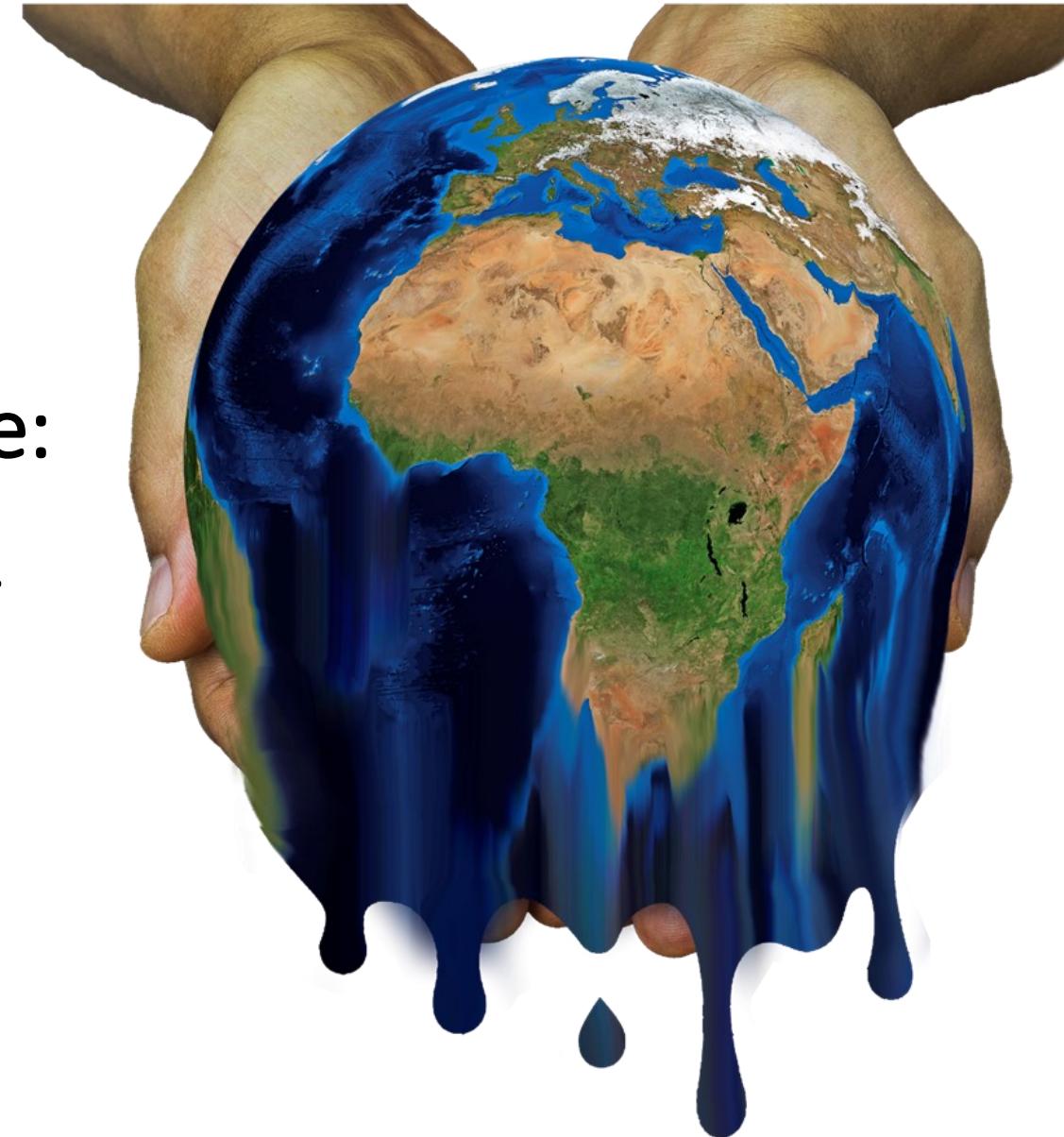


Climate Change: Challenge and Opportunities for Shropshire

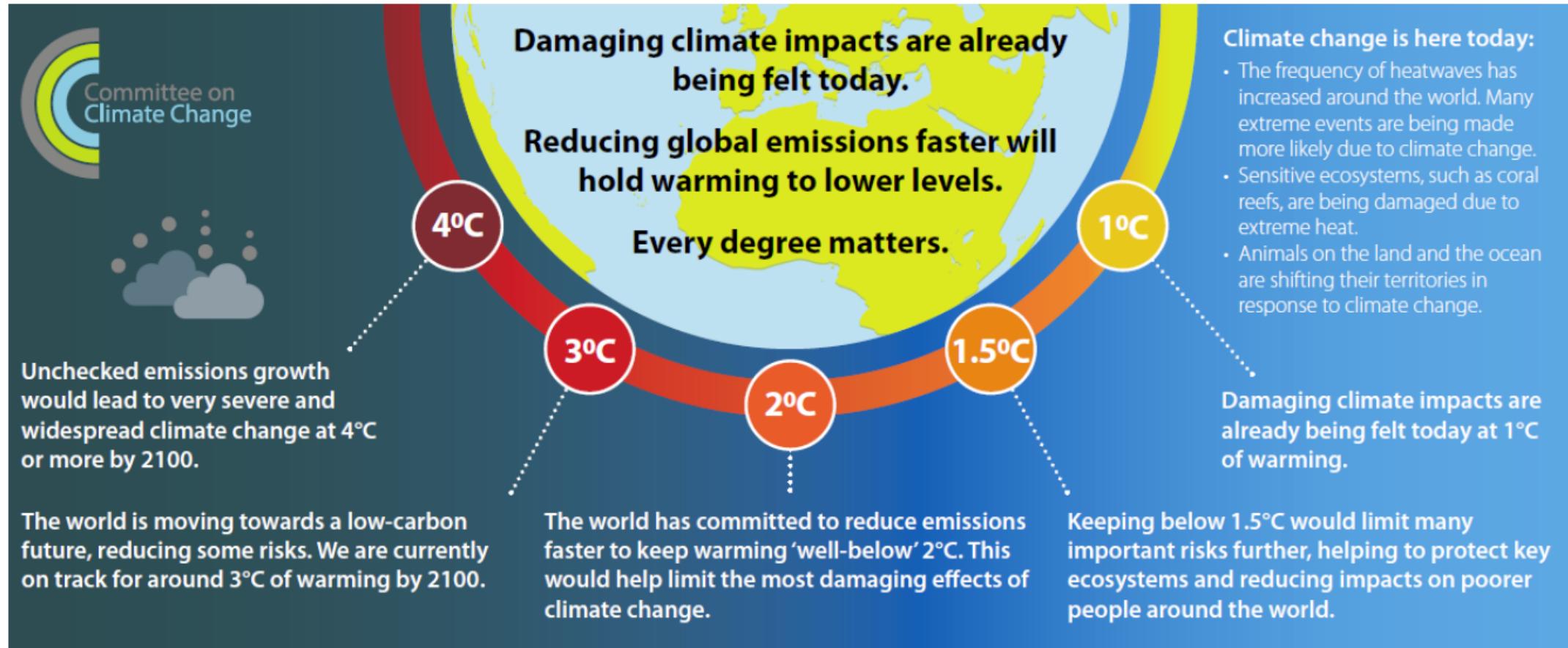


Adrian Cooper
Climate Change Manager
Shropshire Council

Scope

1. The challenge of climate change
2. Climate Strategies
3. Climate Action Projects:
 - Power Down;
 - Power Up
 - Carbon Capture & Storage
 - Climate Resilience

Challenge of Climate Change



Impact on Shropshire



- **Physical Impacts:**

- more pronounced and frequent episodes of extreme weather;
- flash flooding, water damage, surface water drainage and road maintenance costs;
- Impact on agriculture and food production.

- **Plant, Animal and Human Health impacts:**

- Adverse impact on diet and exposure to disease and pests;
- Adverse health impacts on children and vulnerable older residents.

