

# **Local Plan 2040: Climate change, carbon emissions and air quality strategic overview**

CDLP2040-CC01

Nicholas Thurston / Climate Change Officer

## **Executive Summary**

The causes and consequences of climate change are central issues to the Local Plan 2040 process: actions to reduce carbon emissions and adapt to the changing climate and its impacts are necessary in all aspects of development.

This report summarises evidence from the most up to date and relevant sources to inform climate change and related air quality issues. It also sets out how local plan choices will influence the ability of Canterbury district to reduce carbon emissions in a timely way. Further detailed reports provide additional analysis and evaluation of policy in key local plan areas of development options, buildings energy efficiency standards, transport options and energy strategy.

The scale of change required to meet UK carbon budgets in the energy, buildings and transport sectors is very large and requires significant intervention from national, regional and local government to enable the changes. Local planning policies in the Local Plan 2040 will need to play a major part in ensuring that district development meets the challenges and opportunities.

The report presents the pathways to net zero carbon emissions across the key sectors and draws out the key messages for each sector.

# Contents

<b>Executive Summary</b>	<b>1</b>
<b>Contents</b>	<b>2</b>
<b>Introduction</b>	<b>3</b>
Background	3
What evidence might be needed to plan for meeting the challenge of climate change, flooding and coastal change?	3
What is a climate crisis and what does it mean?	3
Definition of carbon neutrality or Net Zero	4
Carbon Emissions in Canterbury District	4
Air quality and its relationship to the climate change	6
Specific climate mitigation issues for Canterbury District	6
Pathways to carbon neutrality	7
UK Government Carbon Budgets	7
Committee on Climate Change net zero policy	7
Anthesis SCATTER district pathways	8
<b>Sectoral pathways</b>	<b>8</b>
Buildings heat and power	8
Key messages for the buildings sector	9
Opportunities in the buildings sector	9
Transport and freight activities	11
Key messages for the transport sector	11
Energy infrastructure activities	13
Key messages for the power sector	13
Waste activities	15
Key messages for the waste sector	15
Land use, natural systems and agriculture activities	16

## Introduction

This document summarises evidence for the Canterbury District Local Plan about the causes of climate change and pollution of local air quality from the most up to date and relevant sources.

Air quality and the causes of climate change are discussed together as there is considerable overlap in the sources of poor local air quality and climate change.

Evidence about the projected effects of climate change to inform policies to adapt to the changing climate will be addressed at a later stage in the local plan process.

## Background

UK Government policy is to reduce the carbon and other greenhouse gas emissions that cause climate change to net zero by 2050. Work to prepare for the effects of long-term changes to the weather patterns is also underway through the National Adaptation Programme. The global challenge to reduce emissions as quickly as possible to net zero is enormous and the UK is endeavouring to provide leadership in this work through its carbon budgets and National Adaptation Programme.

The National Planning Policy Framework (NPPF) guidance on local plan work to address the causes and effects of climate change states:

Plans may include: a review of energy provision (to help increase the use and supply of renewable and low carbon energy and heat) and climate change mitigation and adaptation; Strategic Flood Risk Assessment and assessments of the physical constraints on land use, such as land instability, contamination and subsidence; Water Resource Management Plans; Groundwater Source Protection Zones; Catchment Management Plans produced by catchment partnerships and strategic work to reduce air pollution effects on habitat if possible (e.g. Shared Nitrogen Action Plans or work coming out of Air Quality Management Areas).

Shoreline Management Plans should inform the evidence base for planning in coastal areas. The prediction of future impacts should include the longer term nature and inherent uncertainty of coastal processes (including coastal landslip), and take account of climate change.

Paragraph: 044 Reference ID: 61-044-20190315

Revision date: 15 03 2019

### What is a climate crisis and what does it mean?

The term climate crisis refers to the global heating that is causing climate change and that is projected to have extremely serious consequences for society and has a limited time for action to

reduce the impacts. It is termed a crisis by the United Nations because the timescales for effect action are short and the scale of impacts and change required are very large. The long term change to the climate has been demonstrated to be caused by the increased concentration of greenhouse gases resulting from the burning of fossil fuels combined with large scale deforestation and other changes to the natural environment. Detailed evidence is provided by [NASA Vital Signs](#), [United Nations Intergovernmental Panel on Climate Change](#) and the independent advisor to the UK Government, the [Committee on Climate Change](#).

