

CALDERDALE

# CLIMATE

ACTION PLAN 2022-25



DRAFT

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## OUR PATH TO A BRIGHTER FUTURE

Tackling Climate Change is the challenge of our generation.

Here in Calderdale, it's a challenge we are ready to face.

We've gone through devastating floods and learned a lot about taking action with kindness and resilience.

We learned we need to work urgently, be organised, and create momentum to reach our target of Net Zero by 2038.

**It will be here sooner than we think.**

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## INTRODUCTION

Climate change is a global issue, but we all have a role to play in protecting our planet.

Since the industrial revolution, the world has become increasingly reliant on fossil fuels. We burn fossil fuels to warm our homes and workplaces, power our transport and factories, and create electricity.

However, we can't continue to burn fossil fuels. Burning them releases dangerous, planet-warming gases. They have already warmed the planet by more than 1°C and altered the climate.

We can see the impacts outside our window: our seasons are changing. You may have noticed that in the last decade, flooding in Calderdale has been worse than ever before. Worryingly, this is a pattern that is also being seen across the world as extreme weather events are on the rise. This is a direct result of climate change. The **International Panel on Climate Change (IPCC)** is warning of crop losses and water scarcity across Europe if we don't act soon.

We also know now that solving this problem doesn't mean going back to the stone age. Clean energy and technology solutions are just the start. The good news is that tackling climate change will make life better for us and our families. Join us on our path to a brighter future.

### CALDERDALE'S JOURNEY SO FAR

In 2008, the Climate Change Act became law in the UK. It legally bound the country to getting to Net Zero by 2050. **A more recent update** set a legal target of reducing fossil fuel emissions by 78% by 2035. **In a recent report, the Climate Change Committee (the CCC)** found that UK Government has a solid Net Zero strategy but are behind on action.

We want to take control locally to make sure action happens quickly. Lots of work has been happening for years to protect the environment in Calderdale.

In early 2019, Calderdale Council declared a climate emergency. The Council then set the target of achieving Net Zero by 2038 with significant progress by 2030. This is ahead of national targets but is backed by science. Our neighbours in West Yorkshire (Leeds, Wakefield, Kirklees and Bradford), North Yorkshire, and Greater Manchester have set the same target. You can read more about this decision **in the report on the targets.**



We have made major progress and have hit our historic target to reduce CO2 emissions by 40% by 2020. Together we must go further and faster if we are to leave a stable and habitable world behind for future generations.

One thing is clear: this challenge isn't just about avoiding a climate disaster. Actions which lower carbon emissions also mean that people can live better lives in a healthier, greener, fairer Calderdale.

## OUR PATH TO NET ZERO

In 2021 we commissioned a study that looked at where carbon is coming from in Calderdale and what we need to do to reach Net Zero. This is our **Emissions Reduction Pathway**. This technical study has allowed us to understand the scale of the challenge and recognise what we as a borough, and the West Yorkshire region, need to do in the coming years. It provides the foundation for this Action Plan.

The study taught us that it is technically possible for Calderdale to reach close to Net Zero. However, there is no silver bullet. There are instead a range of powerful solutions that require us to work together to find creative solutions to complicated problems.

To meet our targets we need to act fast. That's why this is a three-year plan: to focus our minds and avoid delay. The more actions we are able to do sooner, the bigger the effect will be. Climate change is about the build-up of emissions which is why we need to cut more of these emission, sooner.

Sir David King, the former UK chief scientific advisor said in 2021: "We have to move quickly. What we do over the next three to four years, I believe, is going to determine the future of humanity".

## MEASURING PROGRESS

How do we know we are on our way to Net Zero? We monitor our greenhouse gas emissions each year. We will continue to do this and will report the borough's emissions in our annual review. We will monitor our progress against a range of pathways to Net Zero. You can read more about this in **appendix 2.1**.

The best greenhouse gas emissions data comes from national datasets. These data sets don't always pick up on the full story of our local efforts. We are developing a set of local measurements you will see throughout this plan. Once they are ready, we will update these numbers annually and display them on the **Dataworks** climate dashboard so everyone can see the impact of our collective work.

## NET ZERO BY 2038

Net Zero refers to a state where the greenhouse gases going into the atmosphere are balanced by their removal out of the atmosphere.

Natural processes like trees and healthy peat bogs absorb carbon – but at the moment, we burn so many fossil fuels that nature can't keep up. Many peat bogs in Calderdale are emitting carbon as they are badly damaged and are being burnt.

At this stage the focus needs to be on reducing the amount of greenhouse gases we are releasing; this is not just CO2 but other gases like methane and nitrous oxides. You can imagine Net Zero as being like balancing a set of scales.



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## OFFSETTING

Offsetting is a method you can use to tackle more difficult and sometimes unavoidable emissions. We can take carbon out of the atmosphere, for example by tree planting or through technology. However, the technology to do this is in its very early stages and cannot be relied on to stop climate breakdown.

We commit to limiting the use of offsets. If offsetting is used, it must be as local as possible.



## ZERO CARBON CALDERDALE: OUR PATH TO A BRIGHTER FUTURE

The plan is divided into six sections: Shared Voice, Community Climate Action, Warm and Resilient Buildings, Green Economy, Transport, and Land and Nature. We have written this plan so you can dip in and out and read the sections that are most interesting to you.

The Climate Action Plan focuses on the actions that will have the biggest impact now and actions which will unlock the best long-term results. We are also committed to making the transition to Net Zero fair: no one should be left behind.

### WORKING TOGETHER: OUR COMMITMENTS

Through a process of working together, bringing in key expertise, and using the science to guide us, we have assembled clear lists of priority actions for the next three years. You can read about the process for producing this plan, and find out who was involved, in [appendix 3](#).

These priorities were selected by Calderdale Council's Climate Action Partnership, a group made of councillors, community representatives and local experts. You can read more about how this partnership works in the Shared Voice section.

We use 'we' throughout the document to refer to our actions. 'We' refers to all of us in the borough of Calderdale. The partnership might not be able to implement all the actions, but the partnership is taking responsibility for making sure that these actions happen. Many of the actions need funds and finance in order to accelerate delivery, including people to project manage and maintain projects in the long term. This challenge is addressed in Shared Voice.

### START TODAY: WHAT YOU CAN DO

We want every individual, community group or business to use their unique skills in the most effective way. We aim to inspire action and help you to understand where to best put your time, energy, and passion. Throughout the Action Plan there are ideas on actions you can take.

You will also see examples of work ongoing around Calderdale – this is to show you that we are not starting from nothing. The transformation to Net Zero is already happening. Let's get on board and work together to build a brighter future.

## SHARED VOICE

We can't fully tackle the climate emergency alone, not as individuals, organisations or even as a borough. Shared Voice outlines the responsibility that the Climate Action Partnership will take to create a change that is bigger when we work together.

Calderdale is a small place, but we excel at big thinking. Shared Voice recognises the need to work together effectively, championing and planning for action on the biggest issue of our time.

We are confident in the impact we can have because we have some strong solutions. These will not just reduce carbon emissions but will also tackle big problems in our modern lives: the cost of living, health and wellbeing and food security.

## OUR CLIMATE ACTION PARTNERSHIP

Our Climate Action Partnership will ensure actions outlined in this plan get done. We want to be clear on how this group runs and be open about the decisions that we make.

The Partnership is a group made up of elected local Councillors from all political parties, members of the Youth Council, community groups, the NHS, housing and third sector representatives. We have recently reviewed how this partnership works – to make sure its impact is as wide as possible – and you can read about this in detail **in the report we took to Calderdale Council's cabinet.**

## WORKING TOGETHER

**We will further develop and expand the Climate Action Partnership.**

As a group, the Partnership's role is to:

- Start work on a Climate Resilience Plan in 2022
- Produce a delivery plan by 2023
- Develop, review, and update our Action Plan
- Release our first annual review in 2023



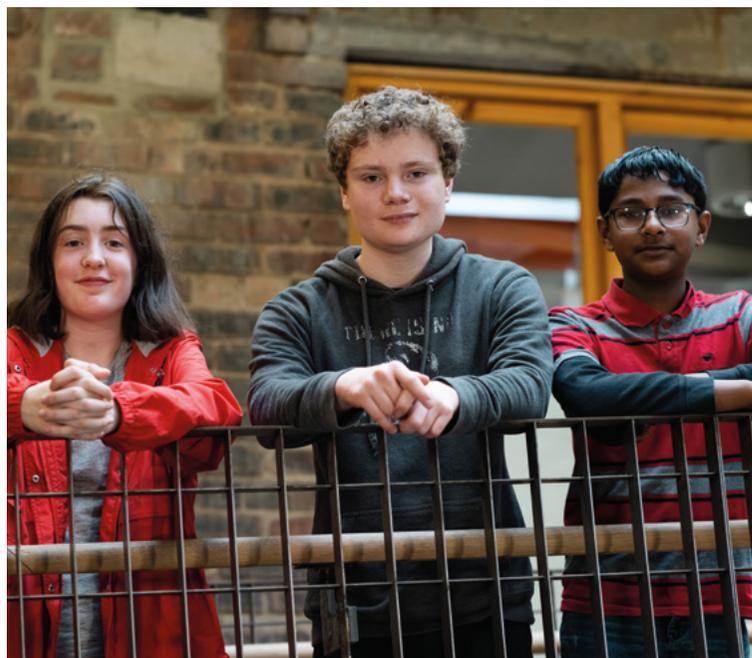
- Make sure actions get done by the person or people best placed to do them
- Set targets, gather better data, and monitor progress
- Inspire action and show leadership
- Have open, transparent discussions about progress, challenges, opportunities, and vote on key decisions
- Ask peers to review our progress regularly

### LOCAL ACTION: YOUTH VOICE

Youth Council members have been part of the Climate Action Partnership since 2019.

Their voice is really important to guarantee that we are ambitious in our action – it's their future we're talking about!

This is something that we think should happen more across the country.



## VISIBILITY

You will see throughout this plan that a lot of incredible action is already happening. Reading about progress can ease climate anxiety and knowing where we are falling behind can help us focus on action.

## WORKING TOGETHER

**A key action is to set up a Calderdale Climate Action website by 2023 where we can share innovation and strengthen everyone's voices. We will regularly publish our progress: we have committed to annual progress reports but want to update you more frequently than this.**

We will use lots of ways to keep you informed and show you the change that's happening including photos, videos, infographics and a regular e-newsletter that will highlight the fantastic work that's going on.

## START TODAY

You can sign up for our new climate emergency e-newsletter, which will provide further details and updates on the Climate Action Plan [here](#). The first newsletter will be released in 2022.

We are consulting widely for this Action Plan. Reaching out and getting your ideas can't stop there though.

**We will set up a mechanism where you can input your thoughts and make sure there is a system for feeding back to you, so you know you are being listened to.**

## COLLABORATING AND INFLUENCING

We can't make this Action Plan happen without people to work out the details, start projects, and secure the funding. We recognise this challenge, and **finding resources is a key action**. We know that the actions outlined in the plan will have long-term financial benefits: we see it as an investment in the borough's future. We will produce our influencing strategy by 2023.



The West Yorkshire Mayor has a role. Other regional bodies like the Yorkshire and Humber Climate Commission can also help bring people together and support action.

## WORKING TOGETHER

One advantage of being a small borough is that we can collaborate locally easily. There is a huge range of talent in Calderdale: we know that if we reach out and talk to people, we will find the skills we need. We want to see organisations benefit from the transition to Net Zero so it's important that we don't leave anyone behind. **We will collaborate locally on action.**

Our Emissions Reduction Pathway is very clear that although there is a lot we can do locally, serious action needs to come from the Government. Our job is to **work with and influence others to act.** Calderdale is in an excellent position in West Yorkshire: bridging Greater Manchester and Yorkshire. We will work with our neighbouring boroughs to call for urgent action. We will be clear on what we need, and we will create a strong shared voice to make change happen.

Throughout this plan you will see key areas where we want to influence:

- **Renewable Energy:** Influencing national government to ensure communities can benefit from local energy production
- **Transport:** 70% of the decisions on transport policy are nationally controlled and making sure our buses function properly will mean action from the West Yorkshire Combined Authority
- **Natural Flood Management (NFM):** NFM needs to happen on a large scale to have a big impact. This means national action and funding
- **Building Standards:** This is something that is difficult to raise locally so we need to work regionally and nationally to make it happen

## START TODAY

We are all influencers: when we adopt low carbon behaviours or talk about climate change, we influence others to change.

You can also write to your MP to get your voice heard on climate action.

## EMBEDDING CLIMATE ACTION INTO EVERYTHING WE DO

The Climate Action Partnership is a group of organisations from across Calderdale. The impact we can have is wider than the actions in this plan. We need to make sure everyone is on the same page within our partnership and in our networks.

### WORKING TOGETHER

Calderdale Council represents the people of Calderdale and makes decisions every day that impact people's lives. A key action for Calderdale Council – and all members of the Climate Action Partnership – **is to ensure that climate action is built into decision making.**

**We will develop key asks for members of the Climate Action Partnership and we will support them on their journey.**

This includes:

- Making sure climate action is part of procurement processes
- Joining up plans and strategies
- Communicating widely about taking climate action, including training staff
- Decarbonising fleet and staff travel
- Implementing low carbon food policies

### LOCAL ACTION: CALDERDALE COUNCIL

Tackling the climate emergency is one of Calderdale Council's three key priorities and they are working hard to embed climate action into everything they do. For example, the climate emergency is a key part of the local plan to influence new developments.

The Council is quickly decarbonising public buildings and its fleet, and they have been training staff on climate action since 2019.



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## COMMUNITY CLIMATE ACTION

Action needs to happen on all levels, from Government to individuals. Everyone can take action to tackle the climate emergency – working together is a great way to have a much bigger impact. Many community groups in Calderdale are already leading the way on climate action; creating a sense of belonging, showing what’s possible and supporting each other to help ideas to grow.

