

Lancashire
climate
Summit



Lancashire Climate Summit

Thursday 10th March 2022

#LancashireClimateSummit



Welcome

County Councillor Phillippa Williamson
Leader, Lancashire County Council



Emma Howard-Boyd

Chair of the Environment Agency

Carbon Reduction Pathways and State of the Environment.

County Councillor Shaun Turner
Cabinet Member for Environment and Climate Change
Lancashire County Council

Lancashire County Council resolves to:

- ✓ 'transition Lancashire away from carbon'
- ✓ 'address the biodiversity crisis'



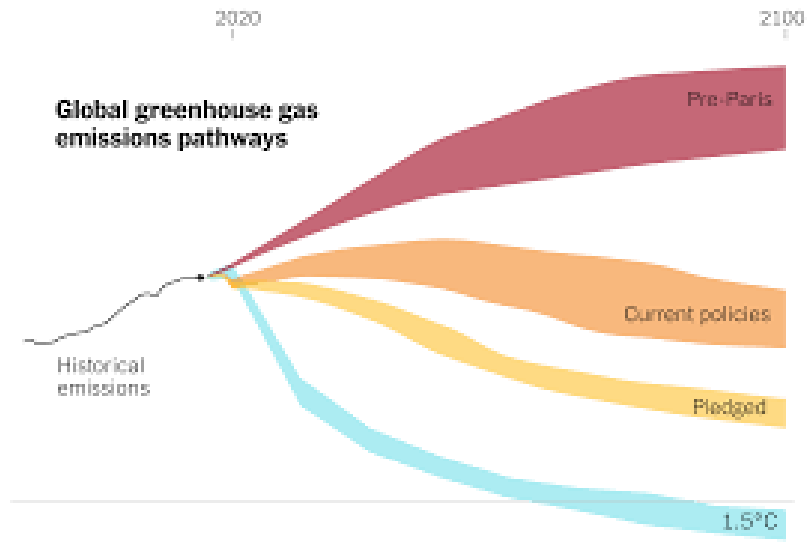
We've made progress...but a lot remains to be done.

- ✓ Environment and Climate Programme (£1m)
- ✓ EV vehicles and charging infrastructure; low carbon projects (£5.7m)
- ✓ Planted 149,000 trees.
- ✓ Converted 152,000 street lights to LEDs.
- ✓ Restored 755 hectares of peatland.

First Step.

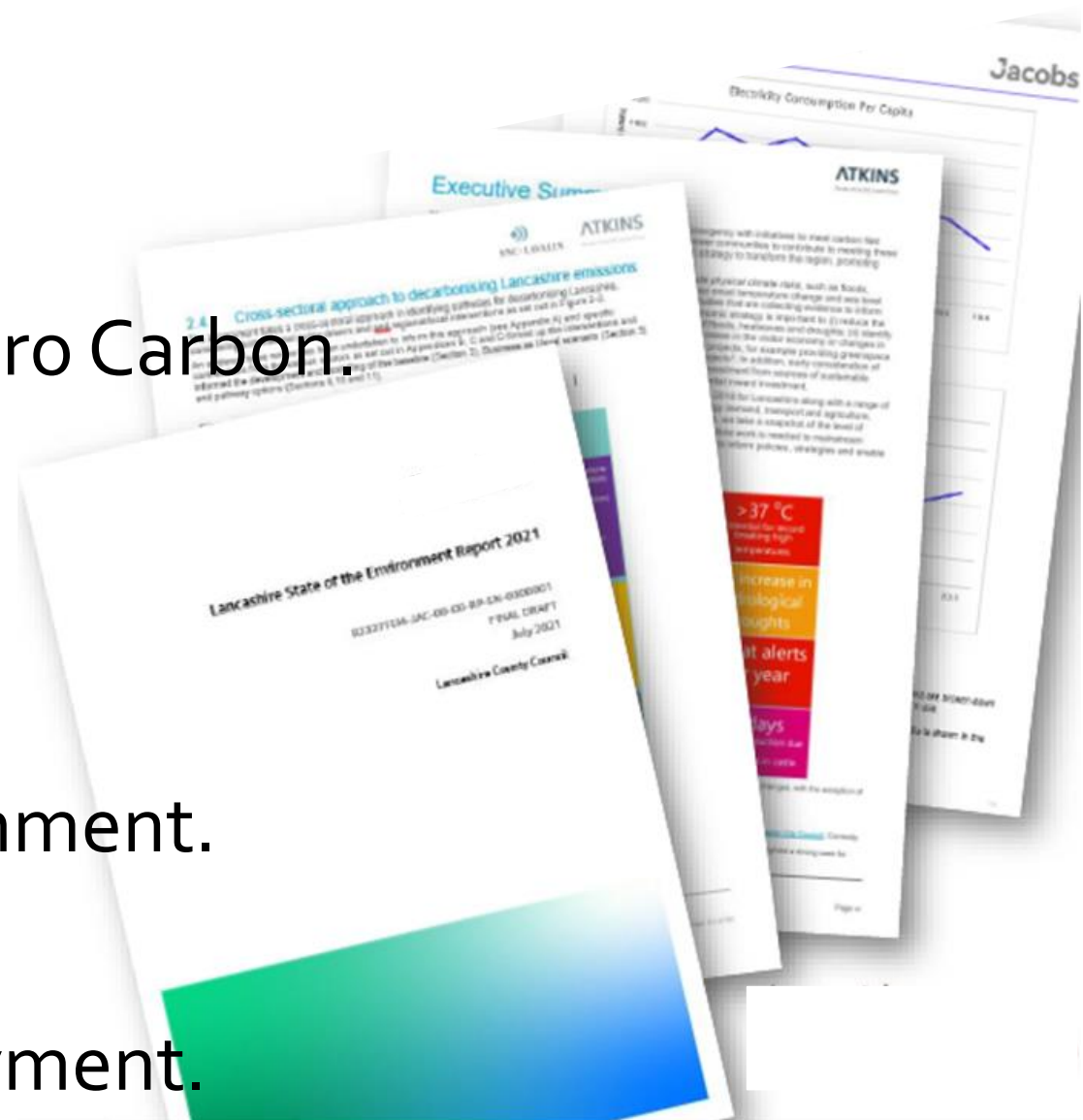
Commission Studies to:

- ✓ Identify the scale of the challenge.
- ✓ Show the most effective pathway.



Four Studies:

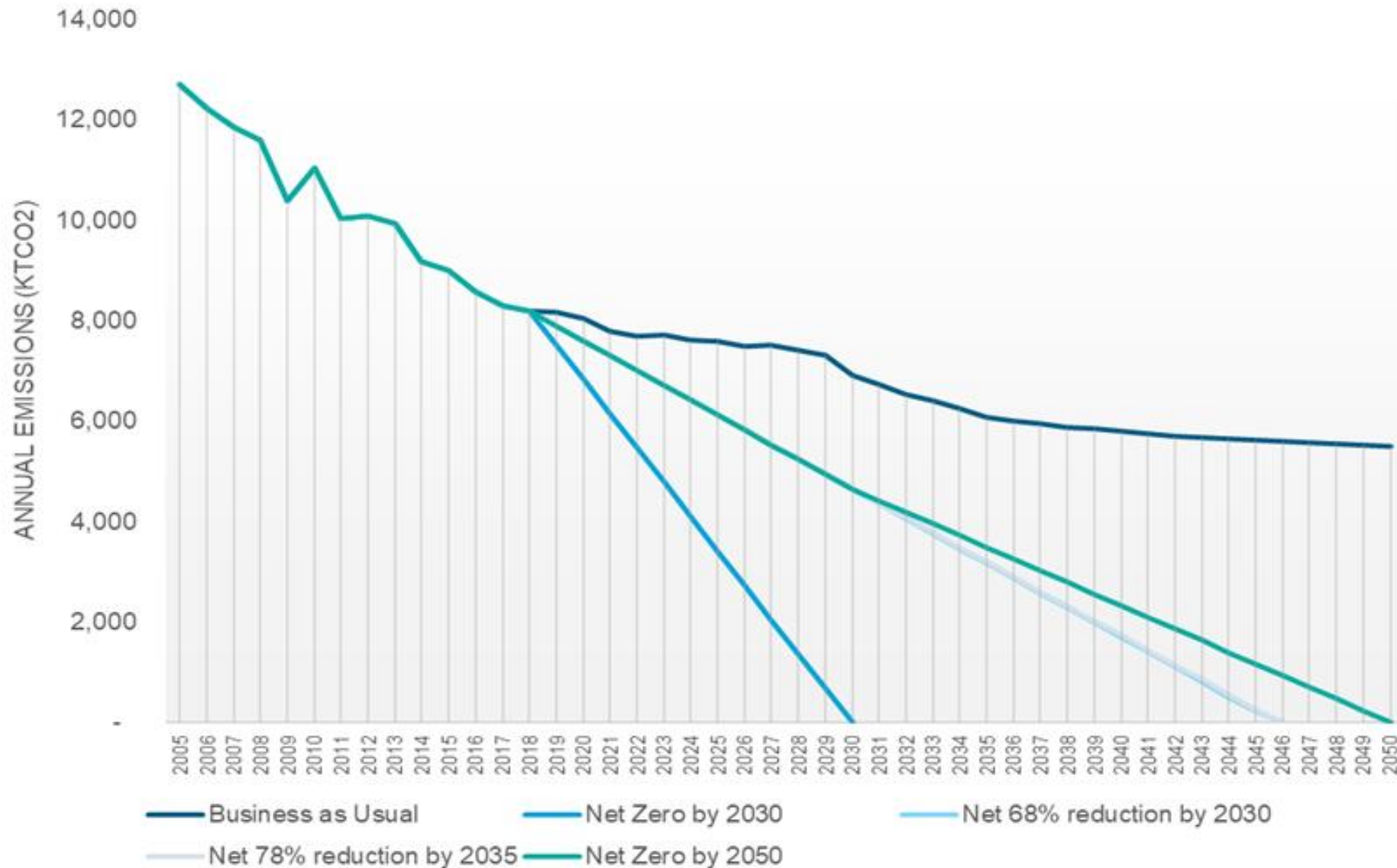
- ✓ Pathways to Net Zero Carbon.
- ✓ Climate Resilience.
- ✓ State of the Environment.
- ✓ Renewables Deployment.