## Climate change mitigation and adaptation

Work to respond to climate change is commonly categorised into two broad areas:

- **Mitigation** means the reduction in the causes of climate change which are the carbon dioxide and other greenhouse gas emissions predominantly from burning fossil fuels. There is a critically short period of time to reduce these emissions to very low levels in order to achieve long term climate stability.
- **Adaptation** means taking action to prepare for and adjust to both the current effects of climate change the predicted impacts in the future. The long-term weather patterns are already altered and they will continue to be affected by climate change under all mitigation scenarios.

This report focuses on mitigation.

County-wide work led by Kent County Council to develop the adaptation programme is underway and will be incorporated into the Local Plan evidence base at the next stage in the plan development process.

## Definition of carbon neutrality or Net Zero

The key element of reducing the causes of climate change, which is also referred to widely as climate change mitigation, involves reducing the quantity of greenhouse emissions released to the atmosphere as quickly as possible. The objective at a global level is to reverse the increase in the atmospheric concentration of carbon dioxide and other greenhouse gases. The UK Government greenhouse gas emissions target is called Net Zero emissions, or carbon neutrality. Net Zero emissions would be reached when the total of any greenhouse gas emissions released less any greenhouse gas emissions removed from the atmosphere sums to zero. At a global level this would mean that the concentration of greenhouse emissions in the atmosphere stabilises; many scientists believe that it will be necessary to go beyond greenhouse gas emissions Net Zero and remove carbon dioxide from the atmosphere to reduce climate change risks.

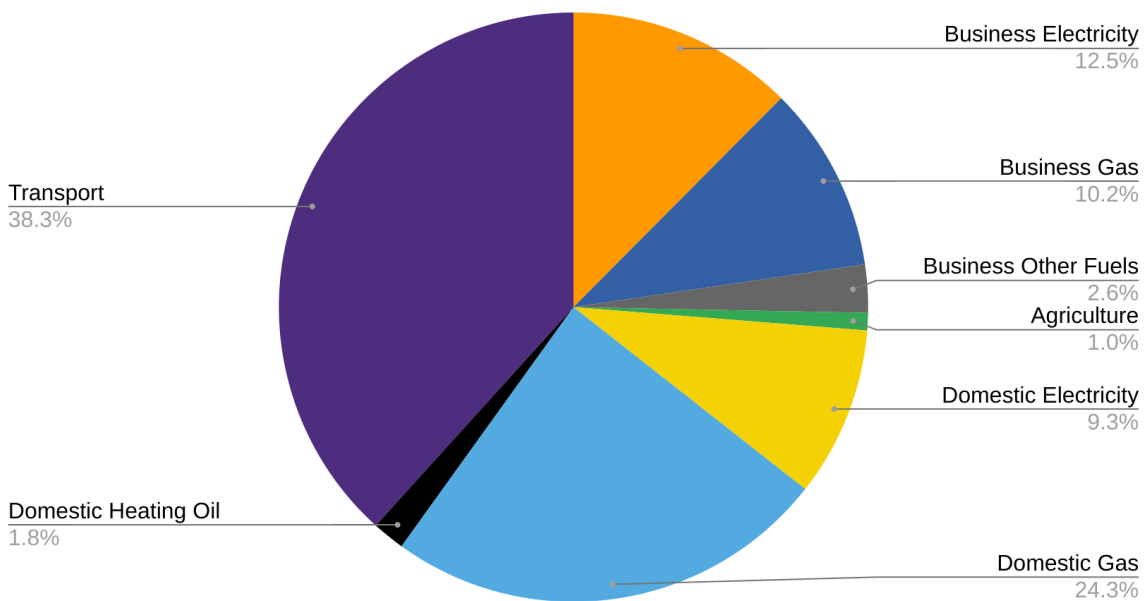
## Carbon Emissions in Canterbury District

The evaluation of carbon emissions is governed at an international level by the GreenHouse Gas Protocol which sets out how to quantify greenhouse gas emissions expressed as carbon emissions at a national and subnational level.

