

Experience of the First Carbon Neutral Authority In Europe What next ?



Dr Simon Pickering

Stroud District Council Chair of Environment Committee

GFirst LEP Energy Group: Renewable Energy Lead

Ecotricity

Business Declares Advisory Board

gfirst LEP
growing gloucestershire

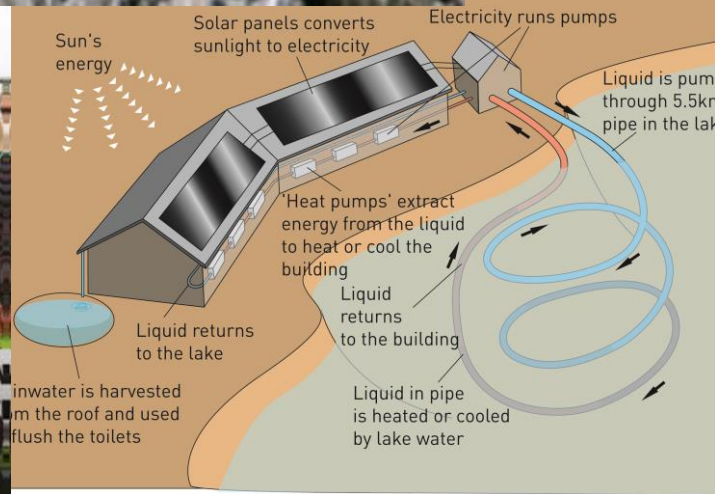


ecotricity

Britain's Greenest Energy Company



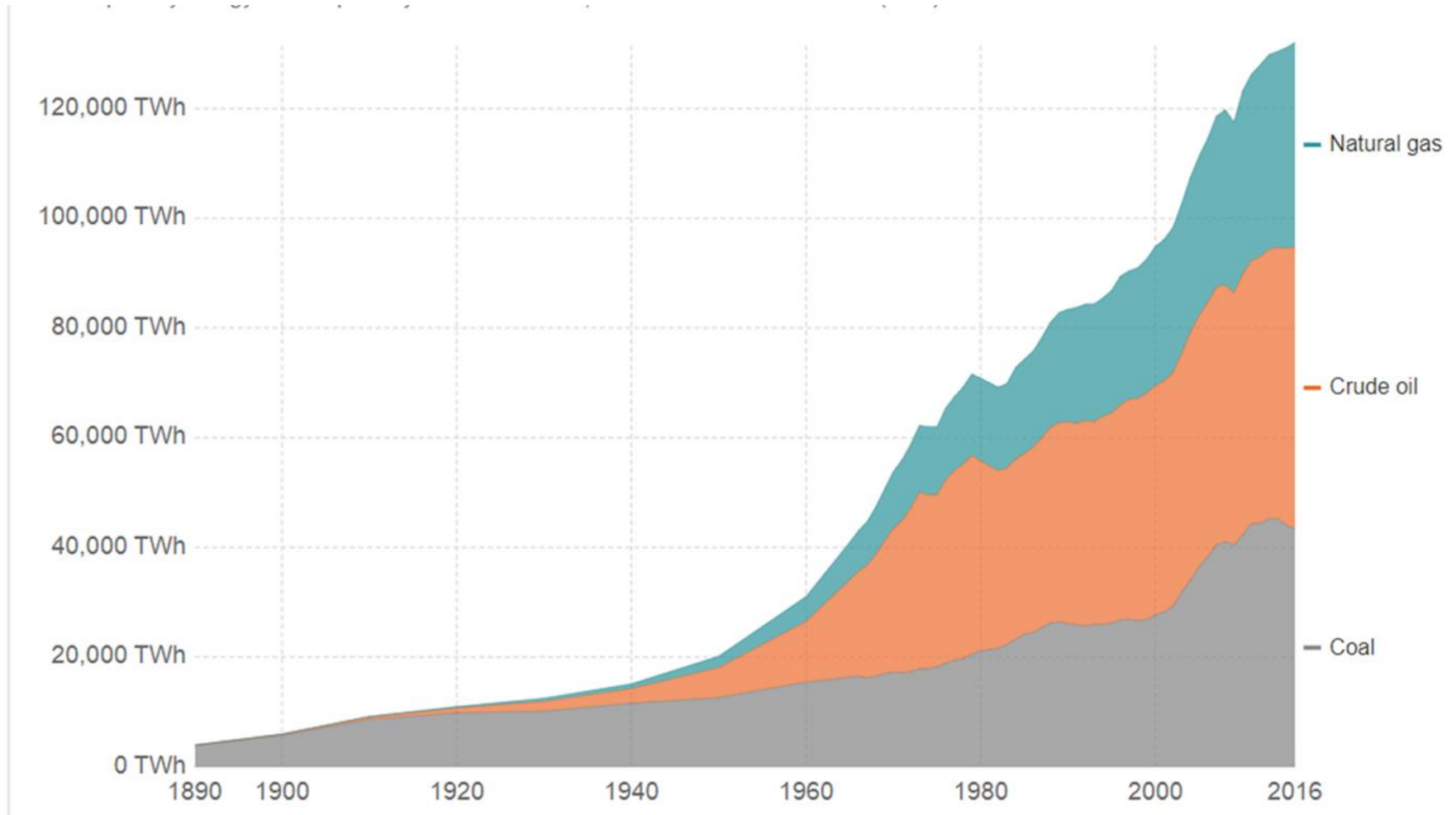
**Business
Declares**



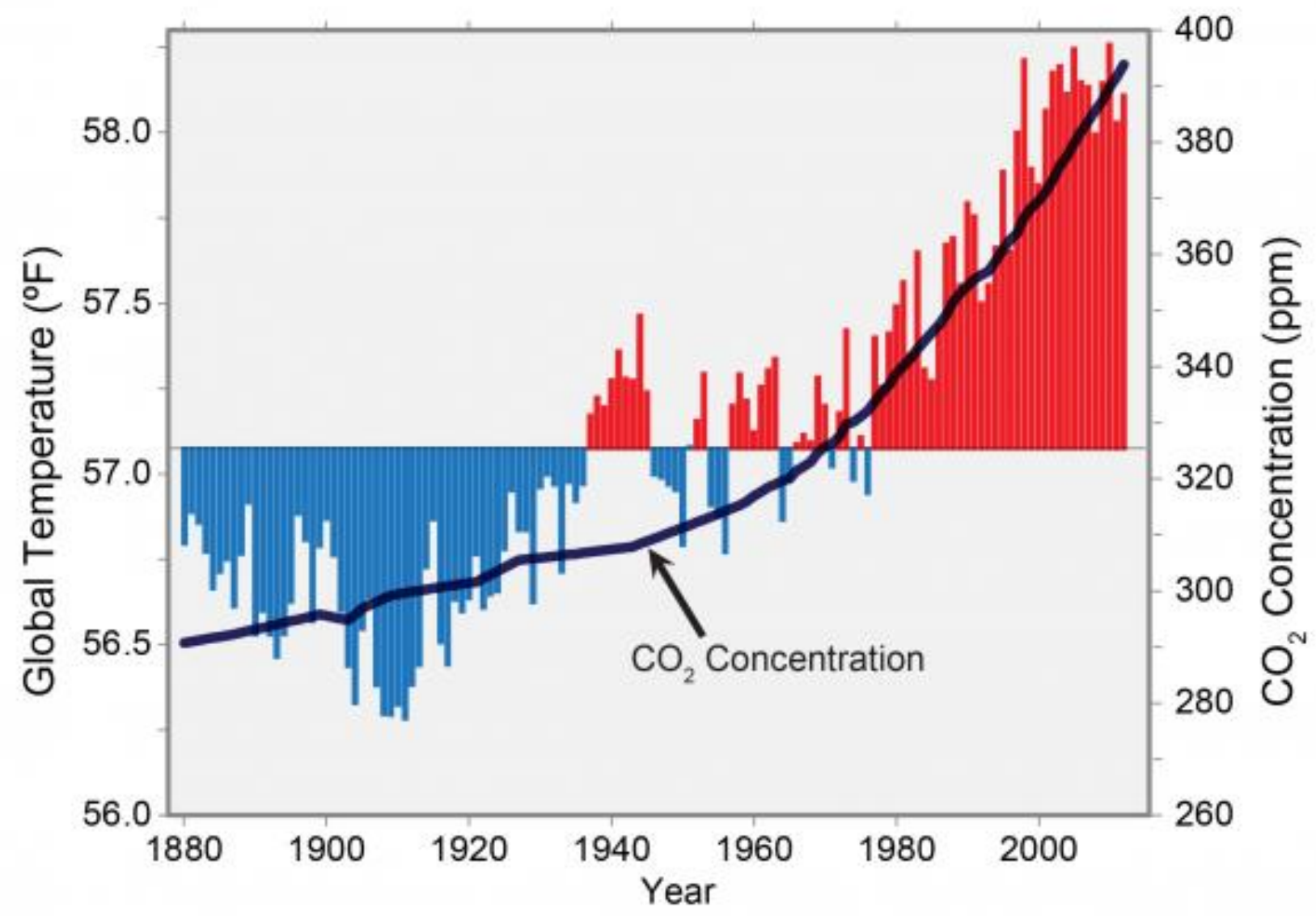


**British
Antarctic Survey**
NATURAL ENVIRONMENT RESEARCH COUNCIL





Global Temperature and Carbon Dioxide



Stroud District Council has been tackling Climate Change since 1990's

Stroud District Council Environmental Timeline



Energy Efficiency



Working as lead local authority

Brought in £32 m into the county of Gloucestershire for energy efficient measures over 20,000 households

In Stroud District over 11,000 energy efficient measures on 6,303 homes (12% of homes)



Target 2050 Homes

1900s detached house Stonehouse
This and many other case studies are also available online at www.target2050.org.uk



Case study 4



£2,144 Saving on fuel bills

64% Reduction in carbon emissions

Traditional stone cottage Painswick
This and many other case studies are also available online at www.target2050.org.uk




Case study 5




£2,194 Saving on fuel bills

59% Reduction in carbon emissions

1980s detached house Stroud
This and many other case studies are also available online at www.target2050.org.uk



Case study 1



£828 Saving on fuel bills

74% Reduction in carbon emissions

Target 2050 Community Buildings

30 Community Buildings : annual savings

Energy savings 70,300 kWh

28 tonnes of Carbon

£4,900 p.a.