Net Zero Pathways

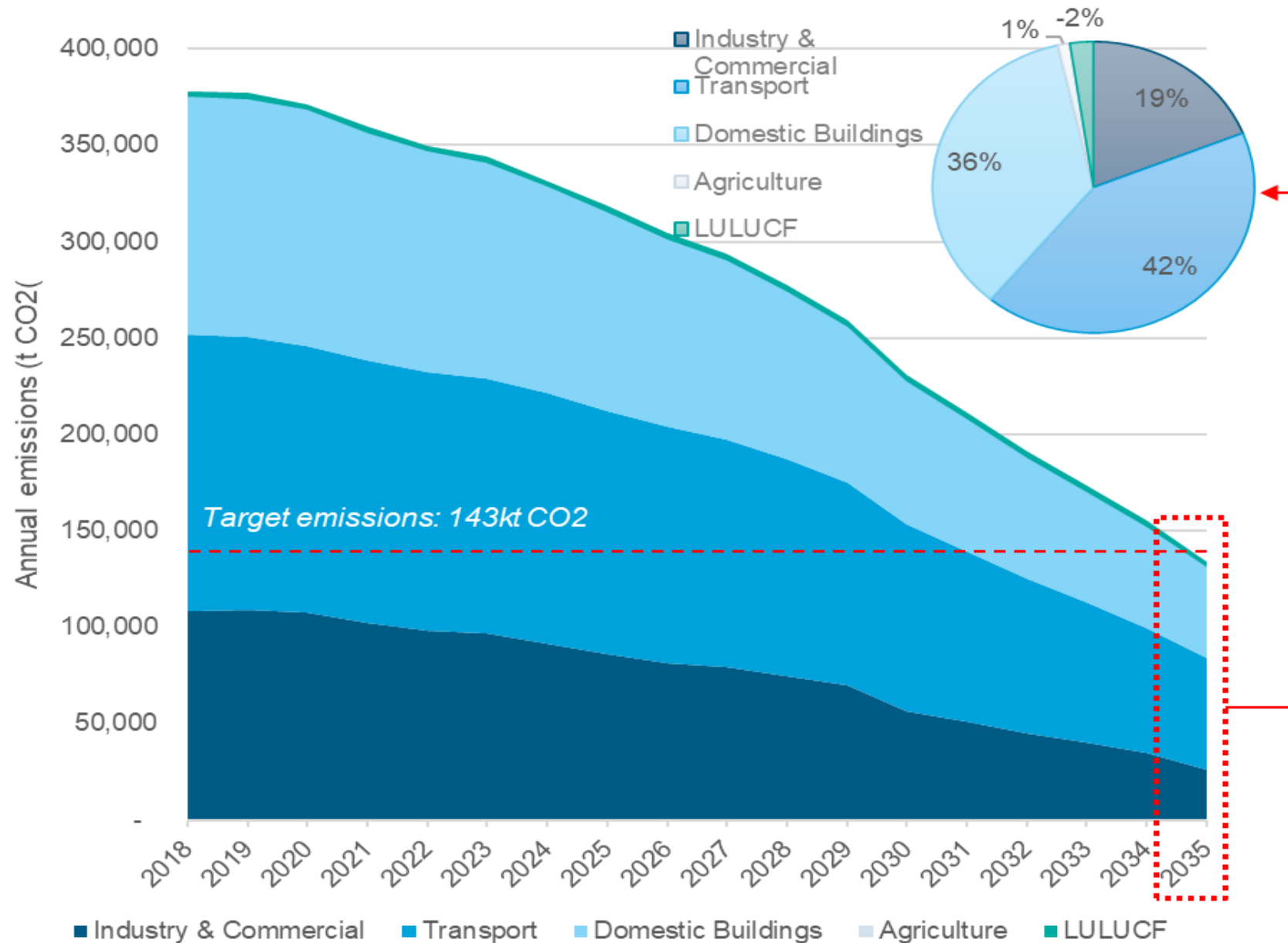
- ✓ 8,568,000 tonnes of CO₂ emitted each year in Lancashire.
- ✓ Emissions evenly spread among transport, domestic buildings, and industry and commercial sectors
- ✓ The study explores three pathway scenarios for carbon reduction:
 - ✓ 100% reduction (Net Zero) by 2030 (compared with 1990);
 - ✓ 68% reduction by 2030 (compared with 1990); and
 - ✓ 78% reduction by 2035 (compared with 1990).

Hypothetical Pathways to Net Zero



- ✓ Achieving Net Zero emissions by 2030 is extremely challenging because of emissions in the transport and industrial sectors.
- ✓ However, very strong action taken across all sectors could achieve a 78% reduction by 2035 compared with 1990.
- ✓ All councils can contribute to the 78% reduction pathway.

Hyndburn: Example of 78% emissions reduction by 2035



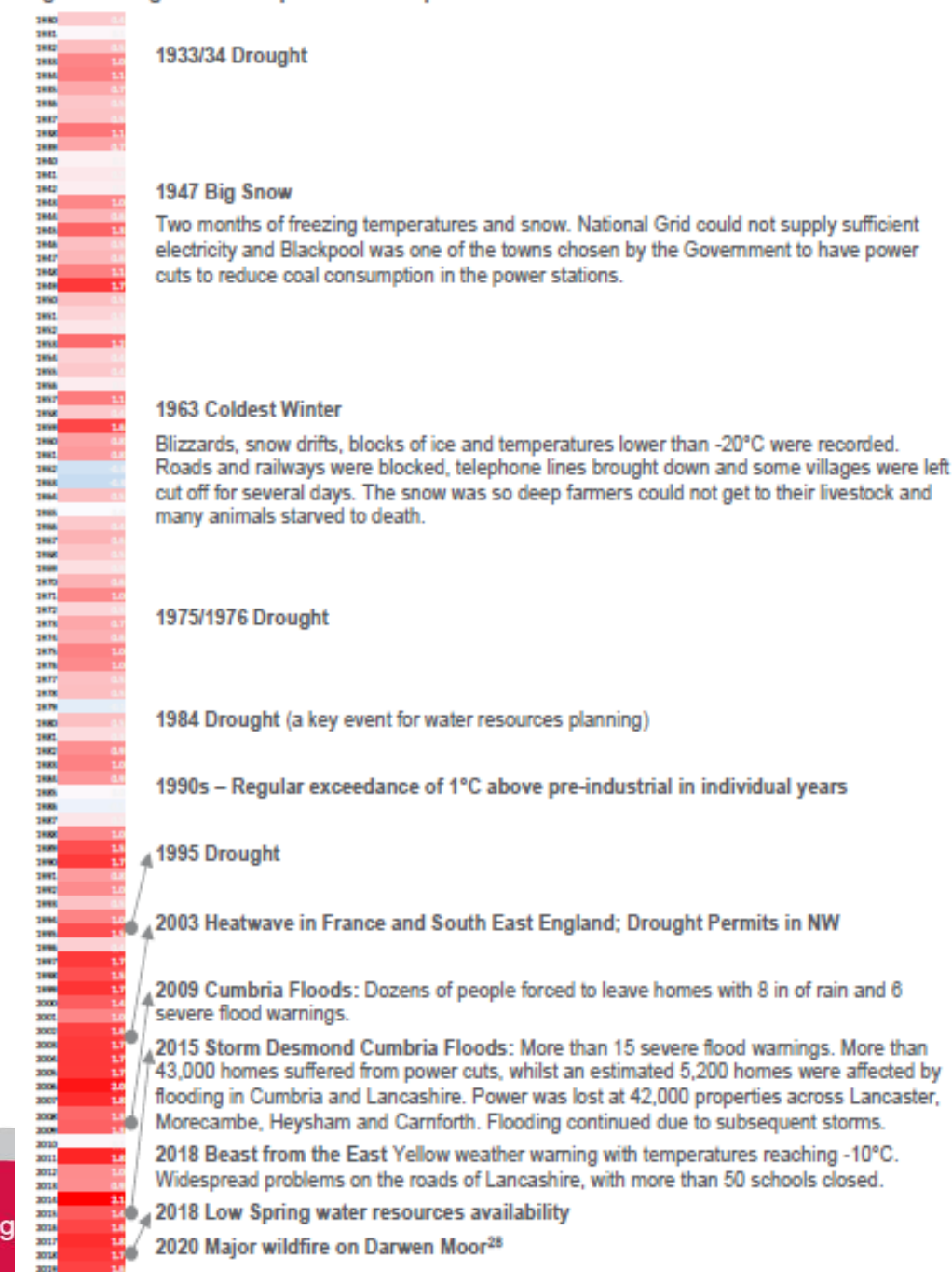
Extending the Pathways.

- ✓ The study extends each of the target pathways to see when net zero could be achieved.
- ✓ Two scenarios are explored:
 - ✓ Continued roll out of high electrification measures
 - ✓ A prominent role for hydrogen after 2035.
- ✓ Net zero could be achieved by the early 2040's with remaining emissions balanced by maximum intervention of removal measures such as peatland restoration and tree planting.

Achieving Net Zero

- ✓ Large scale interventions in transport (walking, cycling, public transport, demand reduction, vehicle battery charging).
- ✓ Large scale programmes of domestic building intervention (insulation, glazing, heating, lighting, meters).
- ✓ Interventions at large industrial installations.
- ✓ Large scale carbon removal interventions- peatland restoration, tree planting.

average warming above late pre-industrial period



Climate Resilience

Climate change trends are already clear in Lancashire.

Historic climate events in Lancashire alongside the North West of England 'Climate Stripes' showing average warming above late pre-industrial period



Temperatures are already around 1.5C higher in the 21st century compared with the end of the 19th century.



Lancashire's climate is projected to be significantly warmer by the 2080s, with annual average temperatures increasing by 4° C

Significant increase in rainfall intensity, with a two-fold increase in the frequency of very heavy rainfall, leading to more frequent river flooding across the county.



State of the Environment

Dashboard of 24 environment indicators, across 8 themes:

- ✓ Air Quality
- ✓ Water Quality
- ✓ Waste
- ✓ Noise
- ✓ Energy
- ✓ Climate Change
- ✓ Nature Recovery/ Biodiversity
- ✓ Transport

Some headlines...

- ✓ **Air Quality:** Nitrogen oxides and particulates are generally below the national air quality objectives.

...But there are 24 **Air Quality Management Areas** in Lancashire, designated because of poor air quality caused by vehicle emissions.



- ✓ **Waste:** For the Lancashire County Council area, 35% of waste is landfilled. Nearly 46% of household waste is recycled, but that figure has plateaued.



- ✓ **Nature:** National data, complemented by some indicator species in Lancashire, suggests the **decline in habitat and species** in the county is significant.



Renewables Deployment.

- ✓ Current renewable energy deployment is underperforming compared to the forecast made in 2011.
- ✓ 807 MW was predicted compared to an actual deployment of 544 MW.
- ✓ Wind, biomass and heat pumps are well below forecast.