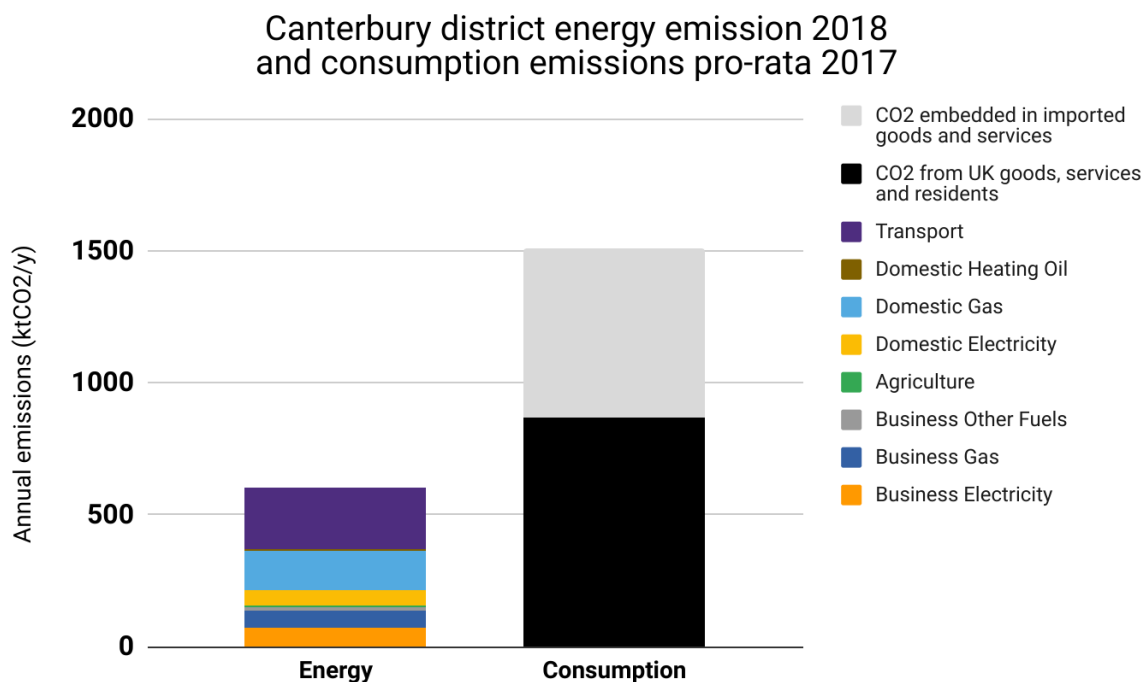
Local Authority greenhouse gas emissions are evaluated and published annually in the UK, 2 years in arrears. The data is compiled based on energy usage information gathered by the Department for Business, Energy and Industrial Strategy from energy and fuel suppliers and multiple other sources including road transport statistics.

The largest two components of district energy emissions are from petrol and diesel fuels for road transportation (38.3%) and gas for heating and cooking in homes (24.3%) and businesses (10.2%).

2018 Canterbury district energy emissions  
(Source: National Statistics)



In addition to the emissions from energy usage, there are also emissions from consumption of goods and services used by the district. Consumption includes the things that residents and businesses buy. This includes a wide range of things such as building materials for infrastructure and homes as well as appliances, vehicles, clothes and food. Consumption emissions are evaluated by the Department for Environment, Food and Rural Affairs (DEFRA). Emissions data for consumption is much more complicated to evaluate and is not calculated at a sub-national level in official data. However a pro-rata calculation based on population indicates a total footprint (including emissions from energy) for the district of around 1,500,000 tonnes of carbon dioxide equivalent emissions in 2017.



Source: BEIS / DEFRA / National Statistics

## Air quality and its relationship to the climate change

Air quality is related to the causes of climate change because two of the largest sources of greenhouse gas emissions - fuels used for road transport and fuels used for heating homes and businesses are also major contributors to local air quality issues.

The causes and effects of poor local air quality are presented in detail in the district Air Quality Management Plan.

## Specific climate mitigation issues for Canterbury District

Canterbury district is a predominantly rural area. The emissions within the district originate mostly from road transport, heating and powering the 70,000+ homes and 5000+ local businesses, and consumption of goods and services. There is little heavy industry in the district and the farming is mostly arable and fruit with a low density of cattle.