- **Organisation-specific impacts:**

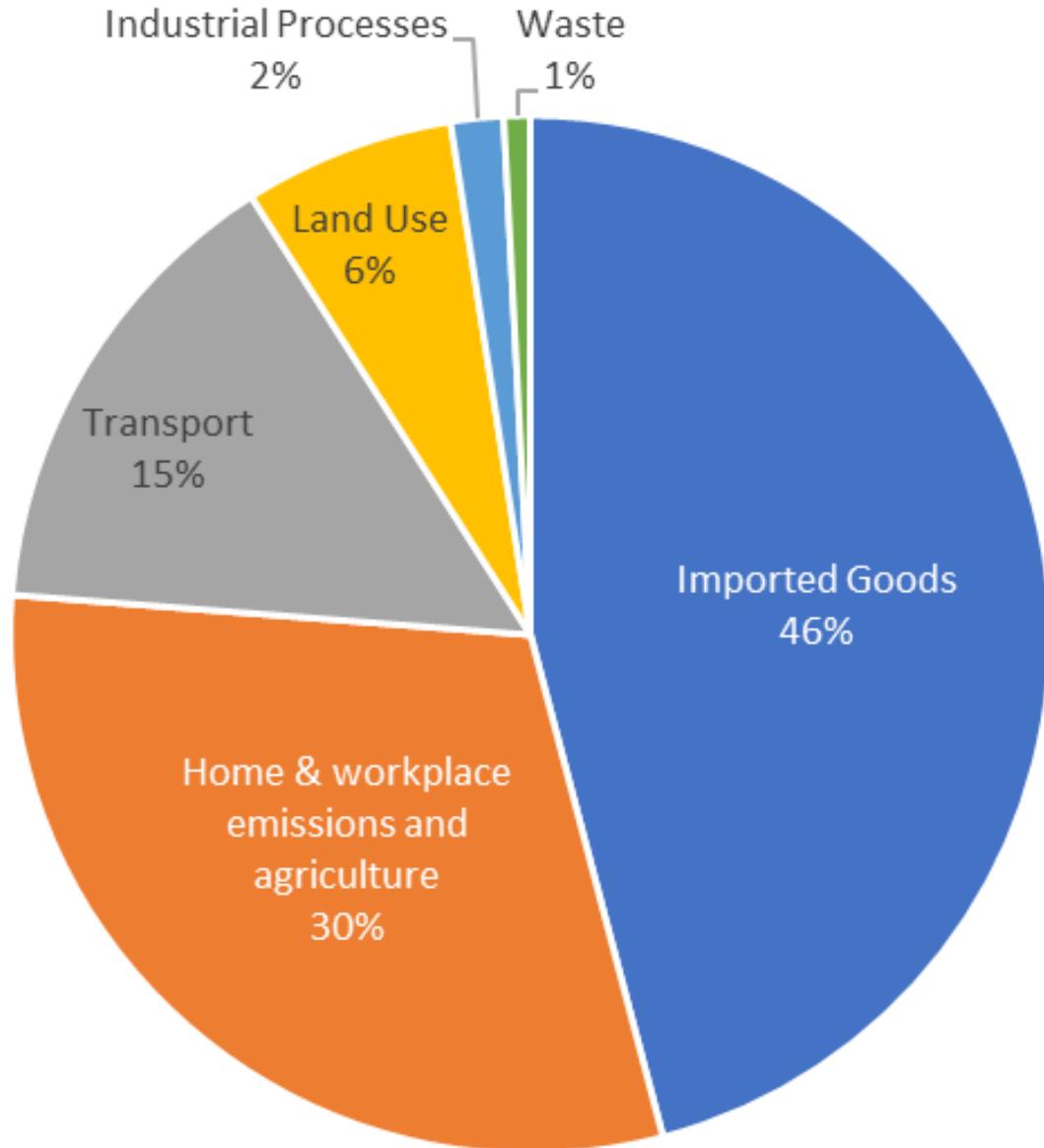
- service delivery and travel costs;
- health and wellbeing and staff productivity;
- health, wellbeing and resilience of service users.

- **Financial impacts:**

- greater frequency of extreme weather events will significantly increase insurance risks and may make many property assets uninsurable
- significant cost of achieving net-zero emissions is likely to be offset by 'green growth' potential

Shropshire's 2018
Carbon Footprint
(Mt CO₂e):

6.1 million tonnes



What is Needed?

Each year starting right away
Shropshire will need to achieve the following:



20,000 homes
insulated to high standards
suitable for switchover and
switch from gas or oil heating to
using heat pumps



 **500 acres of solar farms**
(or wind farm equivalent) installed and
powering the grid and private wire demand

2,000
electric car charge points
for community car share
and car club vehicles



8,000 acres
of Shropshire
marginal land
re-wilded
or planted with
woodland



Recovery, renewal and protection
of 10% of Shropshire
peatlands and wetlands



10% reduction
of car use
by shifting to
active travel
public transport
and reduced commuting



10% reduction in waste
collection volumes by reducing
short life purchases
and single use packaging
and promoting re-use of materials



10% of highways budgets
dedicated to shifting from car
to prioritise active travel