Randwick Village Hall Stroud

This and other case studies are available online at www.target2050.org.uk



Newly-refurbished Randwick Village Hall with efficient double glazed windows and solar photovoltaic system on display



Community case study 1

Key facts

- Footprint **REDUCED** by 5.49 tonnes CO₂ per year
- Building envelope greatly improved with upgraded insulation plus new windows and doors
- Solar photovoltaic (PV) system installed generating 'renewable' electricity to run a ground source heat pump
- Running costs **REDUCED** by £1,502 per year

Target 2050 Business

93 target Business

Annual savings

Energy 1,300,000 kwh

490 Tonnes of Carbon

At least £99,500 p.a.

U Godsell & Sons Dairy Farm Stroud
This and other case studies are available online at www.target2050.org.uk/business



Stroud District
Target 2050
Countdown to a low carbon business

Business case study 1



Uriah Godsell of U Godsell & Sons Dairy Farm

- Key facts**
- total energy **SAVING** of 40%
 - variable speed pump **SAVES** 20% electricity use
 - heat recovery **SAVES** 20% electricity use

Council Housing Stock Energy Strategy

Insulation of Bungalow walls

Air Source Heat Pumps

Solar PV Installations

Replacement gas system

Loft Insulation top ups

Low energy/ diode light bulbs

**Warmer tenants, some saving over £30
per month**



Council Building and Operations



32% CO₂e saving between 2007- 2015 by:

- Cooling for server room**
- Cutting mileage**
- Numerous small insulation measures**
- Air handle systems**
- LED lighting**
- PV installation plus combined heat and power boilers at both Leisure centres**

First Local Authority in Europe to become Carbon Neutral

Total CO₂e Emissions 2015 2925 Tonnes

Audited Annual Savings

SDC	807 Tonnes
Warm & Well	2468 Tonnes
Net Emissions	<u>-350 Tonnes</u>

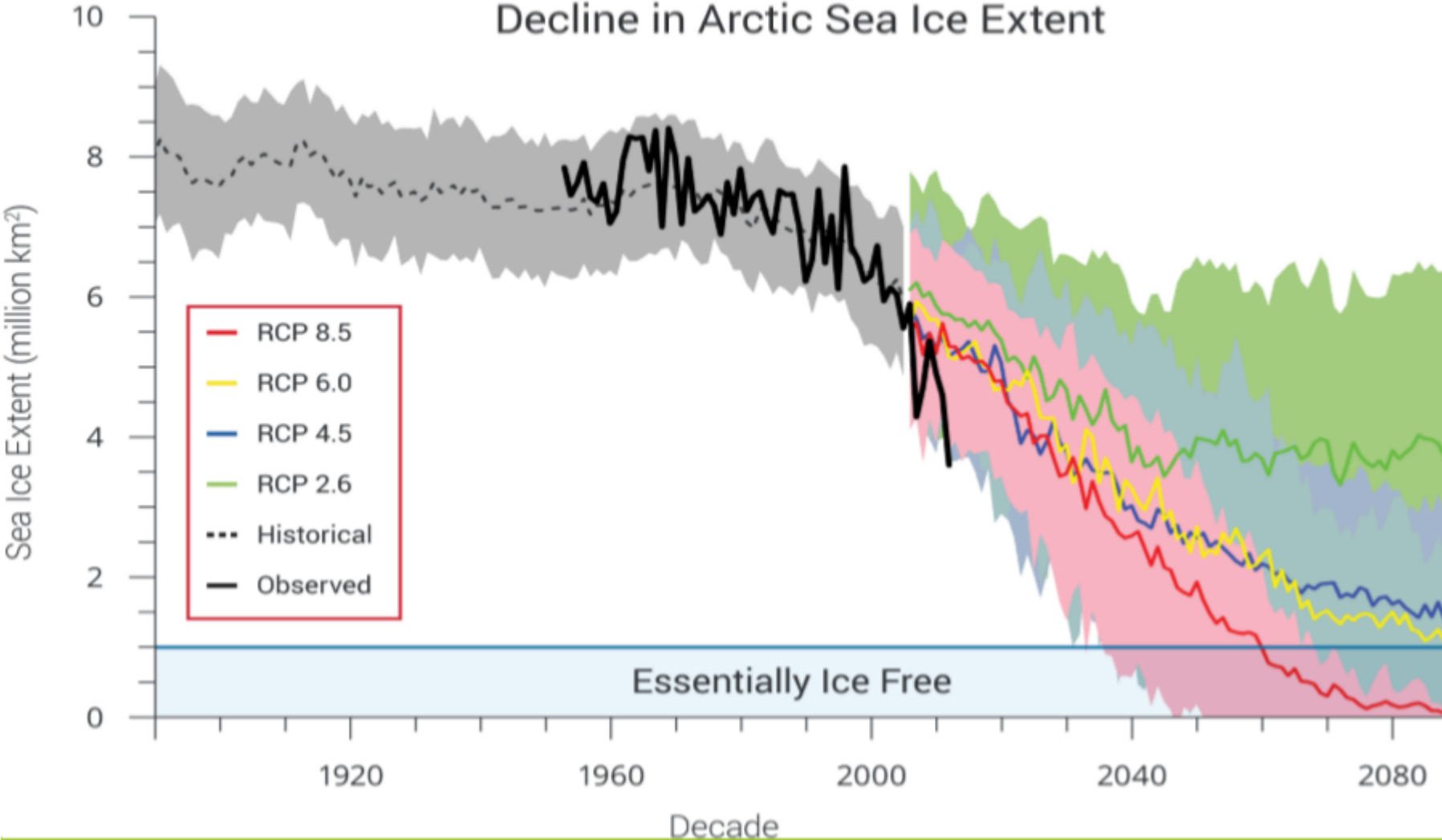
Further Savings not Audited 1,200 tonnes