Some emerging themes:



A major green infrastructure programme.



A major green housing programme



Local Energy Planning & Renewables



Bus Improvement, Active Travel and EV Charging.

Thank you.

shaun.turner@lancashire.gov.uk



Decarbonisation

ENWL and Cadent

Stay connected...

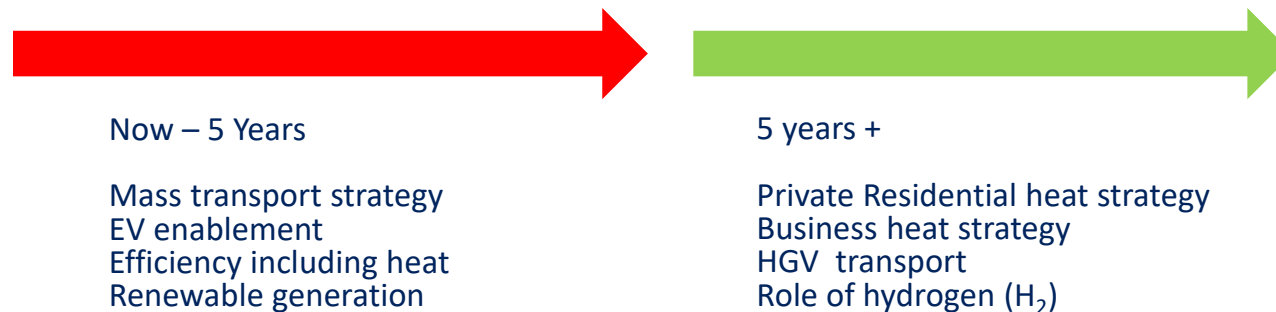
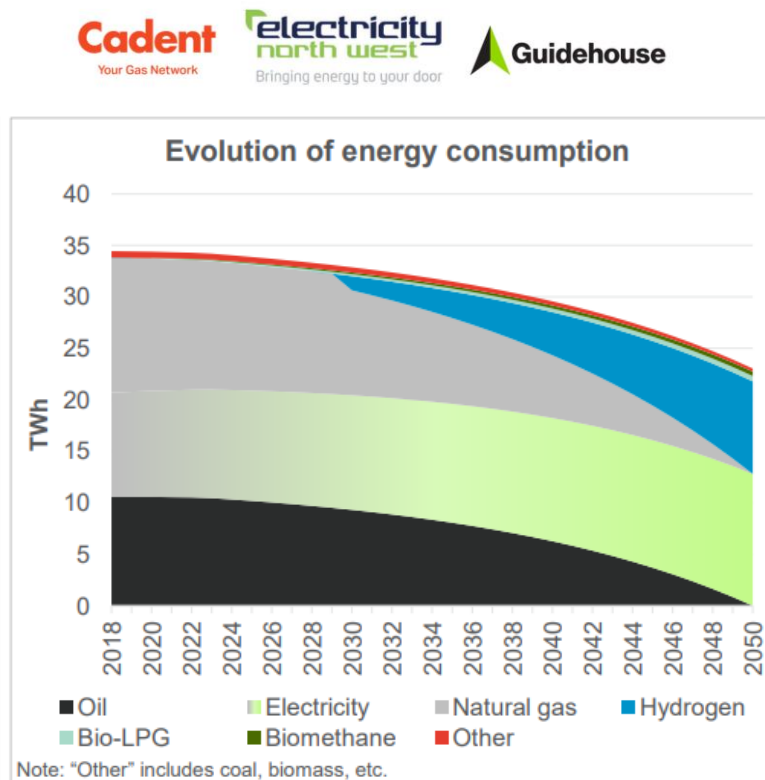
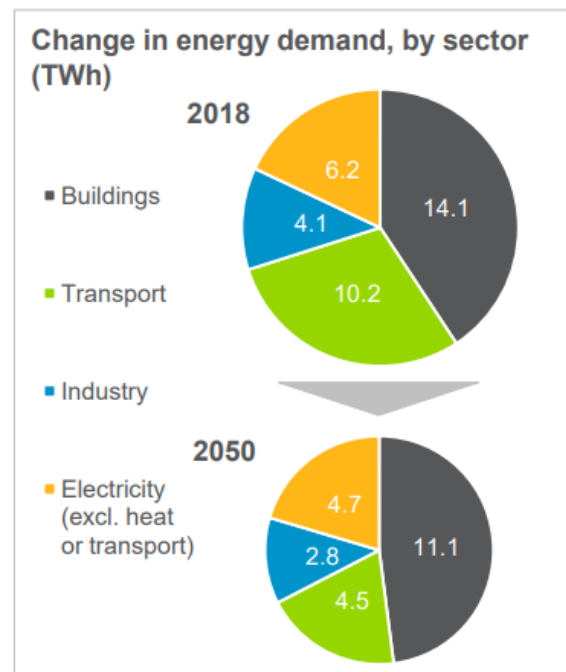


www.enwl.co.uk





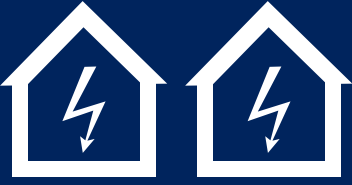


Key messages

1. There are tactical economically viable, no regrets actions that can be taken at huge scale in the next 5 years.
2. There are strategic medium - long term national strategy discussions that will over time revise the options available.
3. 2 must not be allowed to stifle action on 1 recognising NetZero is a multi step journey.
4. Discussion on targets including SBTs assists in understanding volumes but can distract from 1.
5. Lancashire has finite influence over the timing of technology and incentivisation which is determined by national issues.



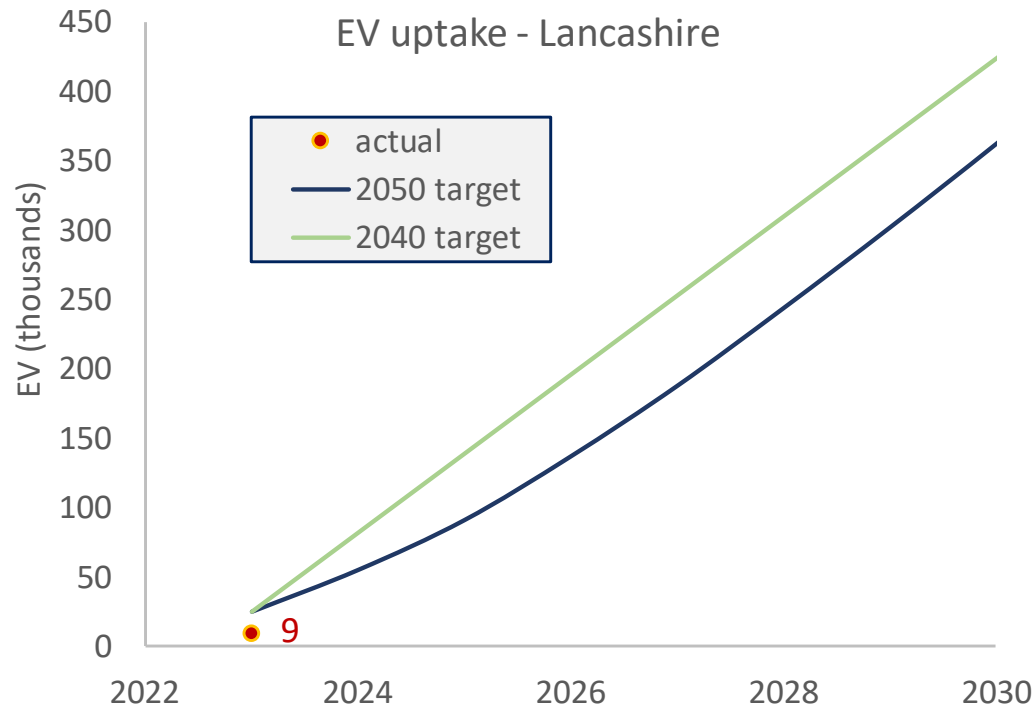
The challenge – a typical working day 2023 - 2028



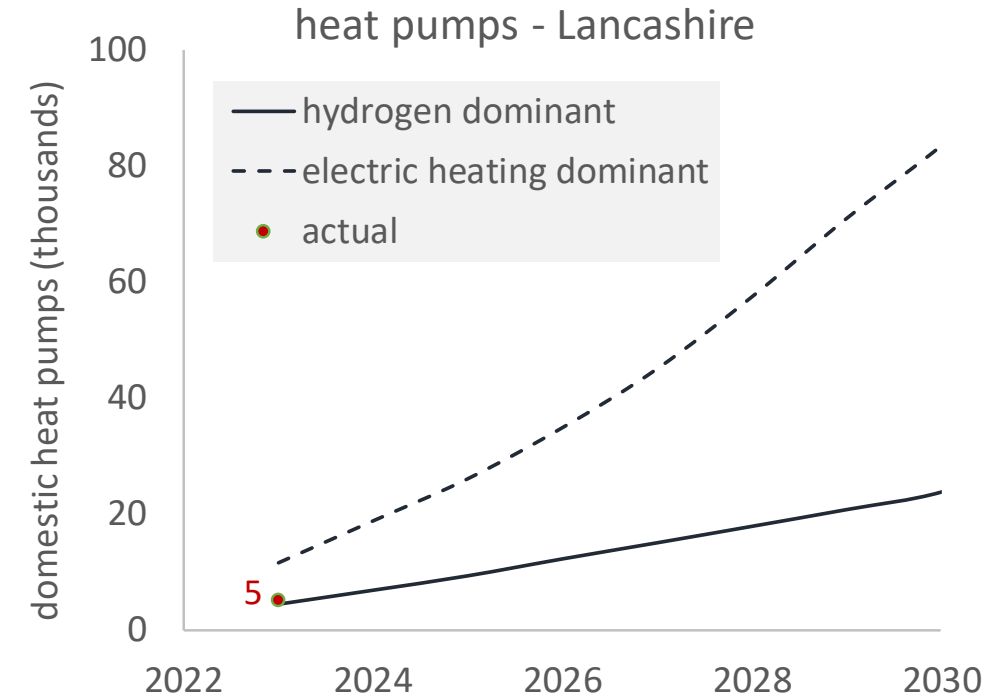
				
500 new EVs will connect to recharge	150 homes will convert to a heat pump	75 new all electric homes will be connected	40 businesses will go 100% net zero	1.5 MW of new renewable generation / storage will connect

£ 650,000 invested in our network

Lancashire 2050 Net Zero minimum targets



- LA EV charging is an important but relatively small component in the charging solution landscape
- Trunk roads, MSA, destination charging including work, retail, recreation are very important factors.
- Home charging viable for ~ 70%
- GB regional strategies to enable and simplify EV adoption differ considerably and Lancashire strategy review needed.
- North West example: TfGM have a consistent and detailed plan covering mass transport and alternate travel means.