500 miles
of new hedgerow laid

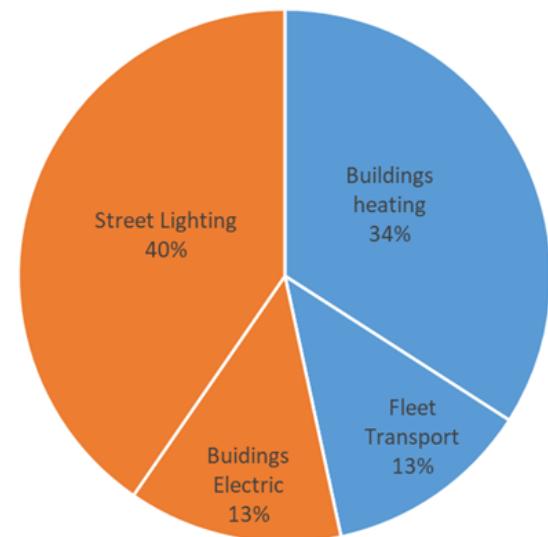
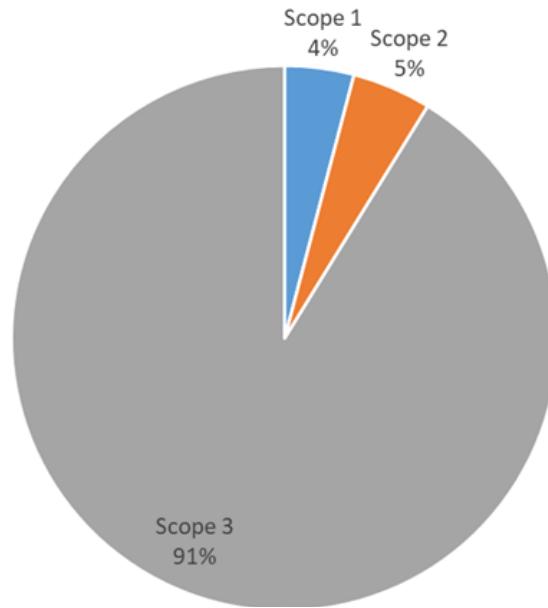
For Shropshire Climate Action Partnership by Niki Holmes: Arts Emphasis © 2020

Decarbonising Shropshire



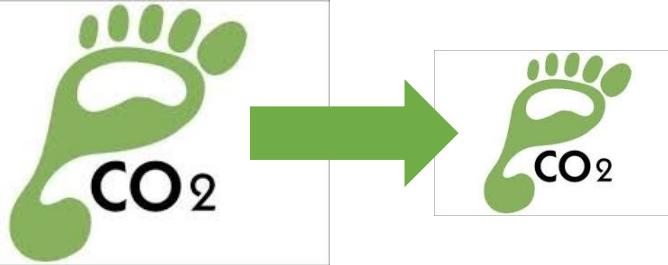
- Shropshire Council takes a lead on reducing its own emissions, but actively supports and facilitates initiatives and action by SCAP, local communities, businesses and charities to reduce wider Shropshire emissions
- **Massive challenge – the only way is to work together!**

Corporate Carbon Performance Trends



- The best available data suggests that Shropshire Council's own direct carbon emissions have fallen from around 17,000 tonnes in 2017, to 5,000 tonnes in 2019;
- The Council's indirect emissions (Scope 3) were assessed as being around 50,000 tonnes CO₂e in 2019, but work is ongoing to refine performance data and establish an accurate picture to support annual monitoring;
- Further significant falls are likely to be reported later in 2021 as the result of moving to an all renewable power supply;
- The Council's emissions represent around 1% of the Shropshire total, however the Council has indirect influence over a significantly greater level of emissions;

Shropshire Council Climate Strategy



Reduce Shropshire Council's carbon emissions to net zero by 2030

- **Power Down:** Reduction of Carbon and other Greenhouse Gas (GHG) emissions from buildings and transport (including staff);
- **Power Up:** Shropshire Council to become energy self-sufficient by 2030 for buildings and travel by developing its own renewable energy sources;
- **Carbon Capture and storage:** increase capture and storage of carbon through on Council land and by working with land managers to capture and store any residual corporate carbon footprint.