### LOW-CARBON COMMUNITY ADVICE HUBS

This document contains lots of sources of help and support for people looking to tackle the climate emergency. However, we recognise that the number of suggestions and different advice providers can be overwhelming. It is important that people can get honest, factual advice from someone local that they trust and who they can go back to if they have further questions.

#### WORKING TOGETHER

Whether it’s online, on the phone, or high-street based, **we aim to launch low-carbon community advice hubs across Calderdale, launching the first one in 2023.** We will work across our trusted networks to agree on how this is best delivered for Calderdale’s varied towns and communities, ensuring the hubs support as many people as possible. This will also help us build local expertise and cascade knowledge across the borough.

#### START TODAY

There is already some great advice out there:

- [Energy Saving Trust](#) can help you work out how to decarbonise your home
- [Green Calderdale](#) has advice on campaigning, volunteering and local events and news
- [Slow the Flow](#) has advice on how to help reduce flooding in Calderdale
- [Zero Carbon Yorkshire](#) provides support for people, groups, and organisations in the region to reduce their carbon footprints
- [Three Valley Vegans](#) provides advice on dietary change to reduce greenhouse gas emissions

## LOCAL ACTION: CALDERDALE INTERFAITH COUNCIL

Community groups are already a great source of advice and learning. Calderdale's Interfaith Council held a climate emergency conference in 2021.

Different faith communities explored why climate action is important for their faith. They also shared and learned from each other about the climate action they are taking.



## SPREADING THE WORD

Local surveys tell us that around 80% of people are concerned about climate change. Citizens assemblies, like [the Climate Assembly UK](#), show us that when people are informed about the causes and solutions of the climate emergency and have the opportunity to explore solutions with others, they really want to see change happen and often get involved in creating that change.

## WORKING TOGETHER

**We want to spread the message of building a brighter Zero Carbon Calderdale to as many people as we can.**

We can learn from the lessons of coronavirus where we worked with a range of community leaders to reach many different people. This time, however, we hopefully won't need to socially distance! A big priority is meeting people, working with our incredible artistic, cultural, voluntary, and business networks to use their talents to help spread the message about the climate emergency.

We will inform people about Calderdale's Climate Action Plan and the many ways they can be involved.

**By the end of 2022, we will publish our Action Plan engagement strategy. We will survey attitudes on climate change to understand the scale of our impact.**



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## LOCAL ACTION: SAND IN YOUR EYE

With the help of local school children, Calderdale's **Sand in Your Eye** created a 60-metre portrait of Greta Thunberg to celebrate International Women's Day 2020.

In 2020, their annual pumpkin trail featured a wide array of **climate-themed pumpkin carvings**.

Next year's festival will be a 'Welcome to Hebden Bridge 2084' looking from the future at all we did to tackle climate change. What an inventive way to spread the word!



## BUILDING SUSTAINABLE LIVES

A huge proportion of our emissions come from the things we buy and eat. These emissions are usually released outside of Calderdale. For example, our food is typically from farms elsewhere in the UK or abroad, which produce greenhouse gasses from fertilizers and animals like sheep and cows.



Many of the things we buy are made in factories abroad, for example in China or the United States of America. There is a debate about who should be responsible for those emissions – but we know that we can influence them.

Tackling these emissions is complex. Getting to Net Zero means that the factories and farms we buy things from, and companies who transport goods around, need to stop using fossil fuels. If we can buy things that last longer, we buy less too. We also really need to produce less waste by getting rid of unnecessary packaging and reusing and recycling what's left. Everyone needs to have easy access to affordable, sustainable options that suit their families and routines.

## WORKING TOGETHER

To tackle these emissions, sustainable choices need to be easy, affordable and enjoyable. These ideas are already growing; apps like **Olio** and **Too Good To Go** help neighbours share and reduce food waste. Campaigns like **Veganuary** and **Clean Air Day** encourage people to try sustainable diets and transport. Repair Cafes are popping up around Calderdale, for example, **one in Heptonstall** and now one in **Todmorden**, to match repair skills to broken things.

**We will build on this momentum and develop ways to help people live more sustainable lives, including what we eat and what we buy.**

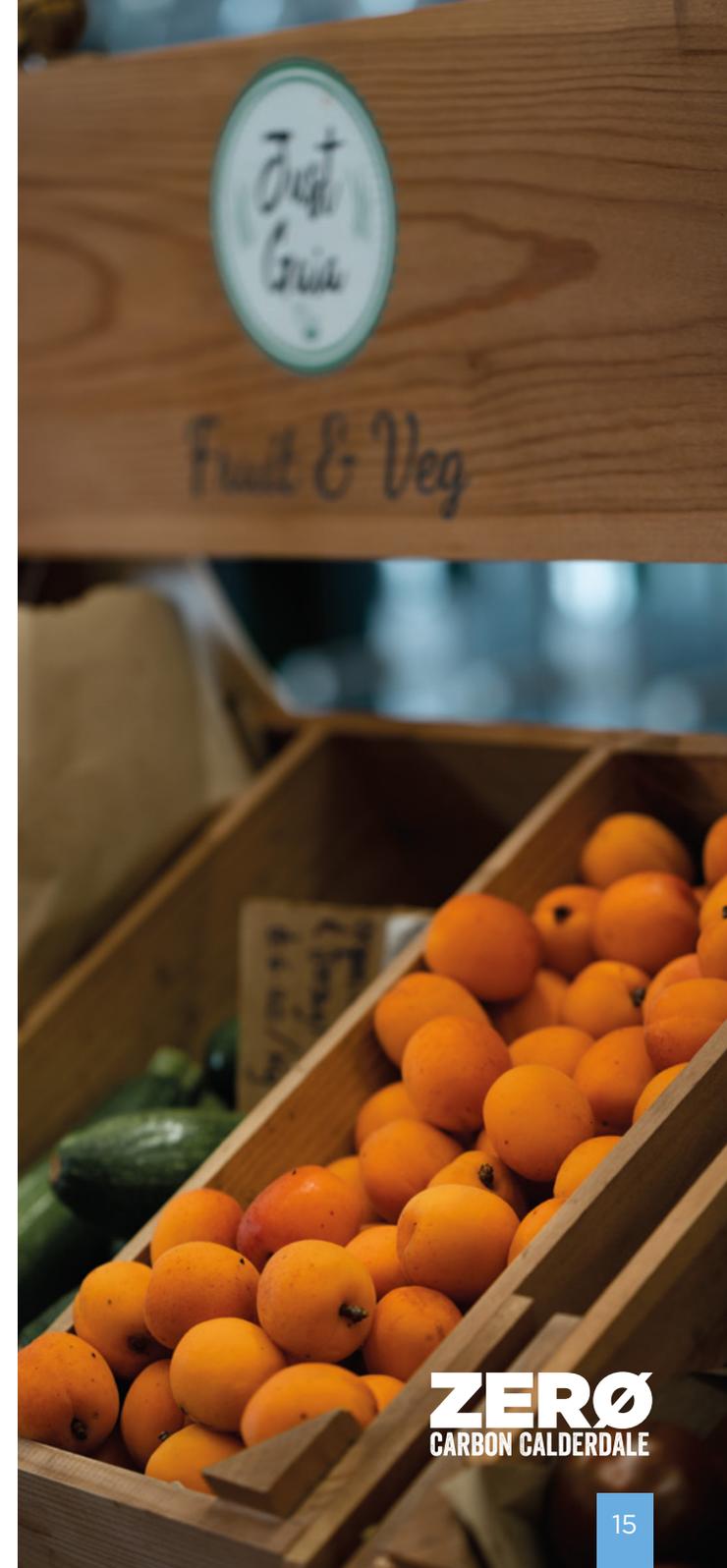
We will develop better data and clarity on these indirect carbon and other greenhouse gas emissions as soon as possible so we can understand the impact of our choices, and how the systems around us influence them.

## LOCAL ACTION: CALDERDALE FOOD NETWORK

Food is such an important part of our lives – it plays a big part in how we celebrate significant events and connect with family and friends. To achieve Net Zero, we need to change how we eat which is also likely to make us healthier.

**Calderdale Food Network** is working hard to make sure healthy, affordable, sustainable, local food is accessible to all. This includes improving access to local food growing, reducing meat and dairy and making sure that school food has the nutrients to help kids grow.

We are currently bronze level and aim to move to silver by 2023 and gold by 2025 or sooner.



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## COMMUNITIES TAKING ACTION

How can we support communities to play their part in making lasting change? Calderdale is already fortunate to have a vibrant community sector with lots of groups and organisations taking innovative climate action.

### WORKING TOGETHER

Calderdale Council and Community Foundation for Calderdale have invested in a £1 million Climate Emergency Fund to help communities to run climate action projects.

**As well as this, we want to employ a dedicated community support worker who will work with groups to encourage, facilitate, and support community climate projects. We will do this by 2023.**

**We also want to work with existing community networks that already work well to support local ideas and bring in expertise and resources, so they can have even more of an impact.**

Working with these networks, we can reach more people, and we can help communities take the action that works best for them.

We will measure progress by monitoring the number of climate-related groups in the borough, and the number of people involved in community climate projects.

### LOCAL ACTION: INCREDIBLE EDIBLE

Incredible Edible started as a community food growing project in Calderdale that is now a global movement. They help communities become more connected through the power of local food growing.

To support this, Calderdale Council created a community growing licence which allows local groups, neighbours or individuals to turn Council-owned land into allotments. Learn more about [the community growing licence](#) or [check the map](#) to see areas where you can start an allotment.



## START TODAY

Check out [VSI Alliance](#), [Voluntary Action Calderdale](#) or [Community Foundation for Calderdale](#) to learn about projects you could get involved in and to find support to help you take ideas further.

## NEIGHBOURHOOD CLIMATE ACTION PLANS

Taking time to reflect and put together a plan can really help to focus action, and the different neighbourhoods in Calderdale have different climate challenges and opportunities. Neighbourhood climate Action Plans can help you and your community figure out what carbon reduction and climate resilience solutions work for you. We already have two Town Council-owned climate Action Plans, but this doesn't mean that's the only way of doing it. In Calderdale our towns and neighbourhoods have distinct identities, and people in those neighbourhoods have important ideas about what needs to happen.

## WORKING TOGETHER

**We will work with communities to develop neighbourhood climate Action Plans.**

We will measure our success by the number of neighbourhood climate Action Plans agreed upon and implemented across the borough. We aim to see our next neighbourhood Climate Action Plan by 2023 with the rest to follow.

### LOCAL ACTION: HEBDEN ROYD TOWN COUNCIL'S ACTION PLAN

In 2020, Hebden Royd Town Council produced their first local Climate Action Plan that set out the action they would take to help tackle the climate emergency locally. It has since been updated and they successfully sourced funding for a Climate Emergency and Biodiversity Coordinator who is helping tackle the climate emergency.

As part of the plan, Calderdale Council funded the Mytholmroyd Climate Group E-bike'um" e-bike festival. The community had the chance to try out electric bicycles free of charge on a traffic-free section of Cragg Road, the longest continuous ascent in the country. The power of community action!



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## WARM AND RESILIENT BUILDINGS

51% of Calderdale's emissions come from our buildings. Our heating systems are a big part of the problem – we mostly use fossil-fuel gas boilers. Buildings often also have low levels of insulation which means that buildings can be draughty and expensive to run.

Every home in the borough needs to be warm, resilient and low carbon. This can only happen if we work hard – and quickly – to insulate thousands of homes by 2038 and move away from gas boilers to technology like heat pumps and district heating. Investment in home energy efficiency is urgent and has many benefits: affordable heating, job creation and improved health and wellbeing for example.

### RETROFITTING OUR BUILDINGS

Getting every building in the borough to an Energy Performance Certificate (EPC) rating of C or above is a huge challenge. Many of our homes leak heat because they were built when heating worked differently, when gas was cheaper and before we understood the impact of burning fossil fuels.

Overcoming this challenge will mean our homes and workplaces are comfortable both in cold winters and hot summers. Good insulation also keeps noise levels down indoors.

It's important for our health too: living in a cold home has mental and physical health and wellbeing **impacts**. The issue costs the NHS about £340 million a year in preventable illnesses.

With 69,000 homes to retrofit by 2038 at a rate of 2,800 per year by 2025 to reach Net Zero<sup>1</sup>, it's clear a one-size-fits-all approach won't work.

### WORKING TOGETHER

**The Climate Action Partnership will develop a fair retrofit strategy covering the range of building types and tenures across the borough. We will start this strategy in 2022.**

It will look at the issues people are facing with affordable heat to find solutions that don't leave anyone behind. The strategy will also make sure retrofit measures implemented across Calderdale are installed to a high quality that both keeps homes warm and ensures good ventilation to maintain healthy air. It is not limited to homes: we are currently decarbonising many public buildings, such as Todmorden Sports Centre, and are working out how to make sure schools across the borough are warm and resilient.

We will measure our success by increasing the number of homes and buildings with an EPC rating of C or higher. We aim to reach a retrofit rate on 2,800 homes per year by 2025.

You can also read in the **Green Economy section** how we plan to grow local business skills and capacity to deliver the work needed. This will involve working with colleges and local businesses to develop a new skilled workforce and supply chains, to both install and maintain new insulation, heating and ventilation systems, and introduce new construction techniques. There will be a role for projects commissioned by members of the Climate Action Partnership to build the demand for these new ways of working, while demand develops in the private sector.

### START TODAY

Calderdale's beautiful stone buildings will be a challenge to decarbonise and make up 50% of Calderdale's homes. If you own a home with solid walls, you could consider doing internal wall insulation on a room-by-room basis. It will limit the impact of disruption, spread the cost and could be done when decorating.