- Social housing heat has a well defined strategy and action plans.
- Private residential heat ~ 90% has little direction or means of visible impetus pending government policy decision.
- The role of Hydrogen is being developed nationally based on North West regional work and will inform policy.
- Political leadership on efficiency may be needed



- **Mayor announces plans to secure a green future for London**

A new report – commissioned by the Mayor of London – outlining the action needed to tackle the climate emergency, cut congestion in the capital to create a greener city, and decrease air pollution, was released on Tuesday 18 January. The report finds that car traffic must decrease by at least 27% in London by the end of the decade to meet the climate change targets and sets out that to achieve a 27% reduction in car vehicle kilometres, London will need a new kind of road user charging system implemented by the end of the decade.

- Business is a major infrastructure provider and consumes over 60% of all energy.
- Business has the financial means to adopt NPV beneficial solutions. ENW is planning a comprehensive business engagement program to inform and influence business on the benefits of EV and PV adoption.
- Co-ordination and mutual message support needed.
- ENW and Cadent will regularly refresh the Pathways work producing a clear set of short term (0 – 5 year) actions feeding into Local Area Energy plans.
- Additional clarity would be helpful on where stage 1 and 2 are co-ordinated to allow alignment of leadership messaging

A person with their back to the camera, wearing a denim jacket and a bun, stands in a vast field of tall, golden grass. They are pointing their right index finger towards a bright sun on the horizon, which is partially obscured by soft, white clouds. The sky is a mix of blue and orange, suggesting a sunrise or sunset. The overall mood is hopeful and aspirational.

Shaping the future of hydrogen

Delivering national strategy

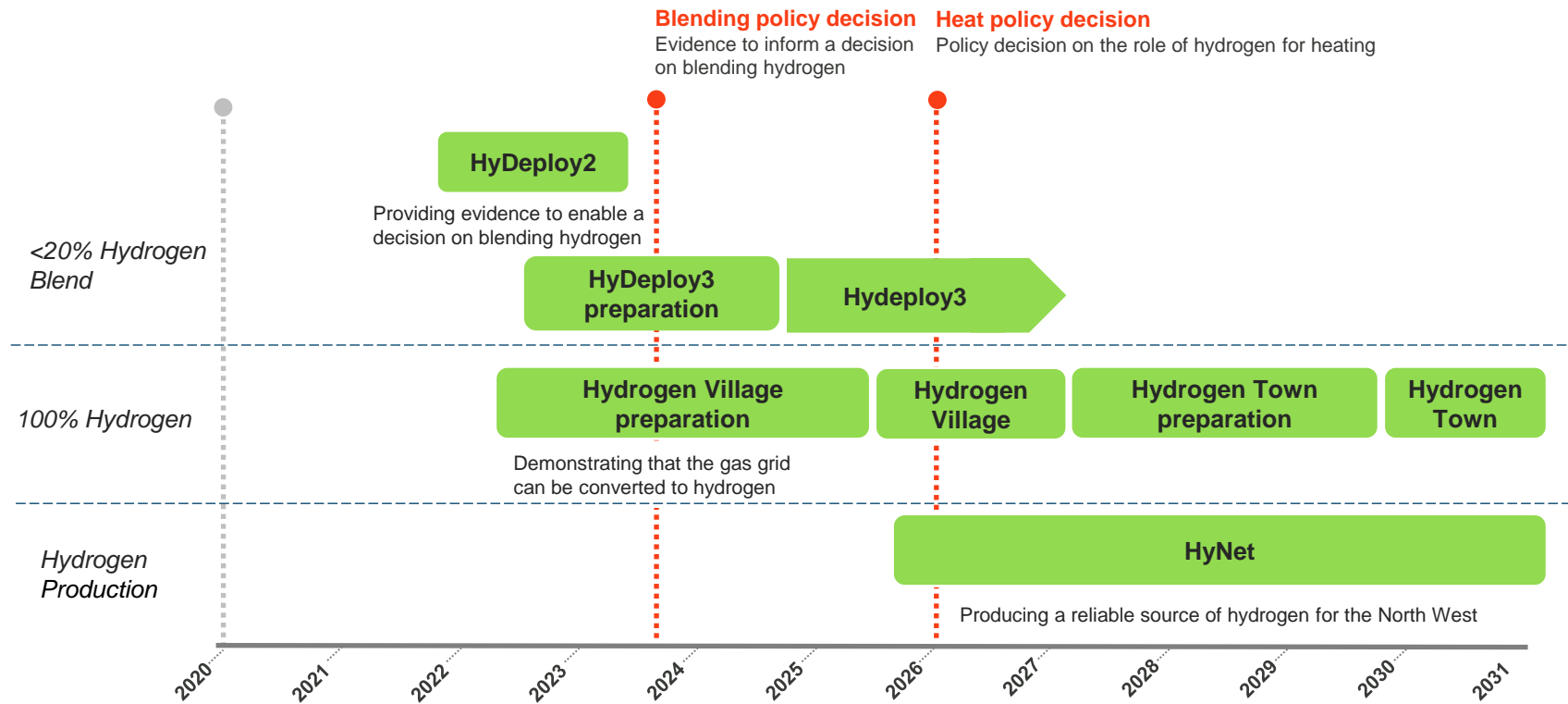
Government commitment to grow the low carbon hydrogen economy is significant:

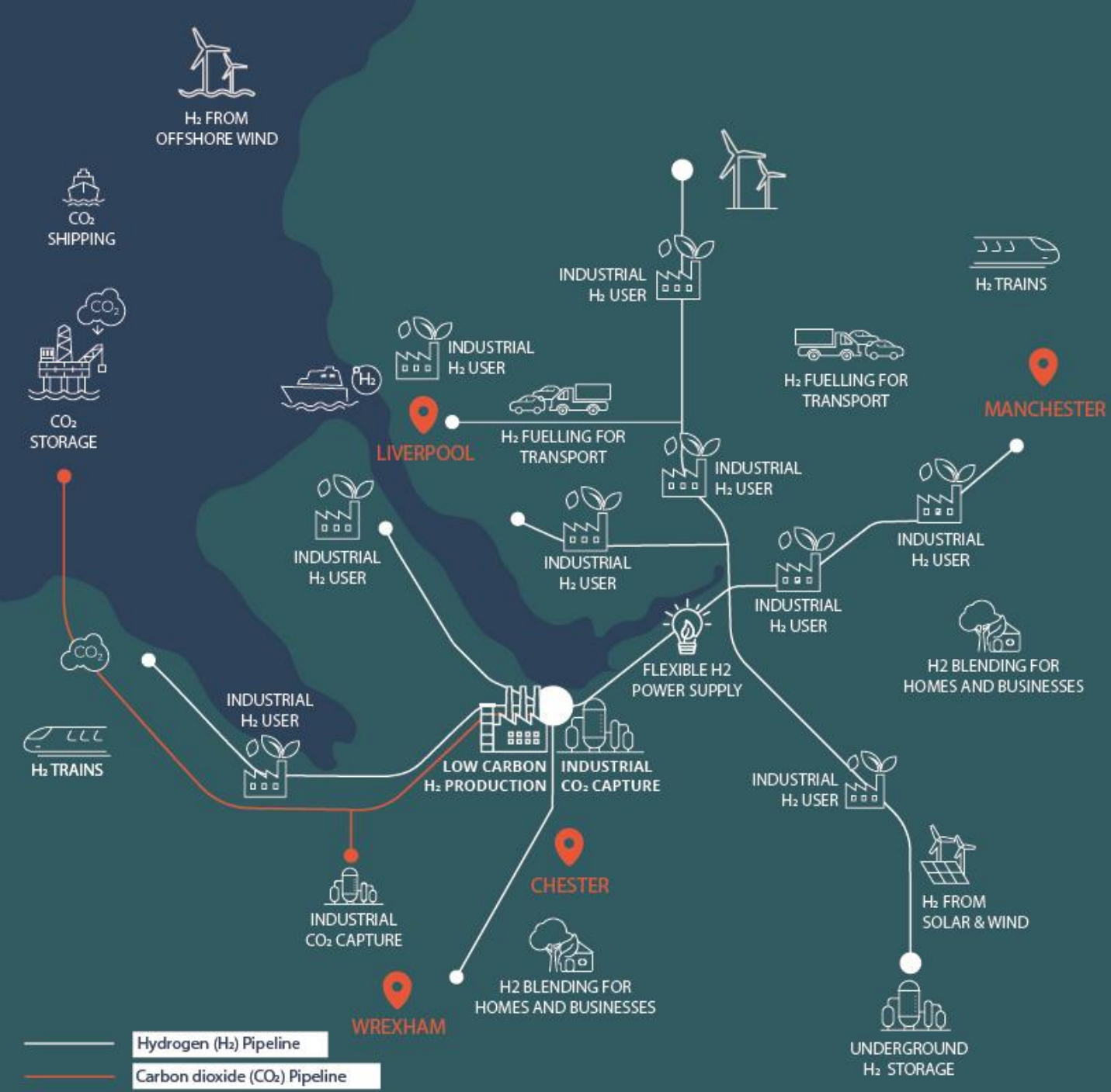
Ten Point Plan	Evidence for hydrogen blending – 2023
	Hydrogen village trial – 2025
	5GW of hydrogen production – by 2030
	Hydrogen town trial – 2030
Hydrogen Strategy	Hydrogen could represent upto 35% of the future energy mix
	Attract £4bn of private investment
	Consultations on low carbon hydrogen standard and vital economic models
Heat and Buildings Strategy	Heat Policy Decision – 2026



Delivering the government's 10 Point Plan

Cadent's hydrogen projects





HyNet North West

- Low-carbon hydrogen production plants
- A hydrogen pipeline network and salt caverns in which hydrogen can be stored ready for use
- Facilities to capture CO₂ emissions
- Underground pipelines to transport CO₂ emissions to permanent safe storage
- Initially focused on industrial decarbonisation
- Future phases to bring hydrogen further into the North West and North Wales