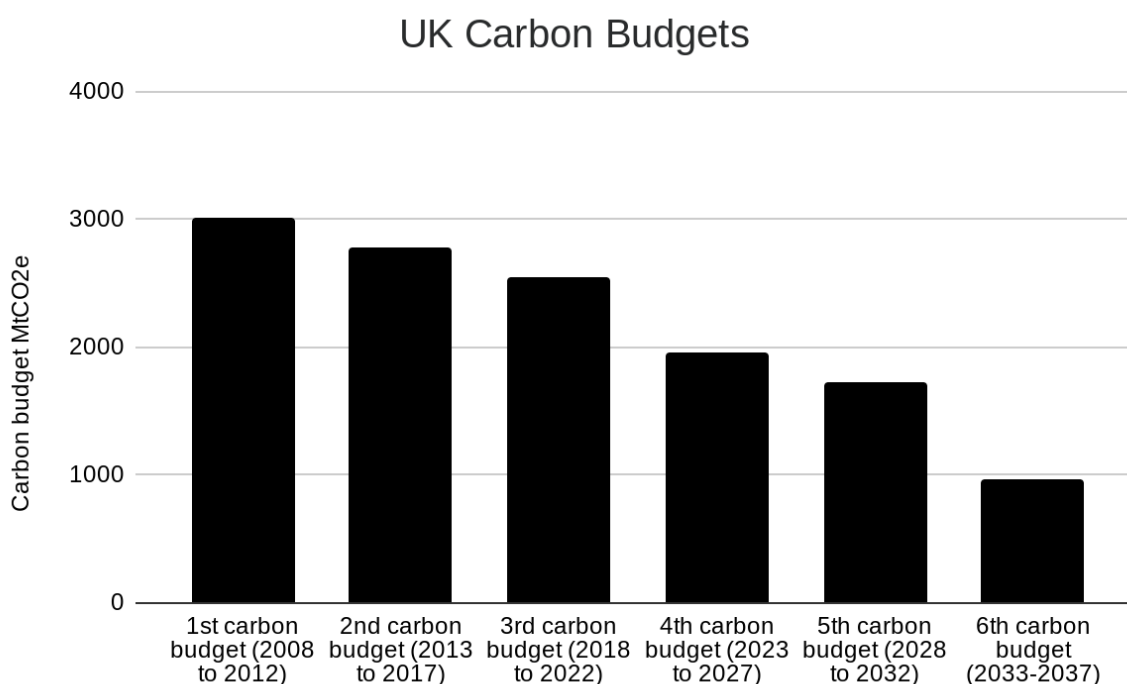
Key issues reducing emission for the district include:

- Reducing the reliance on vehicles power by fossil fuels
- Improving the energy efficiency of homes and businesses and removing fossil fuels from the heating systems
- Improving the air quality, particularly in the two air quality management areas

## Pathways to carbon neutrality

### UK Government Carbon Budgets

The UK Government has committed to reducing emissions to net zero by 2050 and to reducing emissions progressively through the carbon budgets. The 4th, 5th and 6th carbon budgets all fall within the Canterbury District Local Plan 2040 period and demand a reduction in emissions by around 75% over the 20 year period. The requirement to set and meet UK carbon budgets is mandated by national law as set out in the Climate Change Act 2008.



### Committee on Climate Change net zero policy

The Committee on Climate Change (CCC) provides the evidence and advice that informs government policy to achieve the carbon budgets.

Key policy actions from the CCC policy report for the 6th carbon budget and net zero (December 2020) require:

- All new buildings net-zero carbon by 2025 at the latest
- Policy to enable and incentivise the uptake of energy efficiency measures, heat pumps and renewable energy in existing buildings
- Regulations to phase out the replacement of gas powered heating systems
- Local Authorities developing locally-based solutions active travel and public transport solutions that work for their communities

- Rapid electrification of the transport system to reach almost 100% of new car and van vehicles sales all-electric by 2032
- A 30% reduction in carbon intensity from heavy goods vehicle operation by 2030
- Variable renewables (i.e. wind and solar) form the majority - 70% - of electricity generation in 2035

## Anthesis SCATTER district pathways

Kent County Council procured a study from Anthesis on pathway towards Net Zero to inform the action plan within the Kent and Medway Energy and Low Emissions Strategy.