You can also help **by getting an up-to-date EPC rating**. You can find out more about EPCs across the borough **on this open data website**.

### LOCAL ACTION: WOMEN CENTRE RETROFIT

**WomenCentre** was successful in their bid for funding from the **Community Foundation for Calderdale £1 million Climate Emergency Fund**.

They want to get their Halifax building to Net Zero and are starting by replacing windows and lighting. The three-storey building is currently EPC D and can be cold and draughty - this building provides a vital service to the community so it's important that it is as warm and resilient as it can be.



## RETROFIT

Making changes to existing buildings, such as adding insulation and renewable energy, so that energy consumption and carbon emissions are reduced.

These changes also provide the benefit of a more comfortable and healthier home with lower fuel bills.





## TRUSTED ADVICE

There is a lot we can do to lower our home's carbon footprint. There are simple energy efficiency actions such as turning the heating down, installing heating controls and buying energy-efficient appliances. **The Energy Saving Trust** has lots of great advice.

## WORKING TOGETHER

As insulating your home is a big decision, having a trusted and independent expert to talk to is important:

**We will make sure our local advice hub – introduced in our Community Climate Action section – is equipped with independent and trusted expertise on home retrofit and finance solutions. We want to build a directory of local tradespeople with the right skills.**

We will measure the success of this service by an increase in EPC ratings in all types of properties.

**Our long-term action is to improve costs for currently expensive solutions like solid wall insulation and shared ground source heat pumps.**

## START TODAY

In the meantime, **Simple Energy Advice** provides impartial and independent advice and you might find you are eligible for a home improvement grant. There are grants for both owned and rented homes. Speaking to your landlord is a good first step if you're a tenant. Homeowners can speak to their mortgage holder to find out if they can help you finance improvements.

## LOCAL ACTION: GREEN HOMES GRANT

At the end of 2021, Calderdale Council had completed energy improvement work to over 350 attic rooms in partnership with **Better Homes Yorkshire** and thanks to a successful bid for funding from the Government Department for Business, Energy and Industrial Strategy's Green Home Grant Local Authority Delivery Scheme. The work, which initially began with 160 properties in 2019, has a lifetime CO2 saving of almost 17,000 tonnes.

## BUILDING SUCCESS

Although much of the technology that will get us to Net Zero is already here, there is still work to do to deliver it at the scale and pace needed.

## WORKING TOGETHER

We want to demonstrate that it can be done in a way that works for Calderdale.

**Before 2025, we will start piloting visible and innovative ways of decarbonising homes so we can build the skills needed locally and so people can see what good looks like. We aim to find the necessary financial mechanisms to make a whole street retrofit a reality by 2023.**

## START TODAY

We will also support communities to develop solutions in their neighbourhoods. Could you share your knowledge and skills? Would you be interested in a whole street retrofit projects? An ambitious community drive can reduce the price of materials and labour and encourage local businesses to get involved and provide solutions. **Carbon co-op** are a great place to learn more about this approach.

## LOCAL ACTION: NEWGROUND TOGETHER, CHARITABLE ARM OF TOGETHER HOUSING GROUP

Newground Together are working alongside Halifax Opportunities Trust and WomenCentre to deliver Greener Together. Funded by West Yorkshire Combined Authority and Together Housing group.

As part of the plan to deliver green homes the Greener Together project is focused on green spaces, places and futures in Calderdale communities. They plan to reach 1,000 people: helping people into work and in their lives with valuable green skills. They will be using a retrofit demonstrator house as a pop-up community learning space that shows people how simple it is to live with new tech. It also helps both residents and professionals get to grips with the technology.

Watch out: they're delivering community activities too, forming an army of Green Warriors to spread the message!



## LOW CARBON NEW HOMES

If homes and buildings that are being built right now aren't zero carbon ready, they will need to be retrofitted before 2038. We don't want to make our retrofit to-do list even longer – we want to get it right the first time.

The homes that are being built now must be zero carbon ready, with the highest enforceable standards of efficiency – well insulated and ventilated, free from draughts and with roofs designed to maximise the opportunity for solar electricity and hot water systems. They also need to have low-carbon heating and be built to protect us from extreme weather, like heatwaves.

We know from experience that insulating a home while it's being built costs significantly less than retrofitting it later. It is unfair to load that cost and inconvenience onto the purchasers of these homes. As people learn more about the climate emergency, green homes will become more and more attractive to buyers who will be looking hard at what utility bills will cost them each year.

We are also aware of the need for new homes in the current housing crisis: we need to face the challenge of producing enough low carbon new homes to meet demand.

### WORKING TOGETHER

The council's planning department has a key role to play.

**We will ensure that zero carbon homes and neighbourhoods become the standard in Calderdale and that they are built to protect us from extreme weather, aiming for all new builds to be 10% carbon positive by 2025 or sooner.**

**The Climate Action Partnership will also work with the whole supply chain to make sure new buildings, retrofits and extensions are climate resilient and energy efficient, and that their construction has a low impact on the environment.**

Our investment strategy will look at how builders can go green and provide the zero carbon properties people are looking for.

We want to see an increase in zero carbon ready new homes built across Calderdale, so will develop this measure.



## START TODAY

You can learn more about sustainable building best practices from **the AECB**. If you are buying a new home, let your estate agent or the developer know that energy efficiency and climate change are important to you.

### LOCAL ACTION: CALDERDALE'S FIRST PASSIVHAUS

After their children had grown up Graham Joyce and Sally Hinton were looking to move house and build a low energy home to settle in. They built the first certified Passivhaus in Calderdale in Halifax.

Passivhaus has a strict certification scheme, so the house is highly insulated and airtight which includes triple glazing, and a mechanical ventilation system makes sure the air is kept fresh. Solar panels provide some electricity and water is heated by an air source heat pump.

Through clever design, which makes sure the rooms get lots of warmth from the sun, the whole house is heated by only two electric radiators downstairs. You can read more about how they did it on the [Green Buildings Store website](#).



## RESILIENT BUILDINGS

In the changing climate, we need to ensure our homes and businesses are protected. Floods that should be happening once in 50 or 100 years are now happening more frequently, and heatwaves are becoming more intense.

### WORKING TOGETHER

**We will continue to offer flood resilience grants to buildings that are vulnerable to flooding.**

We will measure this by the number of properties in flood prone areas with flood resilience measures. We also need to ensure our homes are equipped for hotter summers. New homes need to be designed to keep cool: this could look like window shades, natural ventilation, and solar control glazing. Heat pumps can also provide cooling in the summer, but good design should always be the first choice to reduce energy use.



## START TODAY

**Eye on Calderdale** has some great advice on preparing for, responding to, and recovering from flooding. It has information on grants you can apply for if your home or business is vulnerable to flooding.

### LOCAL ACTION: THE BLUE TEAPOT

Only months after setting up the café, a dramatic flood hit Lisa's café: the Blue Teapot in Mytholmroyd. She worked - along with help from local people - for 16 hours a day, 7 days a week for 6 weeks to get it back up and running. Not only did she give the café a new look, but she also made it more flood resilient. This involved features like sockets high above where water could rise, treated bricks and a counter that can be wheeled to higher ground when there is a flood warning.

You can learn more about [the Blue Teapot's flood resilience measures in this 3D tour](#).



## GREEN ECONOMY

Net Zero is all about looking forward. It's about making the most of new sectors, skills, and technology so we can thrive in the long term.

Calderdale has an incredible variety of enterprising people who can play their part in their own unique way – from innovative sole traders, co-ops and community interest companies to our varied mix of small to medium enterprises. In a number of sectors, we have business leaders who can show us what the future looks like.

This is a big area of activity across the UK: **the Government has set the ambition** of two million green jobs by 2030. Local action is key to us reaching Net Zero and making the most of the opportunity in Calderdale.

### CALDERDALE'S JOURNEY TO NET ZERO

The journey to Net Zero is creating exciting new sectors and invigorating existing ones. From the rest of the plan, you will see that we need to:

- Insulate 69,000 homes by 2038
- Invest in electricity infrastructure so it can cope with a 51% higher demand
- Increase sales of electric cars by 4,300 per year

That's just the beginning. To do it we need thousands of skilled people and businesses to deliver transformation at a scale never seen before and to maintain it in the long run. You can read in the rest of the plan the huge benefits this work will have for the borough, and how we plan to get work started.

### WORKING TOGETHER

To ensure businesses in Calderdale can make the most of this opportunity, the Climate Action Partnership will start by building links in 2022 with the employers that are essential to the transition to a low-carbon, electricity dependent, economy.

The first key areas we have identified are the construction and maintenance sectors. An initial task is to map the needs of the borough to create security for businesses to plan-ahead.





We will identify how we can invest in the success of these areas within Calderdale, for example by creating local job opportunities with our partners and the projects we have influence over. We will work to help create customer bases to give businesses the security to expand and innovate.

## GREEN JOBS AND SKILLS

At the moment there is a shortage of the kind of skills we need to move to Net Zero. This is an opportunity: **estimates show** that West Yorkshire has the potential to create 40,000 new, high-skilled green jobs by 2030.

Action in this area means opportunities for upskilling or changing career and new career pathways for young people. We also have to make sure that no one is left behind: that those people working in fossil fuel sectors will have access to training to reskill.

It is a key focus for the Mayor of West Yorkshire who has pledged to create 1,000 well-paid, green, skilled jobs for young people. A focus locally will be to work closely with the Mayor to ensure Calderdale delivers the support that is stronger when done locally, and that Calderdale benefits from regional support.

## WORKING TOGETHER

This building of accurate, knowledge-based links, between the Climate Action Partnership, education and businesses is a key priority. **Locally, we will work with education and career support providers on green skills.** We will support them to set up the courses and apprenticeships that we need to upskill at the scale and pace needed for the transformation ahead.

We will encourage these providers and local employers to get out into the schools and inspire young people about the range of work and careers that will be a huge part of the future.

Being given a chance to come into the workplace and speak to people engaged in those jobs will have a huge impact in showing young people what is possible and give them hope for the future.

One measure of success will be an increase in courses offering green skills across Calderdale.

## START TODAY

You can learn about retrofit skills at [The Retrofit Academy](#).

### LOCAL ACTION: THE CLIMATE CHALLENGE COLLEGE

Todmorden's innovative [Climate Challenge College](#) is the first of its kind. It aims to build a local labour pool to kickstart a green economy. Their introductory course develops practical skills in environmental land management, natural building, repair and reuse, energy-saving, and renewable generation schemes.

We can't wait to see more courses like this.



## DOING THINGS DIFFERENTLY

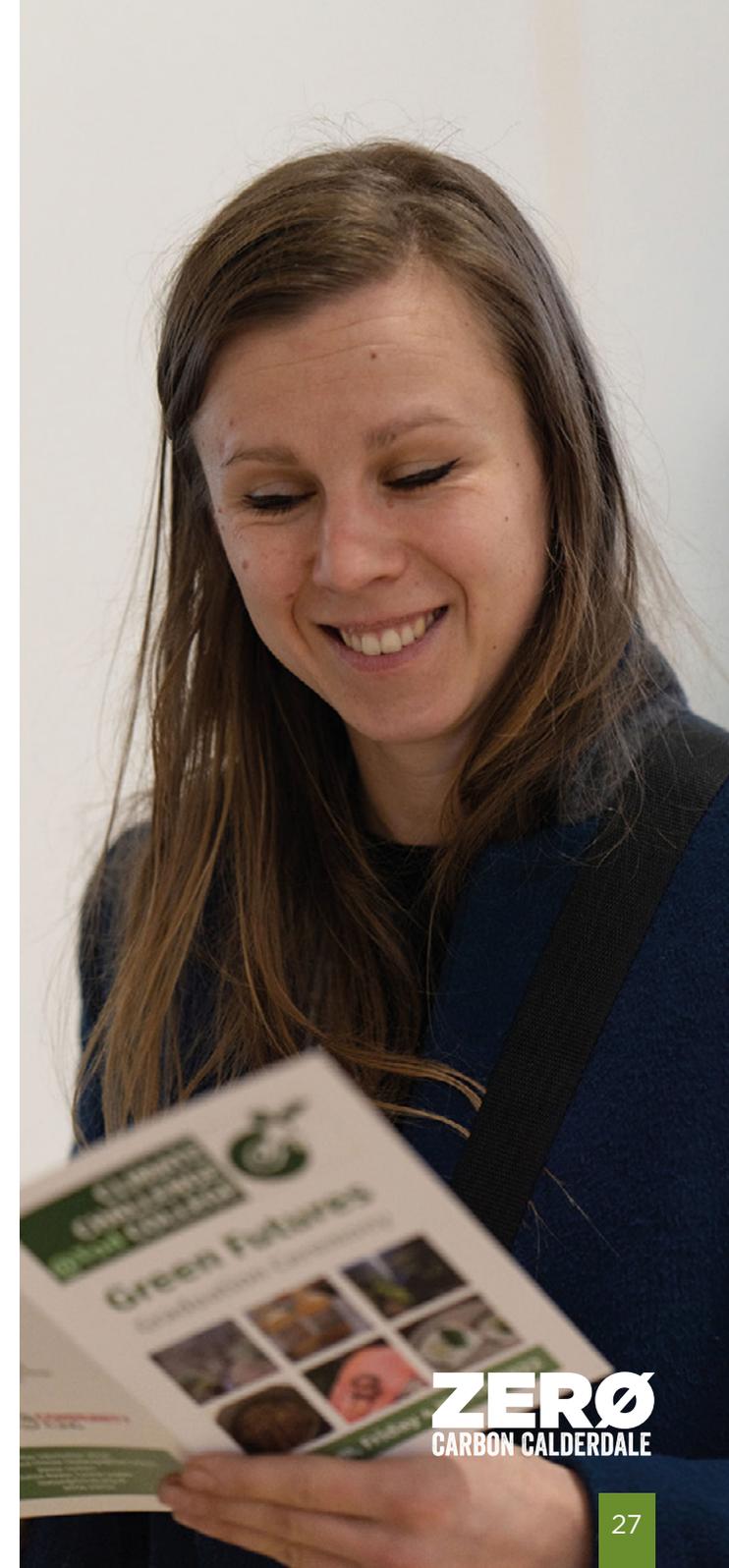
We know that organisations across Calderdale want to do the best for the planet and improve productivity and their long-term prospects. It's not always easy to know where to start.