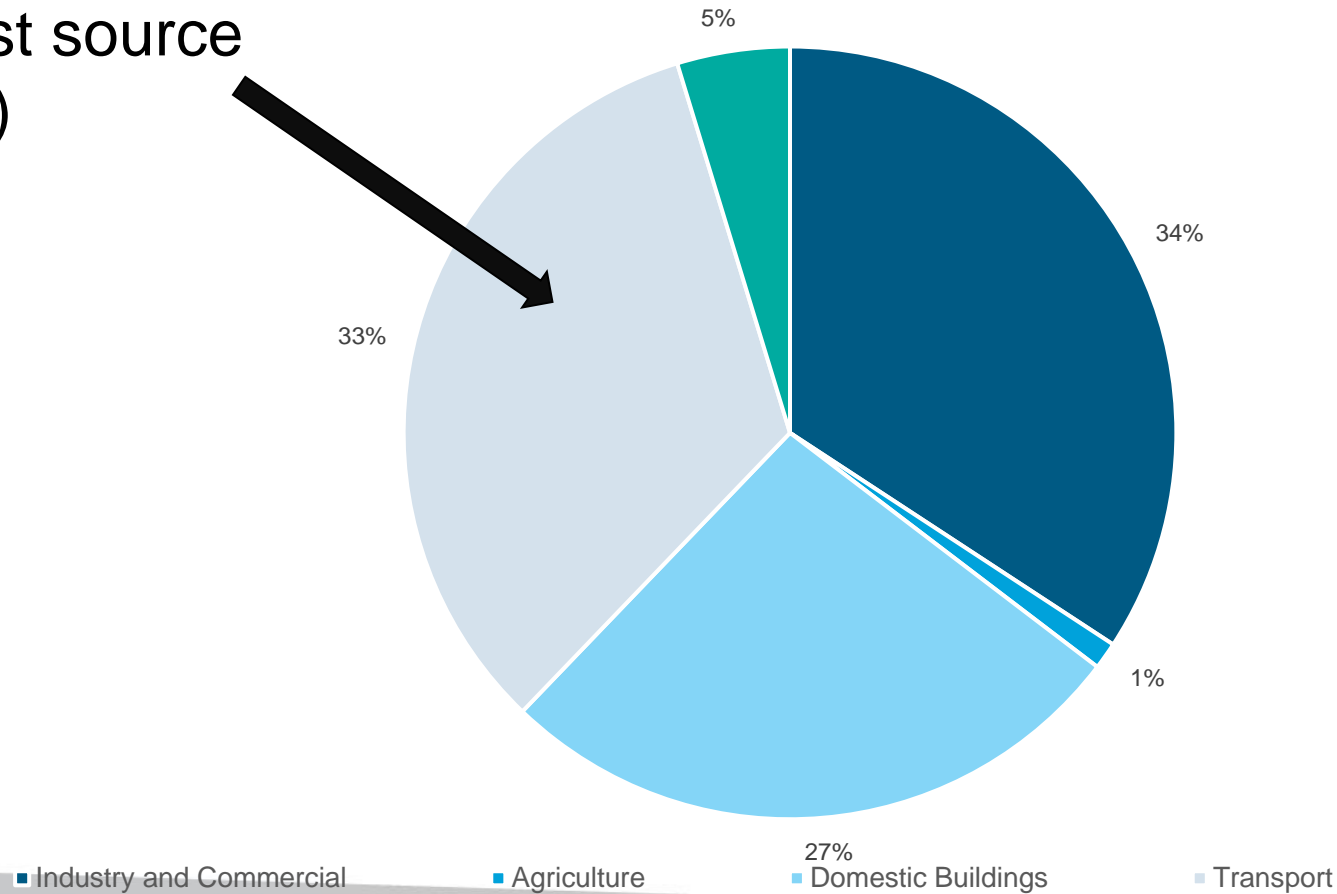
Questions

Transport and Decarbonisation in Lancashire .

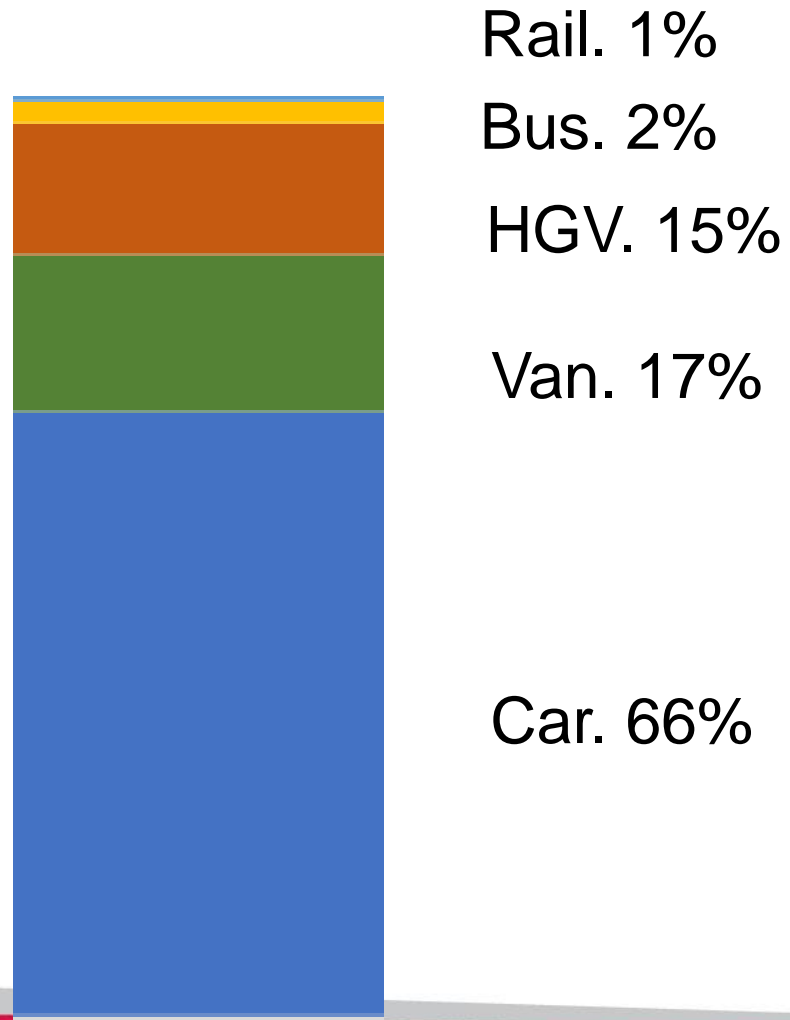
County Councillor Charlie Edwards
Cabinet Member for Highways and Transport
Lancashire County Council

Lancashire CO2 emissions by source.

Transport is the
largest source
(33%)



Lancashire Transport CO₂ by source.



Transport decarbonisation so far.....

Pennine Reach bus rapid transit scheme in East Lancashire (£40m).



Active Travel...some examples:



East Lancashire
Cycleway: 54km

Preston cycle
superhighway and
Innovative junction.



New Cottam Parkway Rail Station.



New Rawtenstall Bus Station



Renovated Preston Bus Station.



EV Charging Points.



- ✓ 428 publicly available
- ✓ 150 on highway

**...some options to accelerate
action.**

Avoid, Shift, Improve hierarchy.

Avoid



- ✓ Reduce the need to travel.

Shift



- ✓ Shift to sustainable modes.

Improve



- ✓ Improve carbon emissions.

Better planning....where residents can meet their everyday needs within a short walk or cycle.



Ambitious Plan for Bus Services (£165m).



Mobility Hubs or Interchanges.

Good quality connections between services and timetable alignment.



EV car clubs:



**EV charging
infrastructure
(footways).**

Thank you.

charles.edwards@lancashire.gov.uk



Blackpool Coastal
Housing

The Climate Challenge

A housing perspective

INSPIRING PEOPLE TO BUILD **BETTER COMMUNITIES**

WHO WE ARE

- BCH is a wholly owned Council company managing 5000 properties
- Predominantly social housing for rent meeting local housing need in one of the most deprived boroughs in the country
- We deliver general needs housing and increasing amounts of supported housing
- Additional support including employment support is central to what we do



CARBON REDUCTION – THE CHALLENGE

- We are signed up to a target of being carbon zero by 2030
- We have audited our CO2 use with the Carbon Trust
- Our biggest challenges are,
 - Scale and cost
 - Industry readiness
 - Competing needs



SCALE & COST

- Much of our stock is at EPC C or above
- Our first scheme with support from ERDF has cost £33k per unit and its not fully carbon zero
- Scaled up for our stock that's £165m required to be spent before 2030 (Blackpool's target date)
- For Lancashire there are circa 618,000 households making comparable costs in the order of £1.5b/£2b
- A herculean task when we have multiple demands for service and investment



INDUSTRY READINESS

- Housing in the UK and social housing in particular has a well developed and highly efficient gas heating system
- We can equip an average family home with a gas heating system that provides affordable warmth and hot water for circa £2k.
- The current alternatives cost between £6k and £10k to install and have not developed the same reliability and cost effectiveness for users.
- New technologies such as Hydrogen remain years away from practical implementation

DELIVERING CHANGE

- The size of the problem we face and the time we have to complete it in is a daunting prospect
- Do we have a collaborative approach around new technology, innovation and implementation?
- Have we got the skills and the workforce to deliver the necessary change?
- Is the leadership in place to provide the necessary focus to get the job done?



THE OPPORTUNITIES

- An emerging Government funding programme which is too small and not being delivered at pace but a start
- A well developed social housing sector that set up to deliver “Decent Homes” and is structured to invest in its stock and ready to deliver with some encouragement
- Green Jobs should be a legacy of any new investment if we are organised enough to exploit the potential for local labour markets
- A real opportunity to raise the quality of property condition across all tenures and improve running costs



WORKING ACROSS TENURES

- For the last 15 years Lancashire authorities have co operated to share capacity and skills
- CHiL Cosy Homes in Lancashire has championed energy efficiency across all tenures
- The cooperation has led to significant investment particularly in the private sector
- ChiL has sourced millions of pounds to tackle fuel poverty, poor fabric and climate change



WORKING ACROSS TENURES

- CHiL has given a great working example of successful collaboration across the county
- It provides a model for working with hard to reach tenures
- It has linked tackling fuel poverty with tackling climate change and has an established reputation to build on



SUMMARY

- The challenges are undeniable but there are multiple benefits to be had by tackling them
- Defining the work we need to do in detail is an imperative without it change becomes a nice to have not an essential
- No one can do this by themselves collaboration across industries and boundaries is essential
- Leadership is a prerequisite to success



**Blackpool Coastal
Housing**

Blackpool Coastal Housing

Coastal House
17-19 Abingdon Street
Blackpool
FY1 1DG

01253 477900
enquiries@bch.co.uk
www.bch.co.uk

Adapting to Climate Change... our decisions matter



There is a rapidly narrowing window of opportunity to enable climate resilient development

(a) Societal choices about adaptation, mitigation and sustainable development made in arenas of engagement