Actual net Emissions in excess **-1,470 Tonnes**

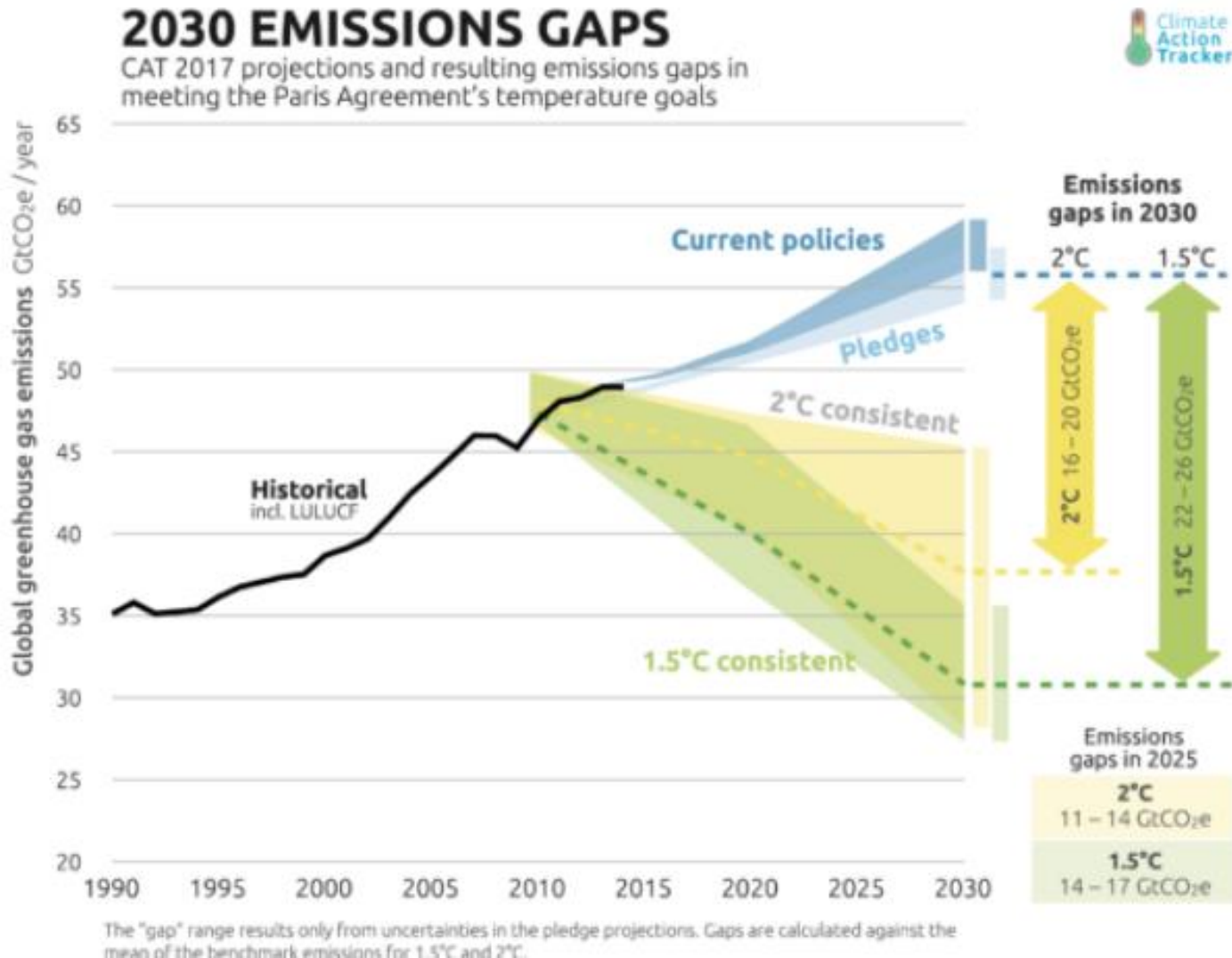
A further 25% cut in emissions 2015-2018



Melting ice and sea levels



IPCC Report October 2018





THE CLIMATE
EMERGENCY
DECLARATION

“It is no use saying
'we are doing our best'.
You have got to succeed in
doing **what is necessary**.”