There are many benefits to becoming more sustainable. Saving money through energy efficiency, bringing in new customers by offering sustainable choices, or upskilling with training to bring in new work and keep talented staff are a few examples.

## WORKING TOGETHER

We need every single business really thinking about being greener.

**We want to do this right, so we will work with and listen to businesses in Calderdale to develop the right support in the right places. We will move quickly in building links with employers, particularly those in currently carbon-heavy businesses who are struggling.**





## Our Themes and Key Actions - Green Economy

65% of people get to work using a car. Employers have a role to play in helping their staff get to work sustainably.

**We will work with employers across the borough to provide bus services for staff, alongside other sustainable transport options such as walking and cycling facilities and pool cars.**

We want to work towards a borough where you can book a place on a bus to get to work. This will require cutting-edge techniques that use data and technology. We can only do that if employers across Calderdale join us in making this happen.

### LOCAL ACTION: GREENGLADE DAY NURSERY

Nurseries, and other places where people are cared for, are great examples of naturally low-carbon businesses. There is still lots they can do to reduce CO2 emissions in their heating, transport, food and much more.

Greenglade Day Nursery and Forest School in Hipperholme have been doing things differently for years. They have installed a biomass boiler, they grow their own vegetables and compost food waste onsite and are even planting their own forest. Kids love getting involved in these activities and learn a lot about the world around them.



### CELEBRATING INNOVATION

There are a whole host of businesses across Calderdale that have been living and breathing “green” for years. From zero waste shops and sustainable packaging companies to delivery e-bikes, Calderdale is brimming with action that is leading the way in sustainability.

### WORKING TOGETHER

**We will celebrate and highlight the businesses that are part of the solution to get us to Net Zero, especially those who are doing things differently.**

The section above describes how we plan to create the right support. Check our website to find out how we are doing this.

## LOCAL ACTION: CARGODALE

**Cargodale** are leading the way in zero-emissions delivery in Calderdale. They deliver shopping, hot and cold food and lots more on electric cargo bikes. You might be surprised by the power of an e-cargo bike: it can deliver up to 80kg in one go. They definitely have the advantage over delivery vans: they can navigate tiny lanes, zip round congestion, and take on all the hills in Calderdale. Cargodale was funded by Calderdale Council to deliver essentials to people self-isolating during COVID-19.

We can't wait to see more cargo bikes - they're definitely a big part of a Net Zero world.



**ZERO**  
CARBON CALDERDALE

## RENEWABLE ENERGY

Did you know that wind and solar power are now cheaper than fossil fuel energy? It is zero emission, can be installed and maintained by local people and businesses, it will run for decades and can directly power local homes and businesses cheaply and efficiently. Wind turbines are already a distinctive part of Calderdale's skyline. Hydropower is suited to Calderdale's streams and rivers, as historic mill buildings and weirs show.

To meet the electricity demands of increasing electric cars and heat pumps, we will need to see a rise in land-based renewables like wind turbines. This will also make us less dependent on imported energy and price hikes. It is a great opportunity for businesses and community groups to reduce their energy bills and create new revenue streams.

## WORKING TOGETHER

**We will work with the Climate Action Partnership to support and develop renewable energy projects which offer benefits to local communities and businesses.**

This will involve developing our Local Area Energy Plan in 2022 and influencing national policy to enable projects to get off the ground. This will form part of our Shared Voice influencing strategy.

### LOCAL ACTION: BLACKSHAW HEAD PENNINE COMMUNITY POWER WIND TURBINE

**Pennine Community Power** was formed in 2012 to create community owned and financed renewable energy.

Their first project was a 10kW wind turbine in Blackshaw Head. By early 2016 it had already generated a return for the community investors, nearly 100,000 kWh of clean energy and almost £3,000 of community benefit in the form of community grants.



## TRANSPORT AND GETTING AROUND

Transport is one of the biggest areas to tackle: 41% of Calderdale's direct CO2 comes from transport, almost all from our roads<sup>1</sup>. The CO2 released (about 420,000 tonnes a year<sup>1</sup>) hasn't dropped at all in the last decade. Our Emissions Reduction Pathway<sup>1</sup> estimates that 70% of these emissions need to be tackled by national action – our Shared Voice section outlines how we will influence those.

Tackling traffic and pollution means improving different transport choices, so you can get where you need to go without needing a car. We will know we are succeeding in reducing emissions when we also see a reduction in traffic on Calderdale's roads. This will show us that car trips are switching to buses, trains, walking, wheeling, and cycling. Many people switching to these modes of transport will give us the biggest reduction in emissions.

At the moment, our local emissions calculations don't include flying. Reduced flying is an important part of the big picture. Frequent flyers have a huge carbon footprint and the aviation industry is driving global temperature increases. That is why we are opposed to all airport expansions.

We will also model and measure the impact that ongoing road building has on our CO2 targets. Making it clear what road building is happening will help us understand how to act and ensure that money is being spent on tackling the climate emergency.

### CREATING STREETS FOR EVERYONE

Safe, attractive streets with less pollution and noise are better for everyone. They mean that we feel comfortable when walking or cycling with our children to school, crossing the road with our dog and chatting with neighbours.

Being able to take short journeys by foot or bike is great for our health, too. This not only makes us feel better by keeping our lungs, heart, and brain healthy but it also reduces pressure on the NHS in the long term.

### WORKING TOGETHER

We will work with communities to find out what changes are best in their streets. These changes might be cycle lanes, car-free days or benches.

### LOW TRAFFIC NEIGHBOURHOODS

Low Traffic Neighbourhoods are not a new idea: streets for decades have been built with dead ends, bollards or kerbs to lower traffic.

Neighbourhoods across the country are experimenting with new ways of lowering traffic, for example with planters, kids' play equipment or cameras. In the right place, they can make a huge difference in helping people feel safer and happier walking, cycling and spending time outside.



This could also mean removing parking spaces for things that make our lives better such as café seating and kids' play areas.

**We will also find out which communities want to become low traffic neighbourhoods.**

We will measure success by increased miles of green and healthy streets in the borough.

### START TODAY

Get in touch with [activestreets@calderdale.gov.uk](mailto:activestreets@calderdale.gov.uk) if greener and healthier streets are something you want to see in your neighbourhood.

### LOCAL ACTION: SCHOOL STREETS

We know that it's great for kids' health, happiness, and concentration if they get fresh air in the morning. It's much better than being stuck in a car.

With Calderdale Council's help, schools across the borough are taking action to close streets to make them safer for walking and cycling – find out more on the [School Streets website](#) or by contacting [schoolstreets@calderdale.gov.uk](mailto:schoolstreets@calderdale.gov.uk).



## GREEN STREETS

When we have big rainfall events, which are increasing with climate change, the water has nowhere to go. It ends up on hard surfaces like roads or filling our Victorian drains.

## WORKING TOGETHER

Street trees and planting are an important way to reduce flooding as they can soak up excess rainwater. They can also provide homes for insects and birds and make our streets cooler in very hot weather.

**One mature tree has the benefits of 60 saplings, so our aim is to plant good quality trees in the right places. We want to see our towns and streets covered in plants.**

## START TODAY

You can also help, for example by planting trees on your own land or garden. You can contact [NFM@calderdale.gov.uk](mailto:NFM@calderdale.gov.uk) for advice on tree planting.

Another way to help is by not paving (or by depaving) your driveway and not installing artificial grass. You can also help by installing water butts that overflow into rain gardens rather than the combined sewer. This isn't just important in areas prone to flooding, but to soak up water before it moves into areas that flood. **Slow the Flow** have great advice on things you can do at home, school, or work.

## PUBLIC TRANSPORT

Research shows that switching from car to bus is one of the most cost-effective ways of lowering CO2 (see appendix 2.3). However, we need to know that the bus or train is going to turn up on time and will be affordable and clean. Improving public transport, meaning more people switch to it, will not only reduce CO2, it will mean our young people will find it easier to get to school or the college of their choice, and people without a car can get to work on time. It also means being able to relax, read a book or watch the world go by on your way – and not having to search for parking!

Buses in West Yorkshire are run by private companies like First and Arriva. Many routes away from main roads or in smaller communities are currently financed by local authorities like Calderdale Council.

The Mayor of West Yorkshire has pledged to take more control of buses so that people have access to them more often. This has started with a Bus Quality Partnership where bus companies are working with Calderdale Council and the West Yorkshire Combined Authority to improve services.





## WORKING TOGETHER

**Our action is to make sure Calderdale has a voice where decisions on services are made, making the most of the changes that are happening with buses. We will work with the Shared Voice group to develop a plan to make this higher profile and engage as many people as we can.**

We want buses in Calderdale and beyond to have lower fares and be more reliable. Read more in the Shared Voice section of this plan. We will measure our success by an increase in bus trips taken in Calderdale.

## START TODAY

There are also great opportunities for employers to take part. You can read in our Green Economy section how we plan to work with employers to reduce emissions from the commute.

## ELECTRIC VEHICLES

To achieve Net Zero, we need to move away from the car being the default mode of transport. There will be some journeys that are best done in the car, which is where car sharing, electric cars and vans come in. Fewer cars on the road will mean those journeys get stuck in traffic less often, too.

## WORKING TOGETHER

Charging electric vehicles is a big worry for people.

**We will work out how charging can work for everyone by making sure it is accessible and affordable.**

We will publish our Electric Vehicle Strategy by 2023.

## LOCAL ACTION: CALDERDALE HOSPITAL ELECTRIFYING THEIR FLEET

Calderdale's local hospital has converted most of its fleet to electric. This has not only reduced CO2 but has meant money saved for our NHS.



## CYCLING AND E-BIKES

There's no hiding from it - with Calderdale's steep valleys, getting around by bike can be hard work. We will continue to develop flat routes between towns - the canal towpath is a great example of this. For the hills, e-bikes have got to be the future: they mean you can glide up the hills without breaking a sweat. Bikes and e-bikes are the perfect low-carbon alternative for short and medium journeys - maybe you've visited another country with great bike lanes and really enjoyed it. We want to have that for Calderdale.



**ZERO**  
CARBON CALDERDALE



## WORKING TOGETHER

With many terraced houses across Calderdale, we know that storage space can be an issue for many people. We will work with businesses, community organisations and other partners to identify key locations for secure e-bike storage. We will promote cycle to work schemes where employers can help reduce the purchase cost.

## START TODAY

You can get started on your e-bike journey by trialling an e-bike: call your local shop to see if there is one you can take out for a test spin. This will help us build up knowledge of where interest for e-bikes is in the borough, so we can plan things like taster days or e-bike festivals.

### LOCAL ACTION: SAFE TRAVEL CUP

Calderdale Council's Transport Service has been running the Safe Travel cup every year. They ask children from local primary schools to come up with exciting ideas to persuade people to leave their cars at home.

The winner of the 2022 SAFE Travel Cup was Riverside School, with their innovative idea of a board game 'the more you walk, cycle or scoot to school, the closer you are to winning the game'.

Another favourite was a song from Bolton Brow school that featured the line "don't be a car potato", complete with illustrated T-shirts!

## CAR CLUBS AND MOBILITY HUBS

Car clubs allow us access to a car but without the pain of having to pay for maintenance, MOTs, and a large upfront cost. They mean that you can access a vehicle when you need it, whether that's to move furniture, in place of a second car, or if you can usually manage without owning a car.

Mobility hubs are places where all transport options are connected. For example, you might ride your e-bike to a hub where you park it securely and take the bus. Or you could walk to your nearest mobility hub and pick up an electric car club.

## WORKING TOGETHER

Our aim is for you to see more car club vehicles in prominent positions across Calderdale.

**We will work with and support car club providers to expand.**

Identifying key locations for mobility hubs is the first step.

**We will work to ensure that neighbourhoods have what they need to make travelling sustainably work for them.**

### LOCAL ACTION: HOUR CAR

**Hour Car** is a thriving Car Share Scheme, which has been operating in the Upper Calder Valley for more than 18 years.

Their aim is to provide an efficient, low-cost alternative to owning a car for residents of Hebden Bridge and the surrounding area. They have five vehicles and over 60 members.

They have recently secured funding for an additional electric vehicle through the **Community Foundation for Calderdale £1 million Climate Emergency Fund** which will be located at the Mobility Hub at Todmorden Railway Station.



## LAND AND NATURE

With its lush, wooded valleys, windswept heather moorlands and breath-taking views from the tops, Calderdale's distinctive countryside is something that can always lift our spirits. However, many of our treasured places, plants and animals have been neglected. This beautiful countryside needs our help to recover and needs new ways to be managed sustainably in the long run.

By 2038 we will see a Calderdale where vulnerable species are thriving, peatland and moorland is healthy and regenerated, natural flood management reduces flood risk and there are more wild places.

The actions in this section link together as part of our spatial strategy for Calderdale.

### THE ECOLOGICAL EMERGENCY

Through this plan, we are addressing the climate emergency in a way that aims to protect our important biodiversity. However, to do it justice the ecological emergency needs its own time and attention.

#### WORKING TOGETHER

**In 2022 we are starting an ecological survey.**

This will help us understand the wildlife habitats and sites that need conservation action.