Dimensions that enable actions towards higher climate resilient development

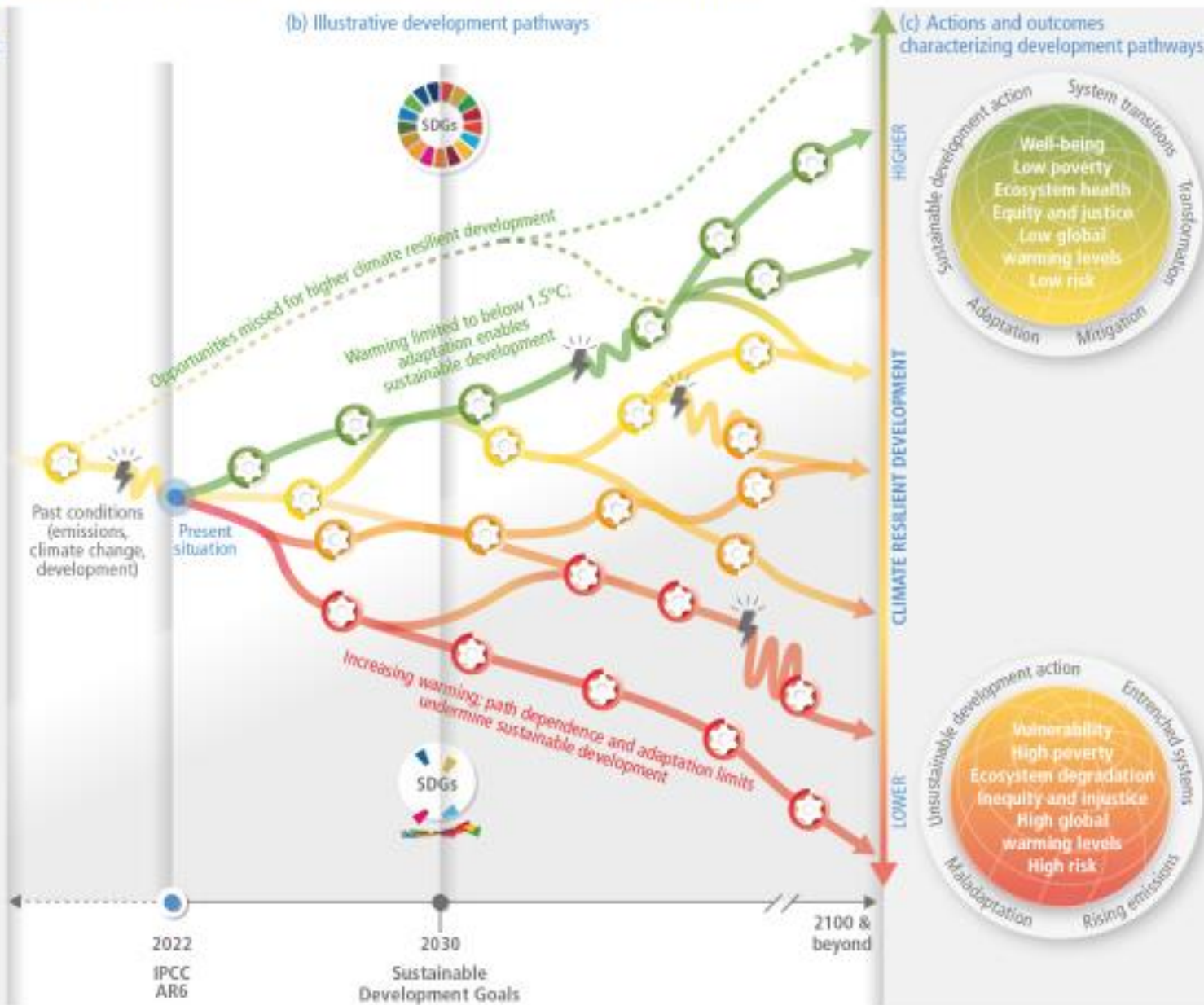


Arenas of engagement:
Community
Socio-cultural
Political
Ecological
Knowledge + technology
Economic + financial



Dimensions that result in actions towards lower climate resilient development

(b) Illustrative development pathways



(c) Actions and outcomes characterizing development pathways



IPPC 6th Assessment Report

March 2022



Illustrative climatic or non-climatic shock, e.g. COVID-19, drought or floods, that disrupts the development pathway