The Anthesis study uses the SCATTER tool which simulates the potential actions and options to reduce emissions at a local authority level. The Anthesis tool is based on Tyndall Centre research which provides subnational carbon budgets. The Tyndall Centre takes account of the distribution of UK manufacturing and the different challenges to reduce emissions from non-energy emissions due to domestic consumption patterns. This approach requires a more rapid reduction in emissions from non-industrial areas in order to meet national carbon budgets.

The tool and the report provides detailed insights into the effectiveness of different routes to meet emissions reduction requirements summarised by sector. The routes provide quantified reductions in emissions that are achievable by different actions and therefore show how policy and plans can be most effective in leading to the necessary emissions reductions.

## Routes to reaching net zero emissions by sector

The action required to reduce carbon emissions by sector is presented along with key messages and recommended actions within the local plan.

### Buildings heat and power

The energy to heat buildings, provide hot water and power lighting and appliances is a major component of the district carbon emissions from energy, representing around 60% of the overall energy emissions. Whilst UK electricity decarbonisation through the switch to renewable energy and the closure of coal fired power plants has been a success, the energy requirements for heating buildings has reduced at a much slower rate. Emissions from using natural gas in the district generates around 35% of the energy emissions.

The following key actions deliver the major reductions in building energy emissions:

<b>Buildings heat and power actions</b>	Description	Total impact (emissions reduction) % *
---	-------------	---



Commercial heating demand	In 2050, commercial heating, cooling and hot water demand is 60% of today's levels	16%
Commercial heating technology	By 2050, 7% resistive heating; 60% air-source heat pumps and 30% ground-source heat pumps; 3% district heating	22%
Commercial lighting, appliances, and catering - Demand	Commercial lighting & appliance energy demand decreases 25% by 2050	3%
Commercial lighting, appliances, and catering - Technology	By 2050, 100% of commercial cooking is electrified	2%

\* The reduction is delivered when it is combined with regional / national delivery of large scale wind power

### Key messages for the development sector

- Many more homes need to be more thermally efficient and all homes will need to switch to some form of low carbon heating by 2030. This will have co-benefits of reduced heating bills for dwellings currently fuelled by oil, solid fuels or electric storage heaters and it will also bring improvements in air quality through the background reduction in nitrogen oxide concentrations.
- As other low carbon heating options, such as district heating, have relatively less potential in Canterbury than in other parts of the country, and other options, such as hydrogen, are unlikely to be scaled up in time, huge numbers of heat pumps will be needed. Around 70,000 homes might need heat pumps by 2030. This new industry will create skilled jobs in the district and opportunities for local manufacture, repair and servicing of equipment.
- There should be a big push on building energy efficiency retrofit, to reduce emissions in the short term and to prepare buildings for heat pumps (which work better in thermally efficient homes). There are over 70,000 existing homes within the district and the vast majority will require energy efficiency improvements and other adaptations to reach the climate change goals. There is a large opportunity to develop a district economy that meets this challenge.
- At the same time, heat pump installations should be encouraged at every opportunity including the Council's own buildings, in new build developments and with the able-to-pay segment of the market.
- Upskilling of existing building trades should be encouraged through training courses to ensure there are enough heat pump installers to meet the increasing demand.

- In addition, the Council could work on the design of a larger-scale scheme for incentivising greater heat pump uptake to reach the numbers required in later years.

## Opportunities in the development sector

### The City Council and other large district institutions:

- Look for immediate opportunities to install heat pumps in owned buildings.
- Lobby government to enhance subsidies for heat pump and retrofit costs in domestic properties and businesses.
- Develop ideas for a policy that can incentivise heat pump uptake.
- Develop materials and training, in conjunction with industry, on options for and benefits of heat pumps, to target the able-to-pay market early.
- Support local installers and supply chain to move to mass roll-out.
- Consider scope for local planning policy to be used to encourage the move to zero carbon homes.

### Businesses:

- Landlords of private rented homes should increase the insulation of their properties and install low or zero-carbon heating where appropriate.
- Heating installers could start marketing low carbon heating solutions more.

### Education:

- District education institutions should develop training courses on heat pump installation and maintenance, building retrofit skills and technologies, net zero design and construction.