~ Winston Churchill

CLIMATE EMERGENCY DECLARATION

— AT ALL LEVELS OF GOVERNMENT

STROUD DISTRICT COUNCIL

Progressing Carbon Neutral 2030 (CN2030) report to Environment Committee June 2019

<https://www.stroud.gov.uk/media/1032856/item-6-progressing-carbon-neutral-2030-cn2030.pdf>"The Stroud Plan" ...

- **Included Corporate Strategy, Audit and Purchasing Policy**
- **Appoint a CN 2030 officer and implementation budget**
- **Community engagement via Transition Stroud**
- **Public, Charity & Business sector engagement via LSP**
- **Severn Wye Energy for technical household / business advice**
- **16 Parish council also adopted Climate Change Emergency**
- **Upgrading standard for new council house build**
- **Local Plan Policies**

Stroud District Local plan review

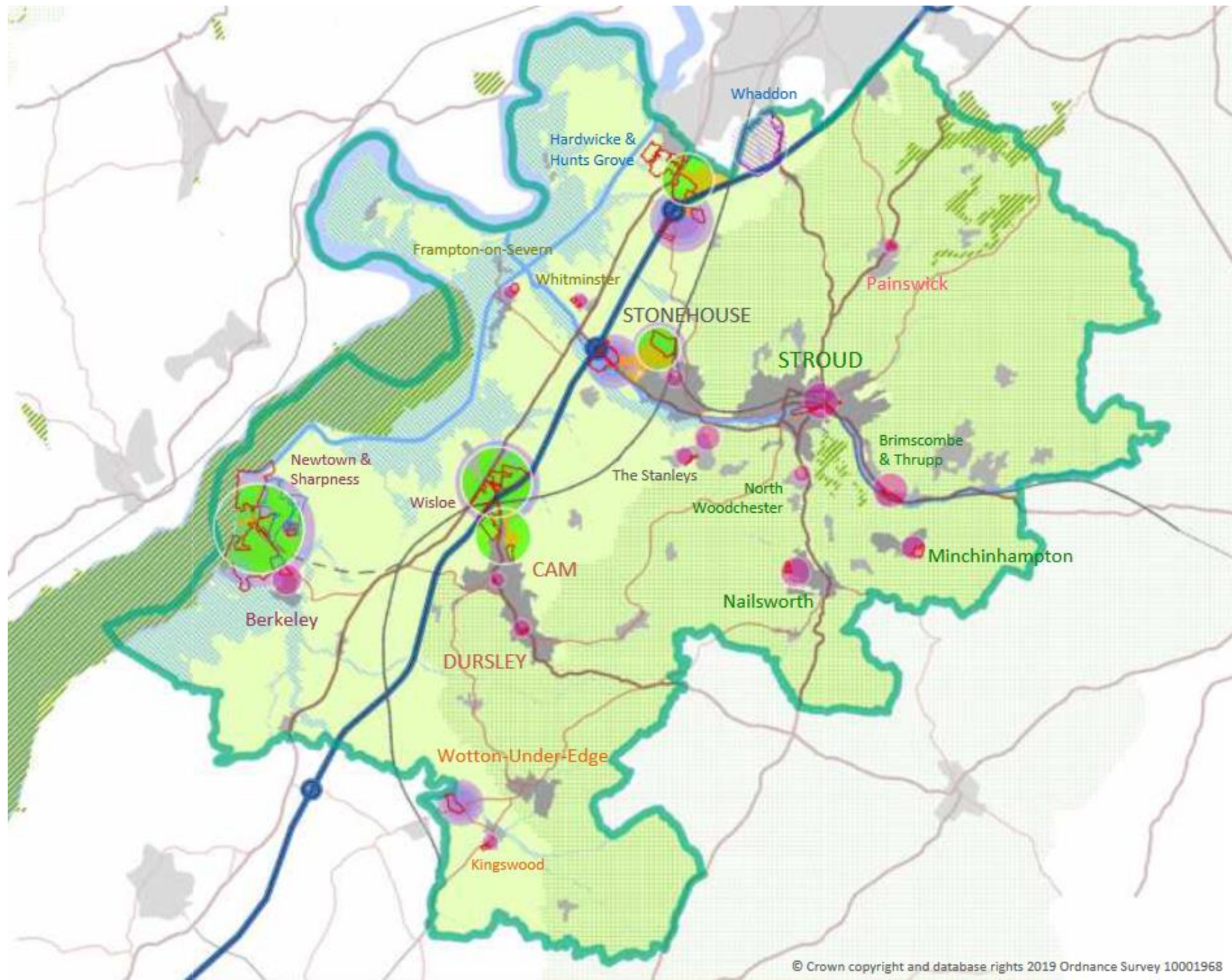
New Core PolicyDCP1 Delivering Carbon Neutral by 2030