Narrowing window of opportunity for higher CRD





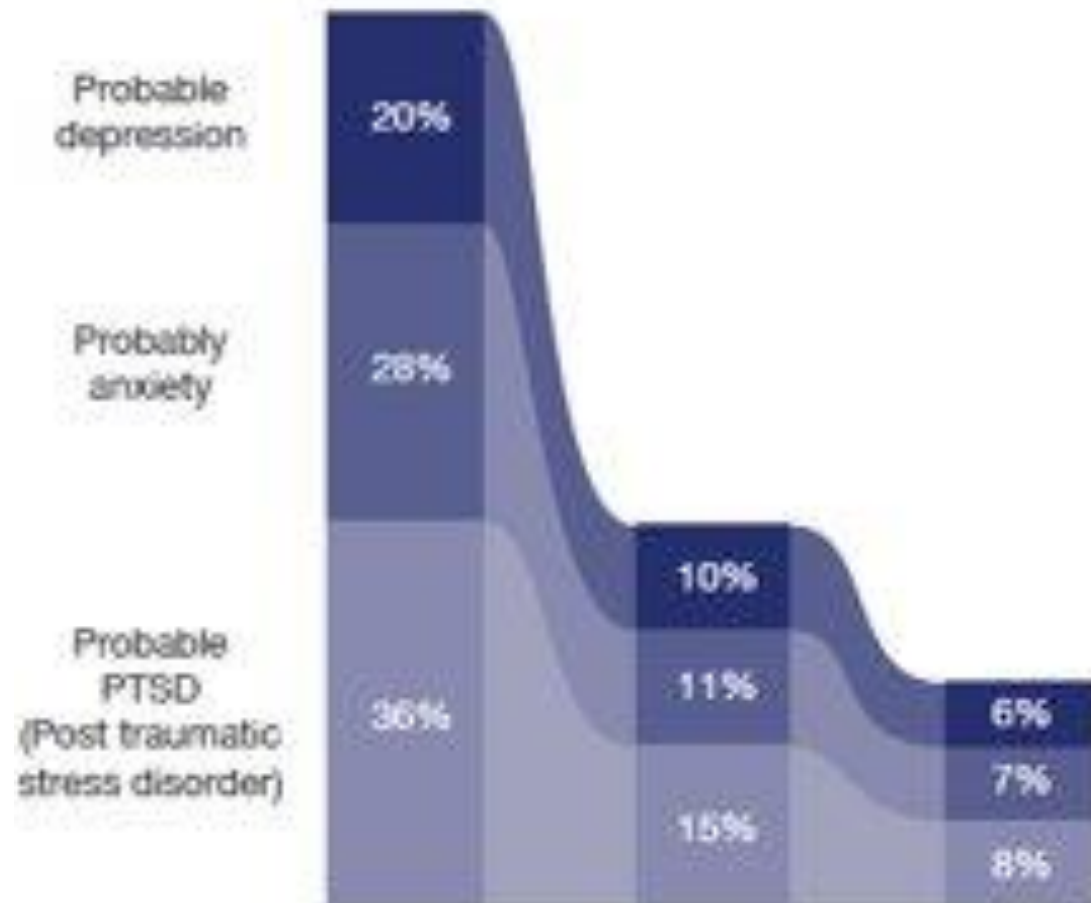
Flooded



Disrupted

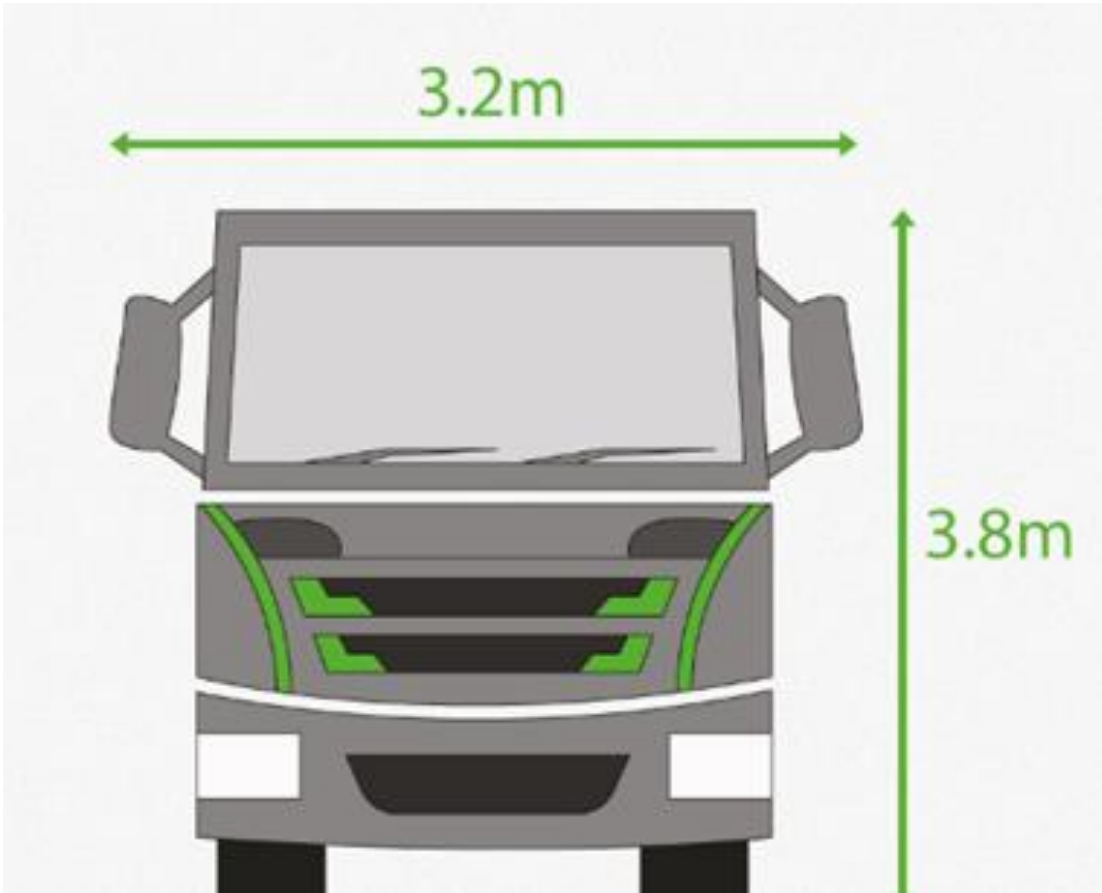


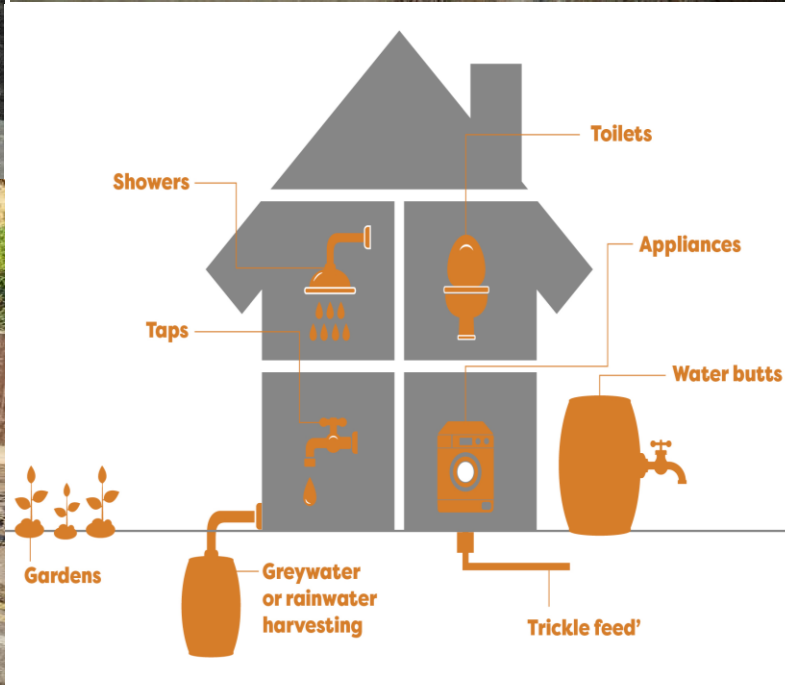
Not flooded



Health & wellbeing

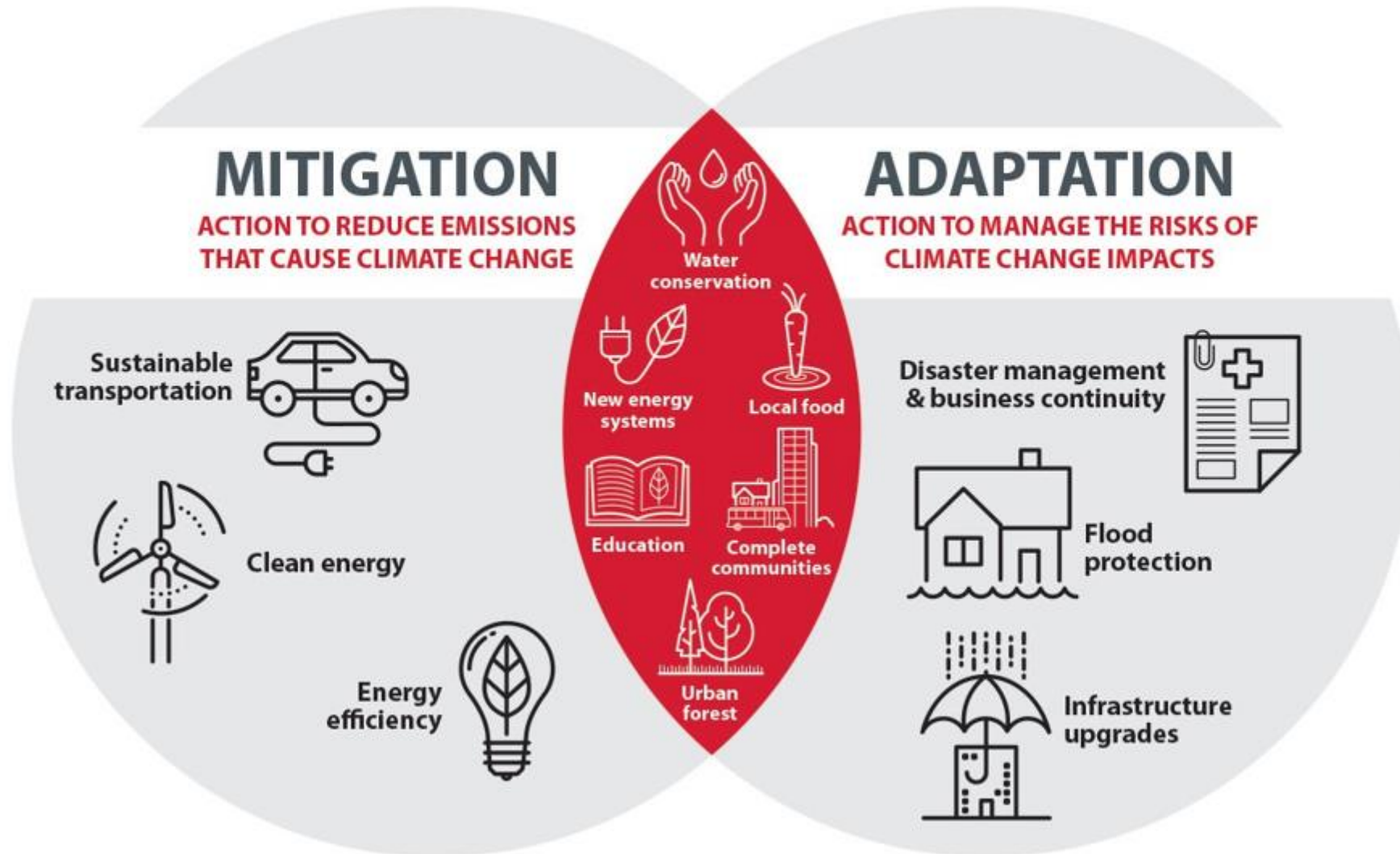
Always higher ?





Lancashire, how prepared are you in the event of a risk or emergency?

Building Climate Resilience



“The scientific evidence is unequivocal climate change is a threat to human wellbeing & the health of the planet. Any further delay.... will miss a brief and rapidly closing window to secure a liveable future”

IPPC, March 2022

Delay and pay or, plan, act & thrive..... The decision is ours



Lancashire's Environment

It's where the money's at:

**Addressing the climate and ecological emergencies through
nature-based solutions**

Tom Burditt
Jack Spees

Chief Executive
Chief Executive

Lancashire Wildlife Trust
Ribble Rivers Trust



Lancashire
Manchester
North Merseyside



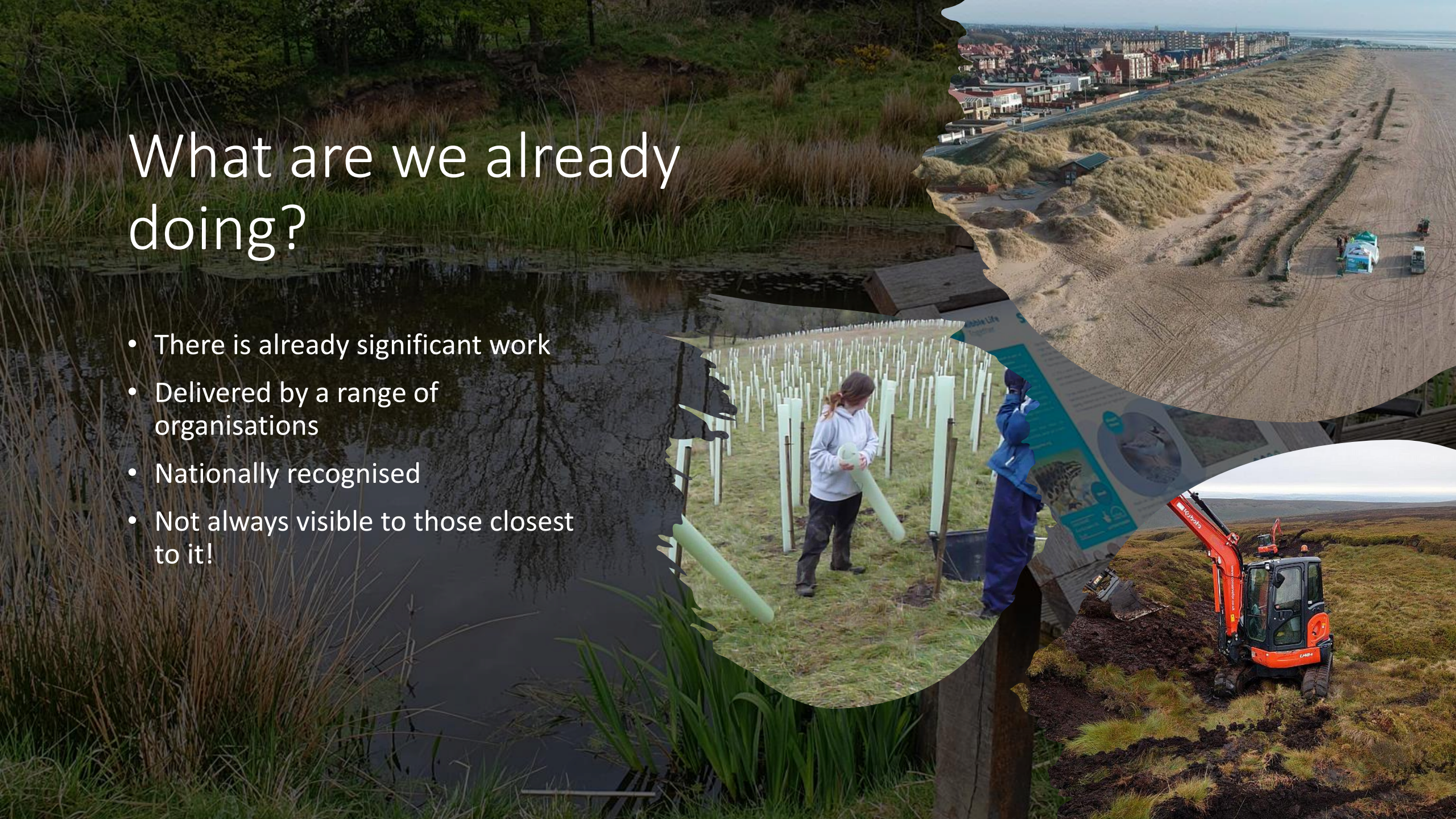
What do we have?



- Lancashire has an incredible mosaic of habitats
- Fortunate to have significant amounts of:
 - rare and priority habitats
 - Priority species
 - iconic landscapes

What are we already doing?

- There is already significant work
- Delivered by a range of organisations
- Nationally recognised
- Not always visible to those closest to it!