Power Down

(Reduce emissions from buildings and transport)

Low Carbon Transport:



- EV Charging infrastructure
- Local Walking and Cycling Infrastructure Plan
- LTP4
- Hydrogen

EV Charging Infrastructure

agile  streets



- Shropshire is one of just four UK areas to trial world-leading ‘Agile Streets’ on-street smart EV charging;
 - Drivers could cut the cost of charging by around 40%;
 - 24 new on-street Connected Kerb EV chargers installed as part for the project, providing crucial infrastructure for those without off-street EV charging options.
 - ‘Try before you buy’- selected residents without an EV offered up to 50% off for the first 2 months EV car hire;
- STOP PRESS! Additional £90,000 government OLEV grant awarded for a further 25 charge points last week.
- ‘Shropshire Goes Electric’ - Shropshire Council hoping to organise a public EV demonstrator day in Shrewsbury in October to showcase electric cars, bikes, buses, chargers etc

Hydrogen as a Vehicle Fuel

MIDLANDS ENGINE



- Shropshire is part of a successful £0.8m joint BEIS funded project to trial green hydrogen HGV's, fuelling and production.
- We are working jointly with the Midlands Engine; the Midlands Energy Hub, CENEX and Midlands Connect on this project.
<https://www.midlandsengine.org/midlands-bid-secures-funding-for-hydrogen-powered-hgvs/>
- Shrewsbury (Battlefield) identified by Cenex as one of the 'top 10' locations for a regional low carbon transport hub.

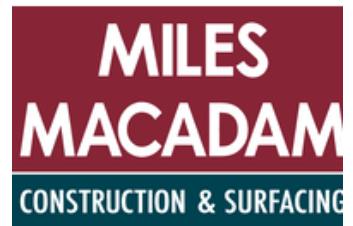
Net-Zero Carbon in Practice

Shropshire Council delivers UK's first carbon-neutral highways maintenance programme

Related topics: Climate change / environment / Highways, transport and environmental maintenance / Partner organisations



- Shropshire Alliance: Shropshire Council, Kier, WSP and Miles Macadam;
- First carbon neutral road surfacing programme by any UK local authority;
- Carbon footprint savings of 40% by specifying a low carbon, warm mix Grouted Macadam instead of conventional surfacing materials;
- Remaining emissions were offset through both an approved scheme and a local Tree Scheme;
- Durability and whole-life costs were considered to both minimise carbon emissions and maximise the road's life cycle.
- Working as a partnership and empowering the supply chain realised added value and benefits to the client and community at no added cost.



Power Down

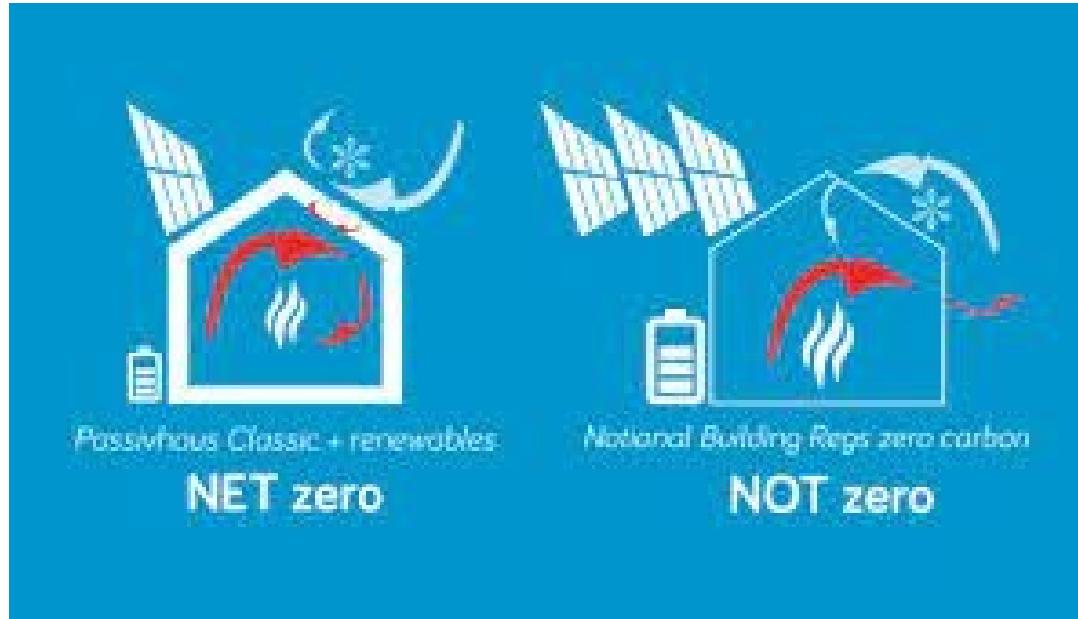
(Reduce emissions from buildings and transport)

Low Carbon Buildings



- New building design – especially Council commissioned buildings
- Retrofit of existing Council buildings
- Social Housing
- Business Energy Efficiency