Stroud District **will become Carbon Neutral by 2030**for new developments by :

- *Location*
- Priority of sustainable transport modes
- Maximise green infrastructure
- Design Energy Hierarchy
 - reduce energy demand ... carbon zero homes
 - renewable energy generation
- Reduce vulnerability and provide resilience
- Allocation of area for new renewable generation

Full details on Page 47 Stroud Local plan draft November 2019





Updated Delivery Policy ES1

Sustainable construction and design

Sustainable design and construction will be integral to new development in Stroud District.

Development proposals should meet the following requirements:

1. Achieve **net-zero carbon—all new development should achieve a net zero carbon standard by means of:**

- an overall minimum 35% reduction in emissions over Part L 2013 Building Regulations achieved onsite;
- a minimum of 10% and 15% reduction in emissions over Part L 2013 Building Regulations achieved respectively in homes and in nondomestic developments through fabric energy efficiency improvements;
- residual emissions offset through payments to a Stroud District Council carbon offset fund;

full details on page 179 Stroud Local plan draft November 2019

Updated Delivery Policy ES2




Renewable or low carbon energy generation

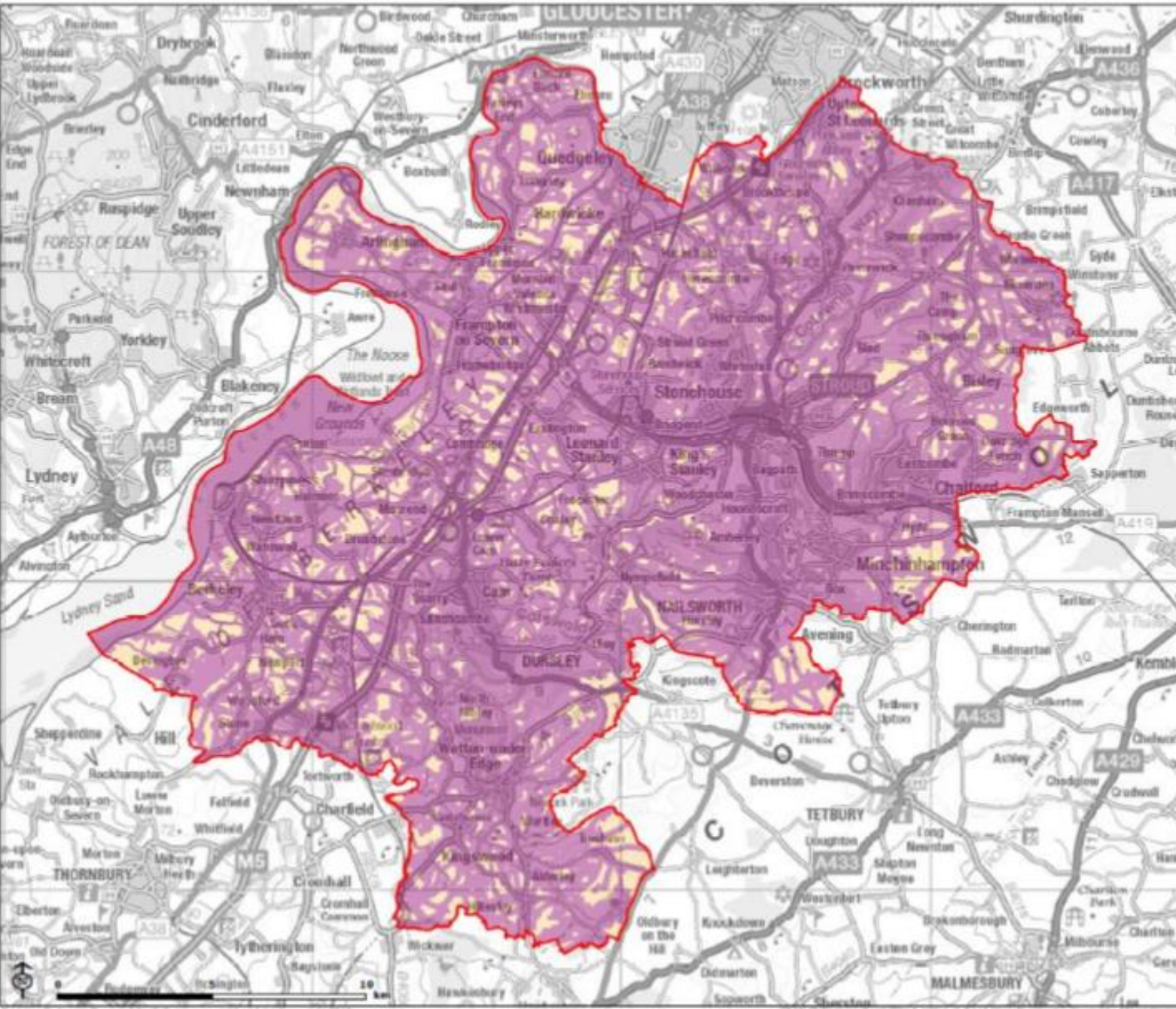
- Decentralised renewable and low carbon energy schemes will be supported and encouraged, and will be approved where their impact is, or can be made, acceptable.