Nature based solutions



- Carbon capture
- Climate resilience
- Natural flood management
- Coastal flood defence
- Water quality
- Air quality
- Health and wellbeing
- Job creation

Peat restoration



- Potential for 200,000t CO₂ extra to be stored by 2045 across 70 sqkm @ £300mn
- 40t/yr @Winmarleigh Carbon Farm in 2ha
- 28,000ha (283 sq miles) available – 26k upland, 2k lowland
- Great North Bog partnership worth £200mn across 7000 sq km (4mn t/yr)

Coastal flood defence

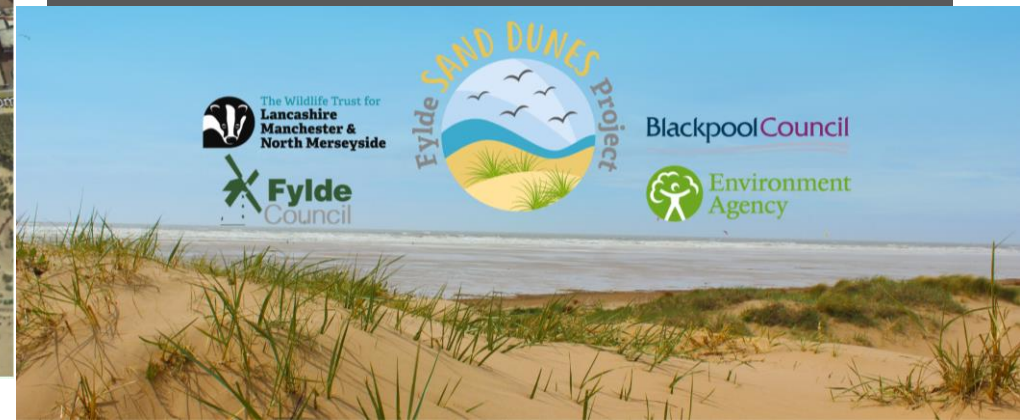
2005



2021



- 493 homes protected from coastal erosion and 8 from flooding (£6mn worth of benefit)
- A further 400 protected as sea levels rise
- 13,000 Xmas trees
- 1100 volunteers
- Plus carbon, nature and tourism/recreational benefits
- EcoCOBS – another £6mn



Health and wellbeing



Our Partners



eden project



- Nature based social prescribing projects
- 95% participants improved mental wellbeing in 6 weeks
- Savings from mental health services costs
- Getting people back to work
- Improved quality of life



Woodlands



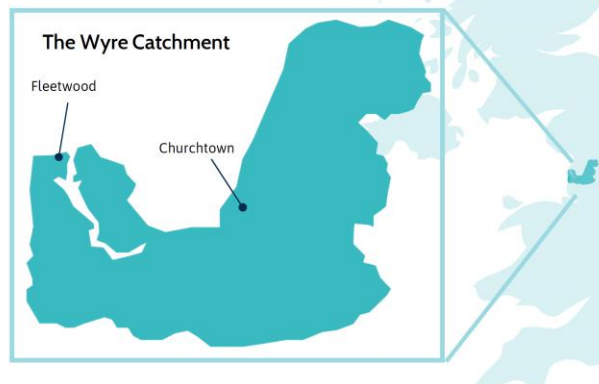
- 50 Hectares a year for a decade – easily exceeded with more resource
- £1m+ in National Funding through FC
- £1m+ in National Funding from WT
- Enabled through small contributions from LAs and others
- More contributions = more



The Wyre catchment

Communities in the Wyre Catchment such as Churchtown have experienced a **1 in 50-year flood** event **four times in the last 20 years** with a devastating impact on the local community.

The **economic cost** alone to insurers alone of a 1 in 50-year flood is **£1.96m**.



The intervention

70ha NFM features

20ha Woodland creation

1710 Leaky dams

42 Ponds and scrapes

10km New hedgerows



Ecosystem services and project outputs.



Natural Flood Management

This project will install over **70ha** of NFM interventions such as ponds, hedges and leaky dams, storing **600,000 m3** water in the catchment



Habitat creation

These **nature based** solutions will improve habitats and increase biodiversity, delivering **283 off-site biodiversity credits**.



Water Quality

We will **replenish (x)** helping to improve the water quality in the catchment



Social

Working with the community, we will reduce flood risk and the associated stresses to **56 properties**.



Carbon

Through **tree planting** and rewetting peat we will sequester **25,600 tonnes of carbon**.



The structure of the deal



Sellers

10+ farmers/landowners
Hosting and maintenance contract
Full capital costs
9 year contract



Ecosystem service

Main service= NFM
Carbon= Peatland Code
Water efficiency= Replenish
Biodiversity= Impact adjusted investment

Board of 7 directors
representing all the different **stakeholder groups**

SPV

Wyre Catchment CIC-
Community interest Company
limited by guarantee. With an
asset lock



Wyre Rivers Trust
O&M contract
3 year delivery phase

Investors



Upfront investment: £850k
Grant: £600k Woodland Trust



Buyers

6 buyers: total annual revenue of £220k per annum.
Mixture of public and private
Based around NFM

Agriculture



- Working with over 100 farm businesses a year
- Aiding in farm business AND nature sustainability
- Forefront of innovation – payment by results for soils
- £1m of investment in and around Chipping
- National DEFRA test and trials

So where is the
money at?

These are the
“advanced parties”

There is significant
funding & investment
in the county already

Much, much more is
out there

Why do we need to do more?

- Climate emergency
- Health Emergency
- Biodiversity Emergency
- Flood Risk, Water Framework, Bathing Water Directives
- Water Company Asset Management Plans
- The current trend is not good....
 - Not just for nature, but for the communities
 - Increasing flood risk
 - Threats to our bathing waters
 - Air quality and health issues



What are the challenges?



- Lack of clarity around the skills and experience already present
- A lack of “shovel ready” projects
- Continuous and ongoing commitments to deliver
- Recognising the need for cross boundary working
- Fear of the scale of the task



Some of the answers

We all need to do our bit, contributing land and resource, from the small to the large

Integrating out actions, green finance to support buildings and infrastructure.

Utilise our procurement processes to support internal action and funding

Taking responsibility, work with others – collaborating using what is already in place to scale up – through LNP and LNRS

The outcomes?

- A boosted economy that is going beyond climate resilient –underpinning growth
- We already have a green economy, with jobs that aren't just ecologists
 - Civil engineers
 - Consultants – skilled workers
 - Supply chains
 - Service sector
 - Farmers
- Boost through inward investment & funding from private sector

A Better place for all



A final thought

Historically it has been believed that the “environment” is a subsidiary of the economy, the reality is the economy is a subsidiary of the environment

**Supporting our Lancashire businesses –
to move to net zero
&
to fund, manufacture and commercialise
low carbon technologies**



**Business support –
for SMEs from all
business sectors for
awareness raising,
transitional support
and subsidy of net
zero tech installation**



Telephone: 01254 356 487 or

Email: info@chamberlowcarbon.co.uk



**CHAMBER
LOW CARBON**
HELPING BUSINESSES GO GREEN

**ARE YOU A LANCASHIRE BASED BUSINESS? LOOKING REDUCE YOUR CARBON
FOOTPRINT, SAVE MONEY & DRIVE ENERGY EFFICIENCIES? WE CAN HELP YOU ACCESS**



1-TO-1 BUSINESS SUPPORT IN

- Reducing bills and raw material waste
- Energy efficiency
- Process resource efficiency
- Water efficiency
- Waste / resource management
- On-site energy auditing
- On-site carbon footprint analysis and action plan



BEST PRACTICE EVENTS

- Let us help you understand which low carbon renewable energy to choose and why
- Find out about low carbon technology, how you can use it and which is best for your business
- We can help you calculate the pay back period
- Understand how it can be installed on your premises



ADVANCED BUSINESS SUPPORT

- Behaviour change/On-site training
- Masterclass of management systems ISO 14001 and ISO 50001
- Masterclass into on-site energy auditing
- Introduction to environmental auditing





Making Carbon Work Project

Helping Lancashire SMEs reduce their carbon footprint by providing:

- An onsite environmental audit
- Carbon footprint baseline
- Tailored carbon reduction plan



Capital Grant for Low-Carbon Technology
Grant of up to £15k (50% Match)

Equipment such as:

**LED Lighting - Solar PV – Ground/Air Source
Heat Pumps - Electric Vehicle Charging Points**

**Low carbon tech
innovation support -
driving job creation
and sector
excellence for the
UK & global market**





**CHAMBER
LOW CARBON**
HELPING BUSINESSES GO GREEN

DO YOU DEVELOP LOW CARBON TECHNOLOGY? ARE YOU LOOKING TO MAKE YOUR IDEAS A REALITY, BUT NOT SURE HOW?

WE CAN HELP YOU ACCESS



LOW CARBON TECHNOLOGIES *ON-SITE GENERATION*

- Meet Low Carbon technology adopters
- View demonstrator sites
- Attend showcase events on Low Carbon technologies
- Access support in finding funding if you choose to implement renewable energies on your site and how to install it



LOW CARBON TECHNOLOGY *INNOVATION & MANUFACTURING*

- Product innovation support
- Prototype design verification
- Establish product readiness and find your local manufacturer to help you start production
- Assisting the product to market and finding your demonstration customers
- Specialist support



LOW CARBON TECHNOLOGIES *SUPPLY CHAIN & SUPPORT SERVICES*

- Low carbon supplier support network
- Business support consultations
- Meet the manufacturers and suppliers events
- Networking
- Showroom space for your products

Eco-Innovation North West

- Long term technical and business led R&D
- Internships and student projects
- Workshops, events and forums
- Business grants

Work Smarter - Improve your products
- Improve your business processes

AHolden11@uclan.ac.uk

“We believe there are fantastic business opportunities for companies in all sectors in the North West”

“We are keen to hear from businesses that have an R&D idea, or wish to explore innovative solutions which aid the push towards net zero”

Eco-I

**North
West**



European Union

European Regional
Development Fund





Investing in a greener future

www.Red-CAT.uk



Welcome to RedCAT

LANCASHIRE CENTRE FOR ALTERNATIVE TECHNOLOGIES

RedCAT, the Lancashire Centre for Alternative Technologies, pump primed by investment from the GETTING BUILDING FUND, is an initiative developed and led by East Lancashire Chamber of Commerce.

RedCAT provides a pathway of financial and R & D support to accelerate the commercialisation of low carbon technologies.



Low Carbon Smart Building Demonstrator

Demonstrate how the use of connected assets throughout a facility can provide information in respect of real-time and historical energy use, enabling industrial enterprises to streamline energy and resources from a bottom-line perspective in both production and office spaces in addition to improving staff health and wellbeing

Location : Samlesbury Aerospace Enterprise Zone



We are Lancashire