**Building on this, by April 2023 we will have secured funding to write an ecological emergency Action Plan.**

This will help us take action to reverse wildlife declines and other related work such as stopping the spread of invasive species, further reducing the use of glyphosate and pesticides, and looking after our soil health.

## START TODAY

There are lots of actions you can take to help protect Calderdale's nature. Here are some examples:

- Join a wildlife group, keep learning, donate, volunteer, and put your unique skills to any of the many groups in Calderdale working to protect the environment. **Countryside events** is a great place to start
- Report invasive species: **Eye on Calderdale** shows you how to do this
- Growing your own garden or **allotment** is a valuable way to connect with nature, create habitats for insects and birds and grow your own fresh vegetables and flowers

### LOCAL ACTION: CROMWELL BOTTOM

**Cromwell Bottom in Brighouse** is one of the most important wildlife sites in Calderdale. Situated next to the Calder and Hebble Navigation, the River Calder runs through the reserve.

In the past, it has been a quarry, tip for ash from a power station and a landfill site. In 2015, residents were asked what they would like to see happen to the site.

It was transformed into a mix of woodland, wetlands and grasslands. The wetlands and meadows provide a variety of habitats for many insects, including butterflies, moths, dragonflies and damselflies.



## RESTORING PEATLANDS

Our moors are important and unusual places. Alongside the heather moorlands, they are naturally waterlogged areas. Plants that thrive there have created a thick layer of a special soil called peat. Because of how wet they are, dead plants don't decompose like they do in other places. Instead, they suck carbon dioxide out of the air and lock it into the ground. A healthy peat bog soaks up CO<sub>2</sub>, and unlike trees, has no limit to the amount of carbon it captures.





Unfortunately, old fashioned land management dried out moorland in an attempt to make it useful for agriculture and shooting. It didn't work well – and now we have many dried out and unhealthy bogs which release carbon dioxide. This means there is more risk of wildfires too.

Wildfires are extremely worrying for nearby communities. **We are taking action** to ensure that fire risk is lowered – this includes banning the lighting of fires, barbecues and sky lanterns in these areas. Heather moorland can be better managed without grouse shooting, but, when necessary, by cutting heather. Burning heather is not only a fire risk but is a problem for ecosystems and the health of the peatland habitat.

Moorlands also took a hit during the industrial revolution. Smoke from factories deposited harmful chemicals into the moors, and the land needs help to recover. To meet our Net Zero goals, we need to restore 100% of our lowland and 60% of our upland peatlands by 2038.

### WORKING TOGETHER

We will continue to support and find the resource to work across boundaries to research, conserve, restore and raise awareness of this special environment.

This includes working with the incredible **Moors for the Future**.

We will phase out the use of peat in Climate Action Partners' horticulture by the end of 2022.

### START TODAY

You can help too by avoiding using compost containing peat: unless the label says peat-free it's likely to contain at least 70% peat. **Read more in this article** about the alternatives to peat by the Royal Horticultural Society.

Look out for volunteering opportunities **with Moors for the Future**. You can help restore peatlands, learn new skills, meet new people, and see new things.

## LOCAL ACTION: GROWING RESILIENCE PROJECT

Blanket bogs are covered in a layer of plants including bog moss, which is also known as sphagnum. In 2020, Calderdale Council was successful in securing a National Lottery bid to start an innovative project to grow moss in a nursery and plant it on local council-owned blanket bog areas. We will continue to develop this project. You can learn more about this project [by watching this video](#).



## SLOWING THE FLOW

Most of our towns in Calderdale are in the bottom of our valleys. Heavy rain on the hills can cascade downstream far too quickly. We can help prevent too much water from coming into our towns with Natural Flood Management (NFM).

NFM involves lots of small interventions that together have a big impact to slow water down. An example of this is leaky dams which act as speed bumps and give the ground more time to soak up water. Another example is attenuation ponds. These are normally dry ponds that give water somewhere to go in heavy rainfall.



## WORKING TOGETHER

National Flood Management needs to happen on a large scale to have a big impact.

**We will continue this work and use our influencing strategy to roll it out further.**

Read more about influencing in the Shared Voice section. We will measure progress by monitoring the number of natural flood management interventions across Calderdale.

## START TODAY

You can volunteer with [Slow The Flow](#) and get stuck in! [Landowners can join in](#) by seeing what measures could be applied to their land and grants are often available too.

### LOCAL ACTION: HARDCASTLE CRAGS

Slow The Flow has been working with The National Trust at Hardcastle Craggs near Hebden Bridge since 2016 to develop a pilot scheme to reduce flood risk in Hebden Bridge using Natural Flood Management.

The volunteers meet every month and have built in excess of 520 woody leaky dams with another 100 built by local contractors in harder to reach locations.

This helps to reduce the height of the flood peak further down the catchment, at Hebden Bridge, Mytholmroyd and beyond. These leaky dams also provide additional environmental benefits like diversifying natural habitats for animals, insects, flora and fauna. Take a look at the [Slow The Flow website](#) to check volunteer dates or [visit Hardcastle Craggs](#) and see if you can spot any leaky dams!



## FARMING FOR THE FUTURE

We need to recognise and support the important work farmers do in putting food on our table and managing our countryside. Farmers understand that they have an important role to play when it comes to Net Zero and climate resilience.

Future farming will have to involve a large reduction in sheep and cattle numbers (see appendix 2.2) that both produce planet-warming gases and compact the ground which can lead to flooding. However, grazing has been part of the management of grasslands for many years - no grazing, too little or too much can be hugely damaging to the habitat and dependent species, which include butterflies, grassland fungi, and bees.

### WORKING TOGETHER

**Our ecological survey work and local area energy plan will help us understand the best use for land in Calderdale, whether that is for carbon absorption, generating energy, or protecting biodiversity.**

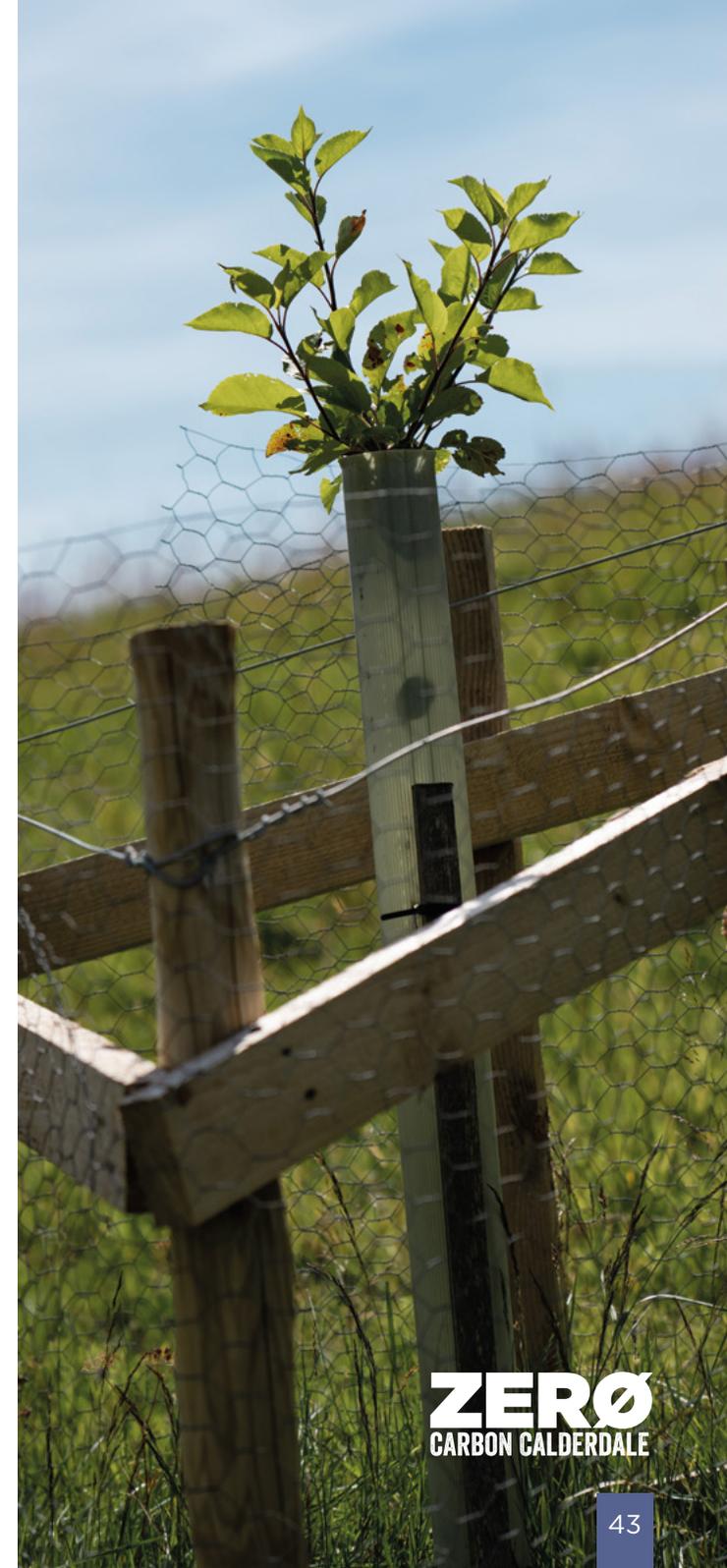
**We will work with farmers and landowners to produce land and farming management advice that works for the geography of Calderdale, and the future climate. This will be informed by our ecological survey work. We will also need to research growing crops that are more resilient to climate change.**

### START TODAY

**Calder River Trust** has a range of detailed advice on land management practices to help farmers use resources more efficiently.

We also now have a better understanding of techniques that keep carbon stored in the soil. Did you know grants are available to support farms to convert to **organic farming**? This can reduce the need for fertilisers which are made from fossil fuels.

Farming practices are always changing and evolving. There are increasing opportunities for farm diversification which can bring in new income and support greener farm practices. You may have seen that **funding** is out there for landowners to plant more trees. Planted in the right place, trees can help increase crop production, protect soils, and slow the flow of water.





## LOCAL ACTION: STONEY ROYD FARM

When Tim took on his farm north of Mytholmroyd 30 years ago, it was overgrazed and had been poorly maintained. His hard work of using more sustainable farming practices, like lower stock rates and native cattle, means that now soil is healthier and there is a diverse range of native grass and flower species.

Habitats and food for insects, birds and mammals are everywhere. Tim has planted more trees and hedgerows so the farm can hold water away from the town, which regularly floods.

Tim sees his role as a farmer as improving the land for future generations. But the farm's practices mean costs are low as no fertilisers and pesticides are used.



Farmyard manure is used to enrich the soils and the cattle eat creeping thistles. This means the cattle have healthier diets. The farm uses less machinery so there is lower fossil fuel use too.

## ABSORBING CARBON

Trees are climate superheroes: as they grow, they absorb and store the carbon dioxide that is driving climate change. Over a lifetime of 100 years, one tree could absorb one tonne of CO<sub>2</sub>.

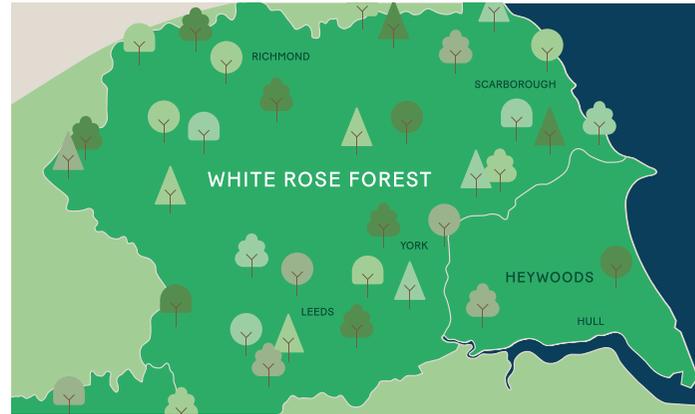
To meet our Net Zero targets, we will need to see new tree planting. We also need to conserve and enhance our existing woodlands which act as ancient carbon stores. Our survey work will help us understand where to plant new trees and what we need to protect.

## WORKING TOGETHER



We will work to implement the White Rose Forest Action Plan to play our part in creating a woodland that stretches from Liverpool to the Yorkshire Coast.

We will measure this by an increase in tree canopy across Calderdale.