New Delivery Policy ES2a: Heat supply

- Development proposals should include a communal low-temperature heating system where viable.

Figure 4.7: Opportunities and Constraints for Small Scale Wind Development

-  Stroud District Council Boundary
-  Suitable areas for small scale wind development
-  Constrained areas for small scale wind development



Map Scale @A3: 1:120,000

Contains Ordnance Survey data © Crown copyright and database right 2010. OS is a registered trademark of Ordnance Survey Limited. LUC is a registered trademark of LUC. All other trademarks are the property of their respective owners.

Figure 3: Opportunities and constraints for small scale wind development

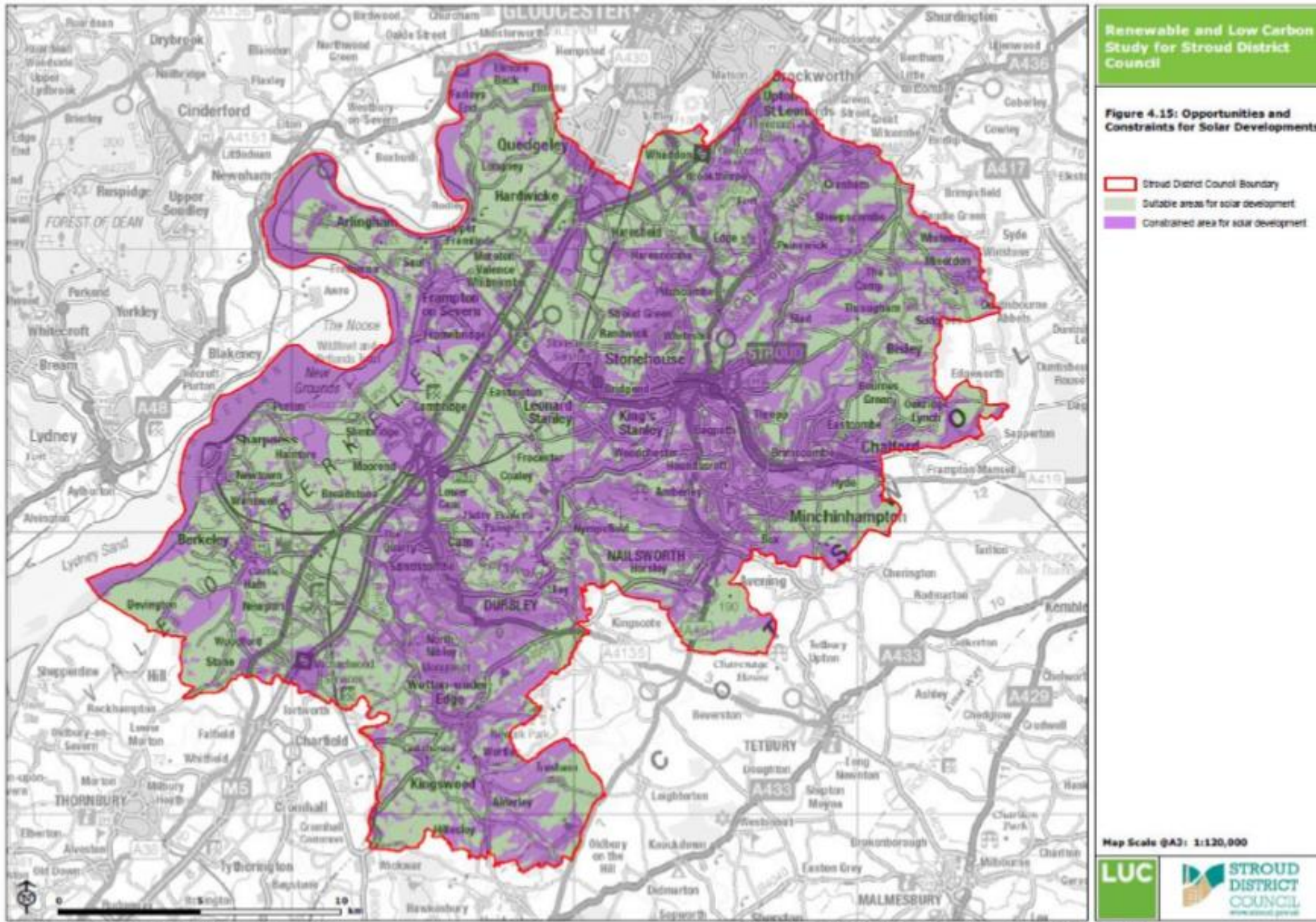
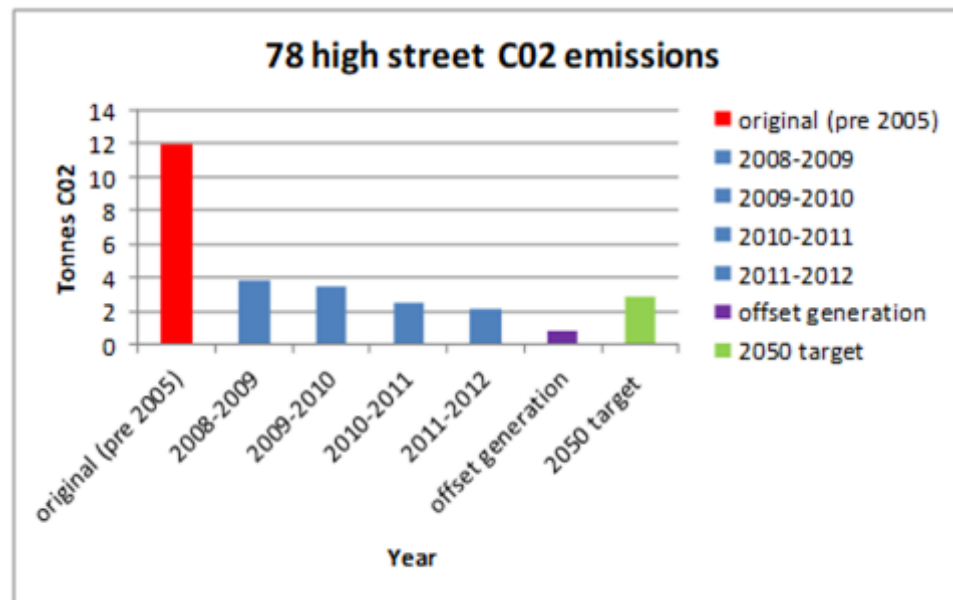
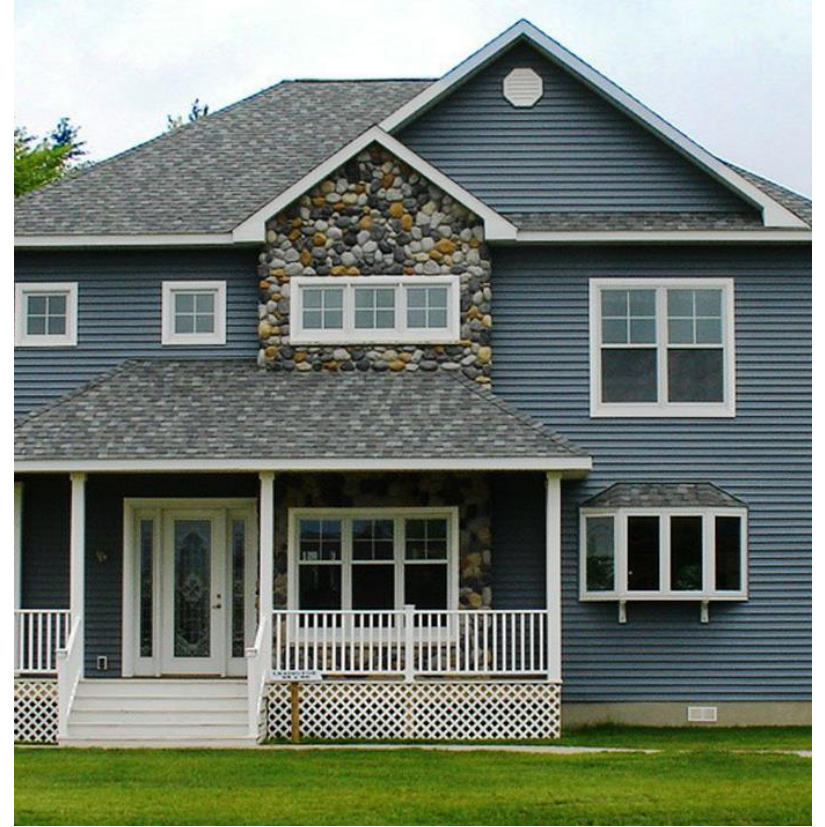


Figure 11: Opportunities and constraints for solar developments

but even 200 year old houses can have high energy performance





How will you build Carbon Zero Homes ?

It's up to us.....

'Avoiding dangerous climate change is impossible – dangerous climate change is already here. The question is, can we avoid catastrophic climate change?' David King, 2007

'If everyone does a little, we'll achieve only a little.' David MacKay



"Yes, the planet got destroyed. But for a beautiful moment in time we created a lot of value for shareholders."