniques to the standard that we need to prevent problems or the need for further work and cost further down the line.

Skills funding and the apprenticeship system is not currently designed in a way that encourages skills providers or employers to invest in skills that will be needed at scale in the near future rather than for getting people into work now. Giving employers and skills providers the reassurance that demand is not only coming but already here, stimulating demand further and matching it with growing capacity in skills and supply chains will be an ongoing challenge.

1. Stimulating and celebrating Sheffield’s low carbon economy

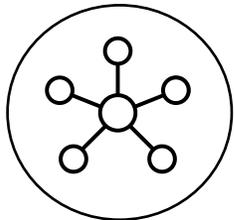
- Ensure that we understand the potential for green job creation and jobs at risk in Sheffield, as well as the skills gap in provision of carbon reduction products and services in the City.
- Increase awareness of the increasingly high levels of demand for retrofit services to increase interest in skills development and provision, as well as further stimulating demand.

2. Building skills to deliver the transition

- Work with the South Yorkshire Mayoral Combined Authority, businesses and industry to increase the provision of low carbon skills.
- Explore how we can work with the existing green sector and training providers to increase and expand relevant skills.
- Use our procurement of carbon reduction and wider activity to support the development of low carbon skills and economy locally.

3. Educating children, young people and communities

- The Education Service are working with Learn Sheffield, schools and other private and community sector partners to develop an offer for young people’s climate education.



9 We will work to ensure we have the planning and infrastructure we need for the future

The infrastructure that underpins how our city works will be vital to our success, from the layout of roads and cycle paths and the capability of our electrical infrastructure, to the way we design our city, and including the digital infrastructure that will allow many people to work remotely and travel less.

Sheffield is at a pivotal point as we develop our new local plan which will be central to planning policy for 20 years once it comes into force. It is crucial to make the plan as ambitious as it can be, and that it is futureproofed.

Sheffield introduced one of the first district energy networks in the country over 25 years ago, fuelled by the city's residual waste. More recently, district heating is increasingly recognised as having the potential to play a large part in the decarbonisation of the city's heating, and there is the potential to explore new and innovative ways to source its energy, its expansion to serve an increased number of both residential and commercial properties, and work is underway to explore options for investment to secure its future.

As heating and transport is increasingly electrified, and increasing levels of renewable energy are fed into the grid, the electrical infrastructure which we take for granted will have to cope with levels and variability of demand and supply that it was not designed to manage. The electricity grid system in Sheffield, as elsewhere, will need to be fit for the future and we have a role to work with Northern Power Grid to influence this.

1. Using the planning system to support our ambitions

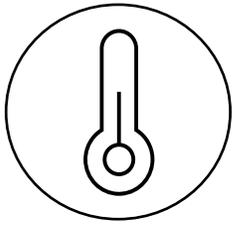
- Develop a new Local Plan that is future-proofed and supports our ambitions to transition to a zero carbon economy by 2030.
- Explore what sustainable neighbourhoods might look like.
- Develop and apply interim revised supplementary planning guidance on renewable and low carbon energy to apply before the Local Plan is adopted.
- Explore the potential for a compulsory carbon offsetting scheme in circumstances when on site abatement is not possible.

2. Ensuring our energy infrastructure is fit for purpose

- Work with partners to explore opportunities for the expansion and decarbonisation of existing heat networks, including through the identification of heat network zones.
- Continue work to explore options for investment in the District Energy Network.
- Continue to work with Northern Power Grid to ensure that Sheffield's electricity infrastructure is capable of supporting our net zero goals and to ensure that investment is made to enable this.
- Work with Cadent to explore opportunities to decarbonise the gas grid.

3. Investing in our transport infrastructure

- We are delivering a £50+ million programme of active travel and public transport improvements across the city through our Transforming Cities Funding, to enable people to get around the city using low carbon, sustainable and inclusive ways of travelling.



10 We will prepare the city to adapt for a changing climate

We know that even our best efforts in Sheffield and globally can only limit climate change. Whilst every fraction of a degree temperature increase that can be avoided matters, we also need to prepare our city for a changing climate. Increasing extreme weather events will become increasingly common, particularly flooding, extreme heat and wild fire. These will impact on people's health and wellbeing and way of life, on service demands and on our economy.

We will need to have a full understanding of which areas are at risk so that we can plan appropriately. Buildings for the future will need to increasingly incorporate features such as green walls, green roofs and, in flood prone areas, buildings that are raised off the ground to withstand flooding. We already have examples of all these interventions, and Sheffield has been at the forefront of green roof development in the UK.

Through the City's Flood Programme we have invested more than £25m in flood risk reduction since the devastating floods of 2007 directly protecting over 500 businesses and approx. 350 homes. £15m of schemes are now in delivery and development to protect a further 100 homes and over 150 more businesses. Between now and 2027 more than £50m of further investment is planned across the Sheaf, Porter and Blackburn Brook to protect 750 homes and over 500 businesses.

We already focus a lot of our resilience work on nature-based solutions to flood prevention, including our internationally acclaimed Grey to Green programme of Sustainable Urban Drainage interventions, moorland restoration and natural flood management. We are looking at ways of working with partners and landowners to expand this work using learning from current projects such as our trial of natural flood management approaches in the Limb Brook Valley with Sheffield and Rotherham Wildlife.

1. Develop our understanding of the impacts of climate change on our city, and on the people who live and work here.

- Commission work to increase our understanding of the impact of climate change on Sheffield's residents in the coming years.

2. Create a resilience plan for the city

- Work with city partners to develop a plan setting out how we can work together to thrive in a changing climate. This will include forward planning, preparing our people and businesses and emergency planning.

3. Future-proofing our city

- Use the opportunity of the development of the Local Plan to futureproof our planning framework.
- Invest in flood risk reduction measures to better protect existing property and infrastructure and to enable resilient investment.
- Identify and look for funding to deliver interventions to mitigate the impacts of climate change.

4. Supporting our people and businesses to adapt

- Our Flood Programme includes providing flood resilience guidance for people and businesses.

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