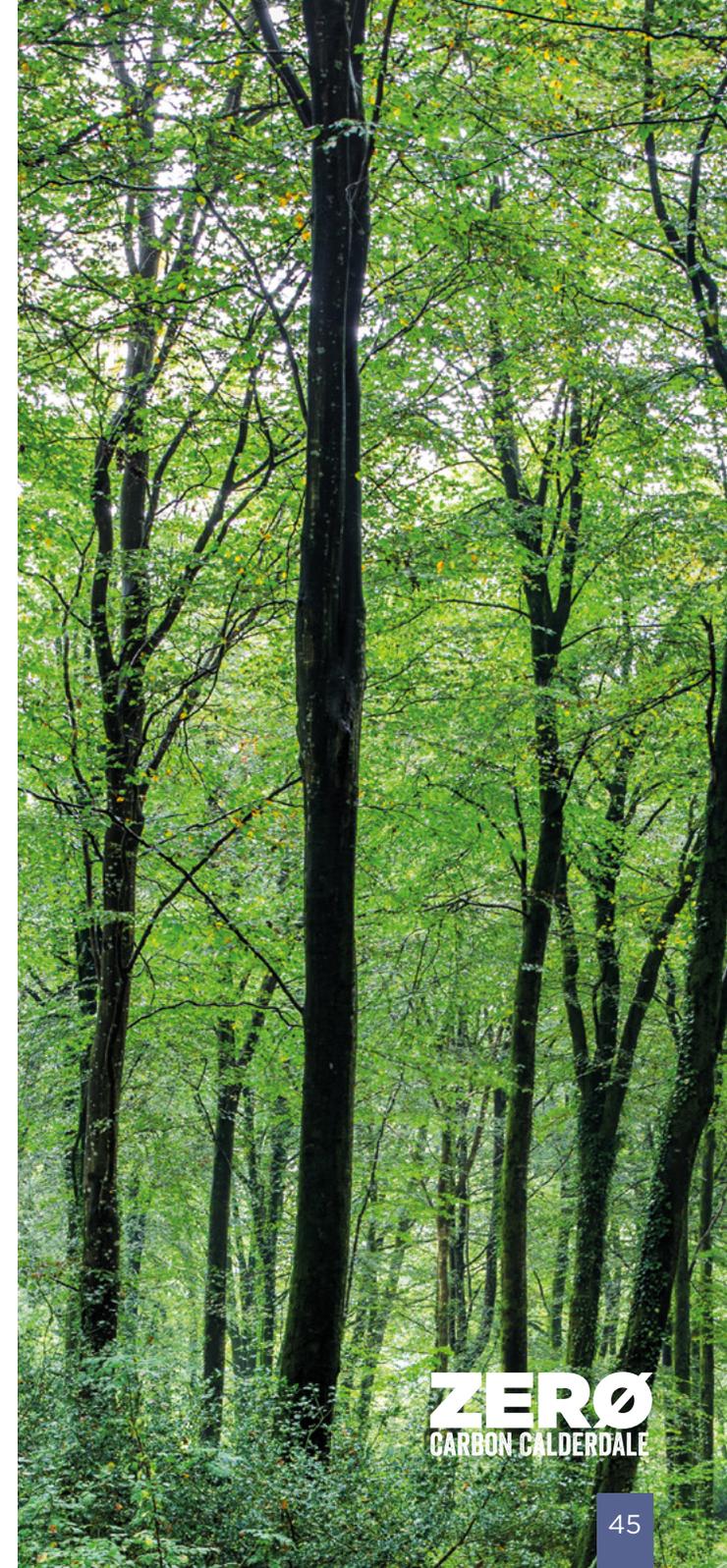
## START TODAY

You can help by planting trees. It is really important that the right tree is planted in the right place. Always seek advice to make sure that tree planting will not damage land of existing high biodiversity value. Get in touch with [NFM@calderdale.gov.uk](mailto:NFM@calderdale.gov.uk) for advice.

## LOCAL ACTION: TREESPONSIBILITY

Formed in 1998, Treesponsibility have made a huge difference in Calderdale. They campaign and educate on the need for climate action and provide opportunities for volunteers to plant trees. Since the Boxing Day floods of 2015, their volunteers have helped plant more than 50,000 trees around Calderdale.

Treesponsibility is a 25-year project and that 25 years comes to an end in 2023. Forus Tree are the successors and are doing lots of great work to absorb carbon and restore biodiversity. You can check out their website for opportunities to volunteer and donate to help more trees get planted in Calderdale.



**ZERO**  
CARBON CALDERDALE

# APPENDIX 1A: FULL ACTION PLAN

THEME	STRANDS	MEASURES	TARGET	HIGH LEVEL ACTION	DETAILED ACTION
COMMUNITY CLIMATE ACTION	Building Sustainable lives	Emissions from food and consumables	TBD	Develop ways to help people live more sustainable lives, including what we eat and what we buy	Calderdale Food Network: Silver by 2023 and gold by 2025 or sooner
COMMUNITY CLIMATE ACTION	Communities Taking Action	Number of VSI climate related groups in the borough	TBD	Encourage, facilitate and support community climate projects. This includes a dedicated community support worker to work with groups across Calderdale	Resource a dedicated community support worker by 2023
COMMUNITY CLIMATE ACTION	Communities Taking Action	Number of people involved in community climate projects	TBD	Work with existing community networks that already work well to support local ideas and bring in expertise and resources	
COMMUNITY CLIMATE ACTION	Low Carbon Community Advice Hubs	Number of hubs	TBD	Launch low-carbon community advice hubs across Calderdale	First hub launched by 2023
COMMUNITY CLIMATE ACTION	Neighbourhood Climate Action Plans	Number of neighbourhood climate Action Plans	TBD	Develop neighbourhood Action Plans that work for the needs of each place	Individual neighbourhood climate Action Plans by 2025 or sooner
COMMUNITY CLIMATE ACTION	Spreading the Word			Spread the message of building a better, brighter, Zero Carbon Calderdale to as many people as we can	First major comms campaign by 2022
COMMUNITY CLIMATE ACTION	Spreading the Word	Attitudes on climate change	TBD	Tell people about Calderdale's Climate Action Plan and the many ways they can get involved	By the end of 2022, we will publish our Action Plan engagement strategy
GREEN ECONOMY				Encourage local employers to inspire young people about the range of work and careers that are part of the future	
GREEN ECONOMY				Support and develop renewable energy projects which offer benefits to local communities and businesses	Develop Local Area Energy Plan in 2022

THEME	STRANDS	MEASURES	TARGET	HIGH LEVEL ACTION	DETAILED ACTION
<b>GREEN ECONOMY</b>	<b>Celebrating Innovation</b>			Celebrate and highlight the businesses that are part of the solution	
<b>GREEN ECONOMY</b>	<b>Doing Things Differently</b>			Work with employers across the borough to provide bus services for staff, alongside other sustainable transport options such as walking and cycling facilities and pool cars	
<b>GREEN ECONOMY</b>	<b>Doing Things Differently</b>			Work with and listen to businesses in Calderdale to develop the correct support in the right places to help them do things differently. Move quickly in building links with employers, particularly those in currently carbon-heavy businesses who are struggling	
<b>GREEN ECONOMY</b>	<b>Green Jobs</b>	Increase in courses offering green skills	TBD	Work with education and career support providers to build green skills across the borough	
<b>GREEN ECONOMY</b>	<b>Green Jobs</b>			Make sure green skills are a key priority within regional employment and skills framework	
<b>GREEN ECONOMY</b>	<b>Working to get Calderdale to Net Zero</b>			Invest in business growth to create the jobs that will help us transition to Net Zero	
<b>GREEN ECONOMY</b>	<b>Working to get Calderdale to Net Zero</b>			Build links with the employers that are essential in the transition to a low-carbon, electricity dependent, economy	
<b>GREEN ECONOMY</b>	<b>Working to get Calderdale to Net Zero</b>			Create customer bases with the Climate Action Partnership to create security for business growth and create local job opportunities	Better embed Net Zero into our social value framework
<b>SHARED VOICE</b>	<b>Climate Action Partnership</b>			Keep developing and expanding the Climate Action Partnership	Produce a Delivery Plan by 2023

THEME	STRANDS	MEASURES	TARGET	HIGH LEVEL ACTION	DETAILED ACTION
SHARED VOICE	Climate Action Partnership			Produce a climate resilience plan	
SHARED VOICE	Climate Action Partnership			Develop better data sets to monitor progress and understand our impact	
SHARED VOICE	Collaborating and Influencing			Find local resource for action	
SHARED VOICE	Collaborating and Influencing			Collaborate locally on action	
SHARED VOICE	Collaborating and Influencing			Influence national and regional government	Influencing Strategy by 2023.
SHARED VOICE	Embedding Climate Action into Everything We Do			Make sure climate action is built into decision making	
SHARED VOICE	Embedding Climate Action into Everything We Do			Develop key asks for members of the Climate Action Partnership and support them on their journey	
SHARED VOICE	Visibility			Set up and maintain a Calderdale Climate Action website to share innovation, monitor progress and strengthen everyone's voices	First e-newsletter in 2022. Set up a website in 2023
SHARED VOICE	Visibility			Regularly publish our progress with annual reviews as a minimum	
SHARED VOICE	Visibility			Set up a mechanism for getting your thoughts, making sure there is a system for feeding back to you, so you know you are being listened to	
TRANSPORT	All	Decrease in traffic across the borough from cordons	TBC	Influence policy and investment changes by national government, West Yorkshire Combined Authority and Calderdale Council	

THEME	STRANDS	MEASURES	TARGET	HIGH LEVEL ACTION	DETAILED ACTION
<b>TRANSPORT</b>	All	Operational CO2 impact of current road building programmes	TBC	Calculate the operational CO2 of current road building programmes	
<b>TRANSPORT</b>	<b>Creating Streets for Everyone</b>	Increase in miles of Green and Healthy streets across borough	TBC	Work with communities to find out what changes are best in their streets to enable walking and cycling. These might be cycle lanes, car free days or benches. Deliver those changes	Expand commonplace public engagement system by 2022, find out which neighbourhoods want to be LTNs
<b>TRANSPORT</b>	<b>Creating Streets for Everyone</b>			Find out which communities want to become low traffic neighbourhoods	
<b>TRANSPORT</b>	<b>Creating Streets for Everyone</b>				Trial a car free day by 2022
<b>TRANSPORT</b>	<b>Creating Streets for Everyone</b>	Increase in mature street trees in the right place	TBC	Increase the number of street trees and urban planting in the borough	Green and Healthy Streets Policy for council land, work with partners as part of implementation from 2022
<b>TRANSPORT</b>	<b>Public Transport</b>	Increase in bus trips taken	TBC	Make sure Calderdale has a voice where decisions on bus services are made, making the most of the changes that are happening with buses. We will work with the Shared Voice group to develop a plan to make this higher profile and engage as many people as we can	Public transport influencing strategy by 2023
<b>TRANSPORT</b>	<b>Public Transport</b>			Work with employers across the borough on innovative staff travel, e.g. demand buses	Work with anchor organisations on on-demand bus services in 2022
<b>TRANSPORT</b>	<b>Public Transport</b>				Work with anchor organisations to introduce needs-based parking permits in 2022
<b>TRANSPORT</b>	<b>Public Transport</b>				Travel Plan Supplementary Planning Document available by 2023
<b>WARM AND RESILIENT BUILDINGS</b>	<b>Building Success</b>			Demonstrate the potential of Net Zero warm and resilient buildings so people can see what good looks like. Do this by showcasing local projects	Find the necessary financial mechanisms to make a whole street retrofit a reality by 2023

THEME	STRANDS	MEASURES	TARGET	HIGH LEVEL ACTION	DETAILED ACTION
<b>WARM AND RESILIENT BUILDINGS</b>	<b>Building Success</b>			Support communities to develop retrofit solutions in their neighbourhoods	
<b>WARM AND RESILIENT BUILDINGS</b>	<b>Low Carbon New Homes</b>			Work with the whole supply chain to make sure new buildings, retrofits and extensions are climate resilient and energy efficient, and that their construction has a low impact on the environment	
<b>WARM AND RESILIENT BUILDINGS</b>	<b>Low Carbon New Homes</b>	Percentage increase in zero carbon and zero carbon ready new homes	TBC	Make sure that zero carbon homes, buildings and neighbourhoods become the standard in Calderdale and that they are built to protect us from extreme weather. Aim for 10% carbon positive in new builds	Resource to inspect new-build homes and other buildings by 2025 or sooner
<b>WARM AND RESILIENT BUILDINGS</b>	<b>Resilient Buildings</b>	Number of properties with flood resilience measures	TBC	Continue to deliver flood resilience grants and support	
<b>WARM AND RESILIENT BUILDINGS</b>	<b>Retrofit</b>	Energy Performance Certificate ratings	TBC	Produce a fair retrofit strategy covering all building types and tenures	Fair Retrofit Strategy started in 2022
<b>WARM AND RESILIENT BUILDINGS</b>	<b>Retrofit</b>			Develop an investment strategy. This will look creatively at public funding, private funding and match funding which will help retrofit works to be delivered	Investment Strategy by 2022
<b>WARM AND RESILIENT BUILDINGS</b>	<b>Trusted Advice</b>	Energy Performance Certificate rating x tenure type	TBC	Make sure our local advice hub - introduced in Community Climate Action - is equipped with independent and trusted expertise on home retrofit and finance. Build a directory of local tradespeople with the right skills	Launch a local advice service by 2023
<b>WARM AND RESILIENT BUILDINGS</b>	<b>Trusted Advice</b>			Improve costs for currently expensive solutions like solid wall insulation and shared ground source heat pumps	

## APPENDIX 1B: ACTION PLAN ORGANISED BY DATE

2022			
THEME	STRAND	CODE	ACTION
COMMUNITY CLIMATE ACTION	Spreading the Word	CCA2	First major comms campaign by 2022
COMMUNITY CLIMATE ACTION	Spreading the Word	CCA3	By the end of 2022, we will publish our Action Plan engagement strategy
COMMUNITY CLIMATE ACTION	Communities Taking Action	CCA6	Work with existing community networks that already work well to support local ideas and bring in expertise and resources
GREEN ECONOMY	Calderdale's Journey to Net Zero	GE2	Build links with the employers that are essential in the transition to a low-carbon, electricity dependent, economy in 2022
GREEN ECONOMY	Celebrating Innovation	GE9	Celebrate and highlight the businesses that are part of the solution
GREEN ECONOMY	Renewable Energy	GE10	Begin developing a Local Area Energy plan in 2022
LAND AND NATURE	Restoring Peatland	LN3	Phase out the use of peat in Climate Action Partners' horticulture by 2022
LAND AND NATURE	The Ecological Emergency	LN2	Start Ecological Survey work in 2022
SHARED VOICE	Visibility	SV4	First e-newsletter in 2022. Set up a website in 2023
SHARED VOICE	Visibility	SV6	Put in place ways to hear from people and to feedback so you know you are being listened to
SHARED VOICE	Collaborating and Influencing	SV7	Find local resource for action
SHARED VOICE	Collaborating and Influencing	SV8	Collaborate locally on action
SHARED VOICE	Embedding Climate Action into Everything We Do	SV11	Develop key asks for members of the Climate Action Partnership and support them on their journey
TRANSPORT AND GETTING AROUND	All	TGA1	Influence policy and investment changes by national government, West Yorkshire Combined Authority and Calderdale Council
TRANSPORT AND GETTING AROUND	Creating Streets for Everyone	TGA7	Expand commonplace by 2022, find out which neighbourhoods want to be Low Traffic Neighbourhoods
TRANSPORT AND GETTING AROUND	Creating Streets for Everyone	TGA9	Trial a car free day by 2022
TRANSPORT AND GETTING AROUND	Creating Streets for Everyone	TGA10	Green and Healthy Streets Policy for council land, work with partners as part of implementation from 2022
TRANSPORT AND GETTING AROUND	Creating Streets for Everyone	TGA12	Comms around individuals planting trees and avoiding artificial grass and paving by 2022