Public Sector Buildings



- New build design standards for new council buildings focussing on whole –life low carbon performance, Passiv-Haus principles and ‘fabric first’;
- Shropshire Council has 2 active programmes of retrofit activity valued at £1.1m which are installing:

- Insulation
- Low carbon lighting
- Low carbon heating & control systems
- Solar PV

to libraries, offices, social care buildings and other public services buildings, saving running costs and around 210 tonnes of carbon/year

Social Housing



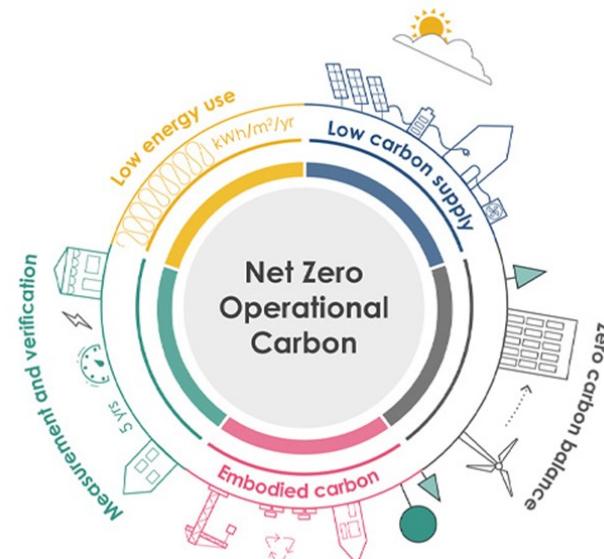
- Fuel Poverty affects 17,670 households across Shropshire - £1.8m Warmer Homes Scheme to deliver heating improvements for 300 households;
- Green Homes Grant: Local Authority Delivery scheme: £4m for insulation and heating improvements in Shropshire to date;
- Working with local Housing Associations to help co-ordinate improvements;

Corporate Governance



- Embed and normalise climate change and carbon reduction in key decisions for all services;
- Enthusiastic support from elected members;
- Updating procurement policies to request information on carbon performance and accreditation;
- Carbon literacy training for elected members and senior officers;
- Internal staff learning resources, training and support programmes

Shropshire Business



- Business Energy Efficiency Programme (BEEP), 23 businesses and £0.2m to date;
- Low Carbon Opportunities Programme (LoCoP);
- Evora Edge - Pump House Training hub;
- Business to Business training AICO 28th September
- Free Shropshire Council Low Carbon Homes training event for building professionals 14-16 September
<https://www.lowcarbonhomes.uk/events/shropshire-september-14-2021/#tab-programme>

The Pump House Knowledge Hub



- A space for EVORA EDGE and partners to host events, deliver training, hold meetings and showcase net-zero technology and kit
- A place to collaborate, network and learn from local and national expertise for all those interested in sustainable buildings
- A focal point of local knowledge and expertise that will help Shropshire achieve net zero buildings by 2030



Power Up

(Renewable Energy Generation and Storage)



Low Carbon Energy:

- Energy mapping support for SCAP;
- Business planning with Scottish Power / Western Power
- Roof mounted solar;
- Maesbury and other solar farm projects;
- Marches Renewable Energy scheme;
- Shrewsbury weir hydro;
- North Shrewsbury Heat Network study;
- Shrewsbury Town centre Heat Network study.

Proposed Maesbury Solar Farm



- Former waste disposal (landraising) site in the middle of the main industrial estate area in Oswestry;
- Proposed 2MW of solar power proposed for direct supply to neighbouring businesses to help them decarbonise their energy supply and achieve greater security of energy supply and protect against future energy price increases;
- Expected carbon savings of 244 tonnes / yr over 30 years;

Biodiversity, Carbon Capture and storage



1. Community Tree Scheme (30,000 trees last year);
2. Tree for every resident (345,000) by 2030 pledge;
3. Trees Outside Woodlands
4. Working on a pilot project for Biochar production
5. Low carbon road repairs
6. Authority-based insetting

Adaptation and Resilience



Whilst we are no strangers to flood risk in Shropshire, more extreme weather from climate change will require changes to:

- Public service delivery;
- Building design;
- Public realm design and management.



Shropshire Council is to hold a short Virtual Resilience Conference on October 26th this year to engage local businesses and other interested organisations with short sessions on:

- Business Resilience in a post pandemic world;
- Climate Change agenda and sustainable energy;
- Flood Management and Impact

Thank you for Listening!