2022			
THEME	STRAND	CODE	ACTION
<b>TRANSPORT AND GETTING AROUND</b>	Public Transport	TGA5	Work with anchor organisations to introduce needs-based parking permits
<b>WARM AND RESILIENT BUILDINGS</b>	Retrofit	WRB1	Fair Retrofit Strategy started in 2022

2023			
THEME	STRAND	CODE	ACTION
<b>COMMUNITY CLIMATE ACTION</b>	Low Carbon Community Advice Hubs	CCA1	First hub launched by 2023
<b>COMMUNITY CLIMATE ACTION</b>	Building Sustainable lives	CCA4	Calderdale Food Network: Silver by 2023 and gold by 2025 or sooner
<b>COMMUNITY CLIMATE ACTION</b>	Communities Taking Action	CCA5	Resource a dedicated community support worker by 2023
<b>GREEN ECONOMY</b>	Doing things Differently	GE7	Work with employers across the borough to provide bus services for staff, alongside other sustainable transport options such as walking and cycling facilities and pool cars
<b>GREEN ECONOMY</b>	Doing things Differently	GE8	Work with and listen to businesses in Calderdale to develop the correct support in the right places to help them do things differently by 2023
<b>LAND AND NATURE</b>	The Ecological Emergency	LN1	Create an Ecological Emergency Action Plan by 2023
<b>LAND AND NATURE</b>	Slowing the Flow	LN7	Influencing Strategy by 2023
<b>SHARED VOICE</b>	Climate Action Partnership	SV1	Produce a Delivery Plan by 2023
<b>SHARED VOICE</b>	Visibility	SV5	First Annual review in 2023
<b>SHARED VOICE</b>	Collaborating and Influencing	SV9	Influencing Strategy by 2023
<b>SHARED VOICE</b>	Embedding Climate Action into Everything We Do	SV10	Make sure climate action is built into decision-making
<b>TRANSPORT AND GETTING AROUND</b>	Public Transport	TGA3	Public transport influencing strategy by 2023
<b>TRANSPORT AND GETTING AROUND</b>	Public Transport	TGA4	Work with anchor organisations on on-demand bus services by 2023
<b>TRANSPORT AND GETTING AROUND</b>	Public Transport	TGA6	Travel Plan Supplementary Planning Document by 2023

2023			
THEME	STRAND	CODE	ACTION
<b>TRANSPORT AND GETTING AROUND</b>	Mobility Hubs	TGA14	First Mobility Hub by 2023
<b>TRANSPORT AND GETTING AROUND</b>	Electric Vehicles	TGA16	EV charging strategy by 2023
<b>WARM AND RESILIENT BUILDINGS</b>	Retrofit	WRB2	Investment Strategy by 2023
<b>WARM AND RESILIENT BUILDINGS</b>	Trusted Advice	WRB3	Equip local advice hub with trusted and independent advice by 2023
<b>WARM AND RESILIENT BUILDINGS</b>	Building Success	WRB5	Find the necessary financial mechanisms to make a whole street retrofit a reality by 2023

By 2025 or sooner			
THEME	STRAND	CODE	ACTION
<b>COMMUNITY CLIMATE ACTION</b>	Neighbourhood Climate Action Plans	CCA7	Develop neighbourhood Action Plans across the borough that work for the needs of each place
<b>GREEN ECONOMY</b>	Calderdale's Journey to Net Zero	GE1	Invest in business growth to create the jobs that will help us transition to Net Zero
<b>GREEN ECONOMY</b>	Calderdale's Journey to Net Zero	GE3	Create customer bases with Climate Action Partnership to create security for business growth and create local job opportunities
<b>GREEN ECONOMY</b>	Green Jobs and Skills	GE4	Work with education and career support providers to build Green Skills across the borough.
<b>GREEN ECONOMY</b>	Green Jobs and Skills	GE5	Encourage local employers to inspire young people about the range of work and careers that are part of the future
<b>GREEN ECONOMY</b>	Green Jobs and Skills	GE6	Make sure green skills are a key priority within regional employment and skills framework
<b>LAND AND NATURE</b>	Farming for the Future	LN4	Develop land and farming management advice informed by ecological survey work and the local area energy plan. Research growing crops that are more resilient to climate changes
<b>LAND AND NATURE</b>	Absorbing Carbon	LN5	Work with West Yorkshire on the White Rose Forest Action Plan to play our part in creating a woodland that stretches from Liverpool to the Yorkshire Coast
<b>LAND AND NATURE</b>	Absorbing Carbon	LN6	Conserve and enhance existing woodlands

By 2025 or sooner			
THEME	STRAND	CODE	ACTION
SHARED VOICE	Climate Action Partnership	SV2	Produce a climate resilience plan
SHARED VOICE	Climate Action Partnership	SV3	Develop better data sets to monitor progress and understand our impact
TRANSPORT AND GETTING AROUND	All	TGA2	Calculate operational CO2 impact of current road building
TRANSPORT AND GETTING AROUND	Creating Streets for Everyone	TGA8	We will also find out which communities want to become low traffic neighbourhoods
TRANSPORT AND GETTING AROUND	Creating Streets for Everyone	TGA11	Work with partners to ensure planting and maintenance reduces flooding and increases biodiversity
TRANSPORT AND GETTING AROUND	Car Clubs	TGA13	Work with and support car club providers to expand
TRANSPORT AND GETTING AROUND	E-bikes and bikes	TGA15	Work with businesses, community organisations and other partners to identify key locations for secure e-bike storage
WARM AND RESILIENT BUILDINGS	Trusted Advice	WRB4	Improve costs for currently expensive solutions like solid wall insulation and shared ground source heat pumps
WARM AND RESILIENT BUILDINGS	Building Success	WRB6	Support communities to develop retrofit solutions in their neighbourhoods
WARM AND RESILIENT BUILDINGS	Low Carbon New Homes	WRB7	Work with the whole supply chain to make sure new buildings, retrofits and extensions are climate resilient and energy efficient, and that their construction has a low impact on the environment
WARM AND RESILIENT BUILDINGS	Low Carbon New Homes	WRB8	Make sure that zero carbon homes, buildings and neighbourhoods become the standard in Calderdale and that they are built to protect us from extreme weather. Aim for 10% carbon positive in new builds. Resource to inspect new-build homes and other buildings
WARM AND RESILIENT BUILDINGS	Resilient Buildings	WRB9	Continue to deliver flood resilience grants and support

## APPENDIX 2: REFERENCES, DATA, GRAPHS

### REFERENCES

We have tried to link to external references throughout the plan. This is so you can click through and read more if you want.

The main reference you will see in the plan:

<sup>1</sup> Element Energy (2021) Calderdale Emissions Reduction Pathways - **published online on the Council's Climate Emergency webpage**

This is our technical study that looked at where emissions are coming from in Calderdale and what we need to do to get to Net Zero. It contains a range of references to support its recommendations.

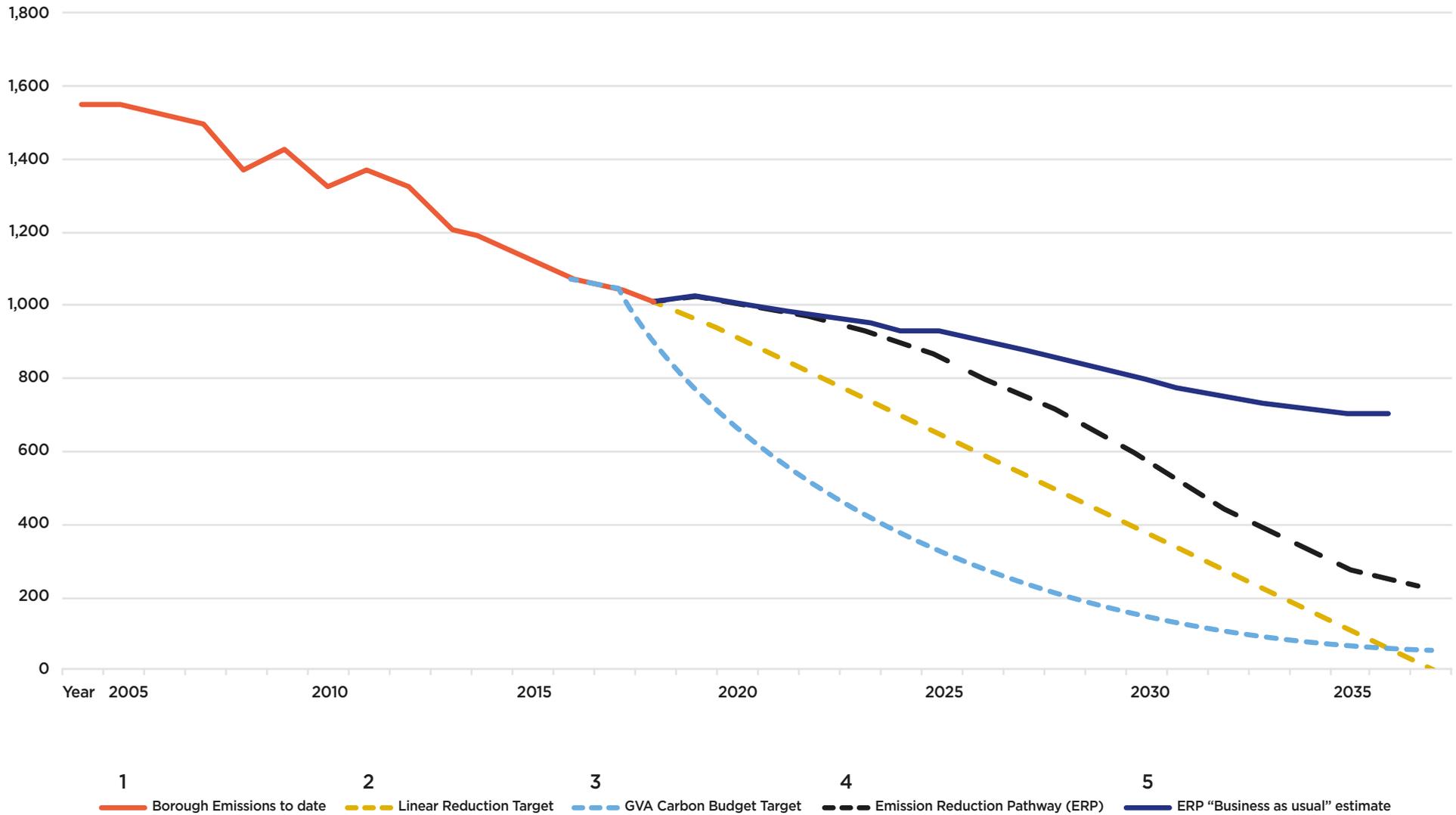
Other references:

<sup>2</sup> Gouldson, A., Sudmant, A., Duncan, A. and Williamson, R. (2020) A Net-Zero Carbon Roadmap for Leeds, Leeds Climate Commission/ Place-Based Climate Action Network.



## 2.1 MEASURING PROGRESS

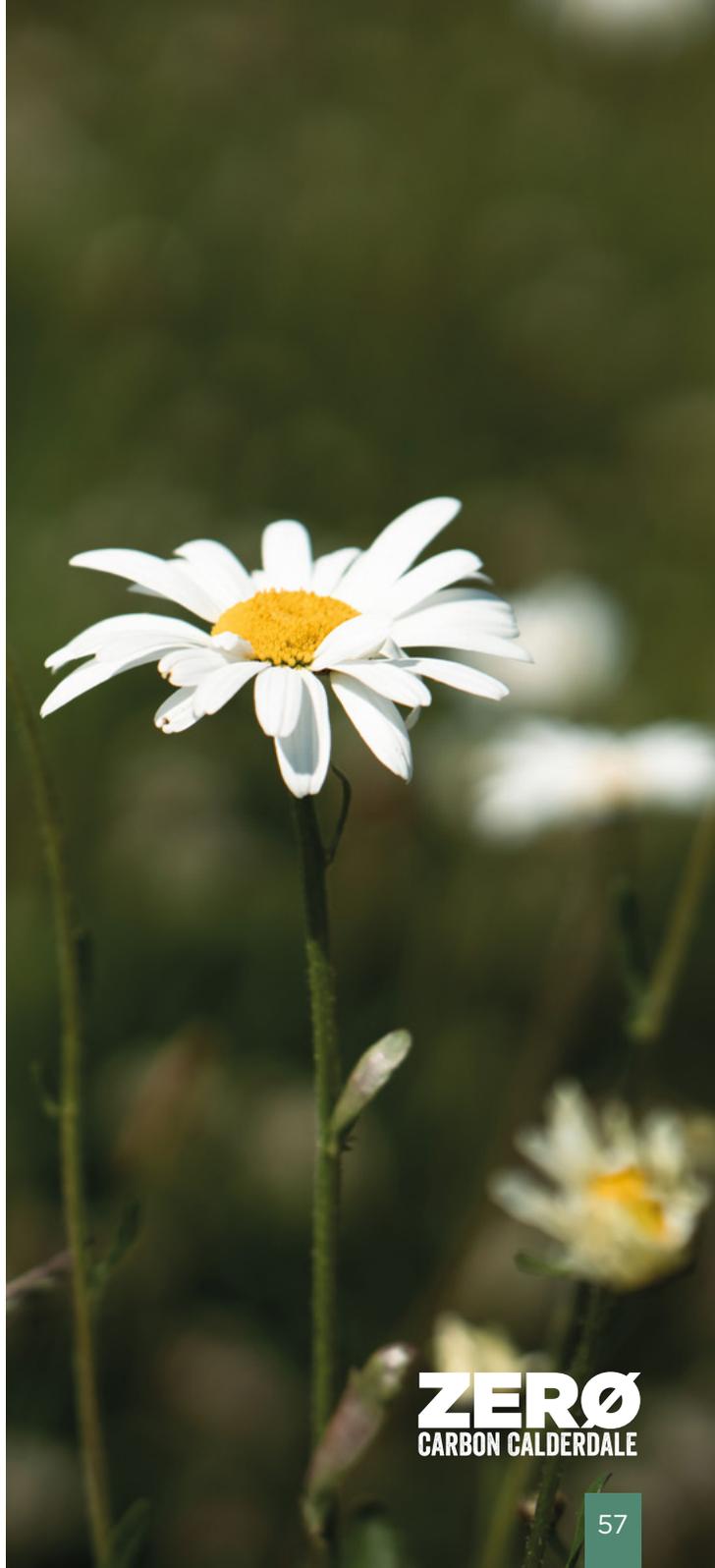
Calderdale - Borough Carbon Reduction (Kt CO<sub>2</sub>e)



This graph shows the pathways we could take to Net Zero. It shows us a reduction in CO2 emissions over time. Calderdale currently emits around 1000 Kt CO2e per year and we need to get to zero.

You can see several pathways or lines that get us to zero or close to zero. We will measure our progress yearly by these different pathways.

1. The orange line shows borough emissions to date. You can see that there has been a 40% reduction in CO2 since 2005. This is mostly because our electricity is quickly getting more renewable.
2. The yellow dotted line is a linear reduction target. It is a simple straight line between today's emissions and zero emissions in 2038. It is a potential pathway to Net Zero but has no scientific backing.
3. The blue dotted line is the GVA carbon reduction target. This is the only pathway aligned with a carbon budget which will help the UK and international players limit global warming to 1.5 degrees - the internationally agreed target. This is a very ambitious pathway and would mean we had to make cuts to emissions very quickly. **Learn more about carbon budgets in this article and video produced by the Tyndall Centre.**
4. The black dotted line is the Emissions Reduction Pathway "balanced scenario" from our technical study that we undertook in 2021. This is technically feasible and the changes necessary are shown in the diagram in appendix 2.2. It will still require transformation and ambition, but it doesn't get us to Net Zero by 2038.
5. The dark blue line is the Emissions Reduction Pathway "Business as Usual". This shows us what would happen if we did nothing. This pathway is not in line with our targets or a habitable world for future generations.



## 2.2. THE SCALE OF THE CHALLENGE: WHAT NEEDS TO BE ACHIEVED TO REACH 82% EMISSIONS REDUCTION BY 2038

### TRANSPORT



**SALES OF ZERO EMISSION CARS REACH CIRCA. 4,300/YR BY 2038 (86% SALES)**



**WALKING INCREASES BY 80% & CYCLING INCREASES 22 TIMES COMPARED TO TODAY**



**PUBLIC TRANSPORT TRAVEL INCREASES BY 50% COMPARED TO TODAY**

### LAND USE & BIODIVERSITY



**100% LOWLAND & 60% UPLAND PEATLAND RESTORED**



**450 HECTARES OF NEW FOREST PLANTING**



**DIET CHANGE TO REDUCE RED MEAT & DAIRY CONSUMPTION BY 32%, LEADING TO 24% REDUCTION IN SHEEP & CATTLE**

## BUILDINGS & TECHNOLOGY



**RETROFIT OF 69,000 HOMES  
TO REACH EPC C OR BETTER**



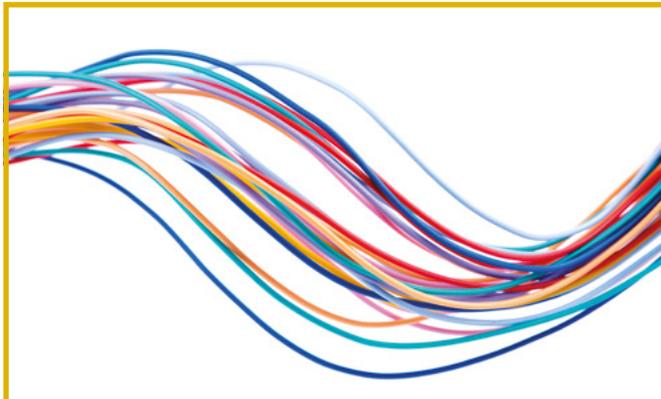
**49,000 HEAT PUMPS & HYBRID HEAT PUMPS  
INSTALLED, OR CIRCA.9/DAY FROM 2025-2035**



**HYDROGEN EQUIPMENT DEVELOPED &  
DEPLOYED FOR SELECT INDUSTRY  
& BUILDINGS BY MID-2030S**



**SOLAR PV AND ONSHORE WIND REACH 143 MW  
(4.8 MW/YR FROM 2020-2030)**



**ELECTRICITY INFRASTRUCTURE INVESTMENT  
ENABLING 51% HIGHER ANNUAL DEMAND**

## WASTE



**35% REDUCTION IN AVOIDABLE FOOD WASTE &  
INCREASED RECYCLING OF MUNICIPAL WASTE**

## APPENDIX 3: HOW WE MADE THIS PLAN AND ACKNOWLEDGEMENTS

This Climate Action Plan is a team effort, and we are grateful to everyone involved. The consultation draft was produced in seven months between January and July 2022.

The plan couldn't have been made without the time and expertise of the Climate Emergency Working Party/ Climate Action Partnership. This includes:

Cllr Scott Patient, Cllr Colin Hutchinson, Cllr James Baker, Cllr Jenny Lynn, Cllr Regan Dickenson and Cllr Steven Leigh, Cllr Nicky Harvey, Adrian Horton (Slow the Flow), Peter Roberts (Calderdale CCG), Anthony Rae (Friends of the Earth), Will Solomon (Calderdale Youth Council), Finn Jensen (Calderdale Green New Deal), Perveen Hussain (Calderdale Interfaith Forum), Stuart Sugarman (Calderdale NHS), Patrick Berry (Together Housing)

### THEMATIC TASK AND FINISH GROUPS

Each theme was developed by a small group who made the time and space to get into the detail of each theme. The group was made up of experts in that area and from Calderdale Council.

### COMMUNITY CLIMATE ACTION

Debs Harkins and Sam Saxby (Calderdale Council), Robert Baylis, Cllr James Baker, Will Solomon, Finn Jensen, Cllr Scott Patient.

### GREEN ECONOMY

Kate McNicholas and Kat Armstrong (Calderdale Council), Cllr James Baker, Cllr Colin Hutchinson, Will Solomon

### WARM AND RESILIENT BUILDINGS

Heidi Waters, Richard Armitage and Sam Saxby (Calderdale Council), Cllr Jenny Lynn, Cllr James Baker, Cllr Colin Hutchinson, Patrick Berry

### TRANSPORT AND GETTING AROUND

Tom Jones and Kat Armstrong (Calderdale Council), Anthony Rae, Stuart Sugarman, Cllr Colin Hutchinson, Cllr Scott Patient

### LAND AND NATURE

Hugh Firman, Moy Cash and Sam Saxby (Calderdale Council), Cllr Nikki Harvey, Cllr James Baker, Cllr Scott Patient, Perveen Hussain

### CONSULTATION

We are proud of our first draft Climate Action Plan. We want to make sure that as many people as possible can feed into the plan during our consultation. The consultation will be live between September and October 2022 and we are reaching out to as many groups as we can during that period.

# KEY DEFINITIONS



## GENERAL

- **Net Zero**  
Net Zero refers to a state in which the greenhouse gases going into the atmosphere are balanced by the removal of these gases from the atmosphere.
- **Low carbon**  
Low carbon is a description of something which uses far less fossil fuel than the standard. For example, low-carbon electricity, such as energy generated from the wind or sun, is produced with much lower greenhouse gas emissions than conventional fossil fuel electricity generation.
- **CO2 emissions**  
CO2 is one of the greenhouse gases that absorbs radiation and prevents heat from escaping our atmosphere. It is the biggest greenhouse gas in terms of volume. Other greenhouse gases are often compared to CO2 and included alongside CO2 emissions as “CO2 equivalent”.
- **Greenhouse gases**  
A gas that contributes to the greenhouse effect by absorbing heat and keeping this in the earth’s atmosphere. Carbon dioxide (CO2) is an example of a greenhouse gas.
- **Climate resilience**  
The ability to prepare for, recover from and adapt to extreme weather such as flooding, heatwaves, or storms.

- **Climate anxiety**  
Anxiety, fear, worry, and distress caused by climate change and ecological damage.
- **Offsetting**  
An action or activity (such as the planting of trees) that compensates for the emission of carbon dioxide or other greenhouse gases into the atmosphere. Careful calculations and checking are needed to make sure there is a balance.



## SHARED VOICE

- **Climate Action Partnership**  
A multi-agency partnership that provides overall oversight of the development and delivery of Calderdale’s Climate Action Plan.
- **Emissions Reduction Pathway**  
A roadmap prepared by experts which shows how we can cut our fossil fuel use with clean technology and investment in communities:  
<https://www.calderdale.gov.uk/v2/council/our-vision/climate-emergency#erp>.
- **Dataworks**  
A website run by Calderdale Council that provides freely available data which can be used or republished by anyone without restrictions:  
<https://dataworks.calderdale.gov.uk/>.



## WARM AND RESILIENT BUILDINGS

- **Heat pumps**  
A device that transfers heat from one area to another. Refrigerators use heat pumps to keep food cool – heat pumps for properties operate in the reverse direction and generate heat to keep the inside of a building warm.
- **District heating**  
District heating is a system for sharing heat generated in a central place through a system of insulated pipes (usually buried alongside other utilities) to homes or businesses which need heating and hot water.
- **Retrofit**  
Making changes to existing buildings so that energy consumption and carbon emissions are reduced. These changes should also provide the benefit of a more comfortable and healthier home with lower fuel bills.
- **Carbon positive**  
An activity that goes beyond Net Zero to create an environmental benefit by removing additional carbon dioxide from the atmosphere.
- **Decarbonising**  
Describes removing or reducing the carbon dioxide (CO2) being put into the atmosphere.

- **Passivhaus**  
A quality assured standard and methodology for low-energy building, which helps create buildings that use around 75% less energy compared to standard practice for UK newbuild.

## GREEN ECONOMY

- **Green economy**  
An economy where economic activity doesn't have as significant a negative impact on the environment and biodiversity. Involves the sustainable management of resources and is good for people.
- **Green skills**  
Knowledge, abilities, values, and attitudes needed to live in, develop and support a Net Zero sustainable and resource-efficient society.
- **Green jobs**  
Positions in agriculture, manufacturing, research & development, administrative, and service activities aimed at substantially preserving or restoring environmental quality.
- **Biomass**  
Plant-based material is used as fuel to produce heat or electricity. It is often considered to be Net Zero as the CO2 produced when burning the material is balanced by the CO2 taken in by the plant when it grows.

## LAND AND NATURE

- **Spatial strategy**  
A plan for land use so that areas are able to produce food and energy, provide housing and protect biodiversity considering the geography and needs of that area.
- **Ecological Emergency**  
The pressures of climate change, intensive agriculture, unsustainable use of resources, and continuous development are causing an ecological emergency. The result is that wildlife is declining at an alarming rate.
- **Biodiversity**  
Refers to the variety of living species on Earth, including plants, animals, bacteria, and fungi.
- **Invasive species**  
An animal or plant that harms the environment after being artificially introduced to a place by humans.
- **Glyphosate**  
A substance that is toxic to many plants and is used to kill weeds.
- **Flood resilience measures**  
Changes to a property that reduces the risk of water getting in and/or reduces the impact if flood water does get in. Flood resilience measures can also be designed for infrastructures like roads and railways.
- **Natural flood management**  
When natural processes are used to reduce the risk of flooding (and coastal erosion). Examples include restoring bends in rivers and changing the way land is managed so the soil can absorb more water.
- **Peat/peatland**  
Areas of land which have a naturally accumulated layer of peat soil. Peat soils are formed from carbon-rich, dead, and decaying plant material under waterlogged conditions. Healthy peatland can store far more carbon than an equivalent size of forest – but this stored carbon can also escape if the land is managed badly.
- **Leaky dams**  
A flooding prevention measure, slowing the flow of water downstream. Barriers are added to a stream/river to prevent soil and silt from escaping. This means that water flows at a slower rate.
- **Attenuation ponds**  
An attenuation pond collects rainfall and surface water and slowly releases it into the drainage system or surrounding ground.

## **A BRIGHTER FUTURE**

There is a lot of work to do, but we're motivated to build a better world for the next generation.

Young people are already leading the way and calling on us to act.

The actions in this plan are just the start. We must go further and faster if we are to meet our target of Net Zero emissions by 2038.

**Join us on our path to  
a brighter future.**

**Thank you for reading our Climate Action Plan.**

We'd love to hear your thoughts on the Plan and would like to invite you to complete our short survey to share your feedback. Visit: [calderdale.gov.uk/ClimateActionPlan](https://calderdale.gov.uk/ClimateActionPlan)

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