### Individuals:

- Look to install no-regrets insulation measures such as topping up loft insulation, filling unfilled cavities, reducing leakiness etc.
- Consider opportunities for where large-scale building improvements (e.g. extensions) might be used as an opportunity for installing low carbon heating options.

### National government:

- Consider options for a national-level scheme for incentivising heat pumps and greater thermal efficiency.
- Enhance current Building Regulations and National Planning

### **Key building and industry actions within the local plan**

The energy efficiency standards of new buildings and existing buildings needs to be in place to ensure that buildings meet net zero requirements. (These issues are discussed in detail in CDLP2040-CC02 Construction carbon emissions and energy standards)

The local plan provision of business space should enable net zero construction skills and technologies to scale up within the district.

## Transport and freight activities

Transport emissions comprise around 40% of energy emissions and have only reduced by around 3% from 2009 to 2019. Whilst vehicles have been becoming more fuel efficient, this has been countered by a trend in increased vehicle ownership and usage. In recent years light goods vehicle distribution has also increased due to changes in the shopping and distribution systems.

The following key actions deliver the major reductions in transport and freight emissions based on the Anthesis SCATTER Cities tool provided for local authorities to evaluate routes to reducing emissions at an authority level:

<b>Transport and freight actions</b>	<b>Description</b>	<b>Impact (emissions reduction) %</b>
Domestic freight	By 2050, 22% decrease in distance travelled by road freight; 75% increase in efficiency.	9%
Domestic passenger transport - Demand	25% reduction in total distance travelled per individual per year by 2030.	17%
Domestic passenger transport - Modal shift	Average modal share of cars, vans and motorbikes decreases from the current national average 74% total miles to 38% in 2050.	7%
Domestic passenger transport - Technology	Cars and buses are 100% electric by 2035, rail is 100% electric by 2030. Average occupancies increase to 18 people per bus km (from 12), 1.65 people per car-km (up from 1.56), and 0.42 people per rail-km (from 0.32).	33%

## Key messages for the transport sector

### Vision:

- Most vehicles on the road in Canterbury district will need to be zero emission (mostly fully electric) by 2030. This includes all cars and vans and the best technology for larger vehicles will be much more obvious by 2030.
- Currently (2021) around 0.6% of vehicles in Canterbury district are fully electric. There is already an established network of electric charging points across the district and there is a strategy to increase this by ten-fold by 2025; achieving this therefore will require a significant effort.
- The burden of doing this can be reduced by encouraging modal shift to public transport and active travel (walking and cycling) in the three urban areas Whitstable, Herne Bay and Canterbury. However, the rural nature of the district presents challenges in doing this.
- The emissions reduction pathway projects a significant (25%) reduction in car miles travelled, through a combination of reduction in demand for transport (e.g. car sharing, working from home) and modal shift to public transport and active travel.
- It also modelled a 22% reduction in freight miles and this will require the freight distribution systems to become more efficient.

- This projection reduces district vehicle numbers to 45,000 by 2030 and the vast majority would need to be zero emissions vehicles. Switching vehicles in a linear profile over the next decade, this would mean a replacement rate of over 4,000 district vehicles a year, with all new vehicles being zero emissions immediately. If this is not achieved, greater numbers of zero emission vehicle uptake will be needed in later years and it would probably require scrappage incentives to remove vehicles from the road that have not yet reached the end of life.
- There will probably need to be around 15,000 private charging points for cars and vans, and more than 1000 public charging points across the district by 2030. This would add about 200-300 GWh of electricity demand by 2030, about 50% of existing electricity consumption.

#### Opportunities:

The city council and other public service providers:

- Seek extra investment for public and community transport (e.g. increased routes, frequency, through ticketing etc) and for significant infrastructure that supports a modal shift to walking and cycling.
- Consider measures to dampen demand for private car transport, e.g. increasing parking charges, road user charging, introduction of workplace parking levies etc. At the same time, such measures could be considered to encourage take-up of EVs, for example preferential access to urban areas, reduced parking charges for EVs etc.
- Continue to install and incentivise EV charging points.
- Run additional campaigns to champion public transport and active travel.
- Incentivise low emissions car-sharing schemes

Businesses:

- Rethink the need to travel as part of business activities, reducing commuting and business trips.
- Set up EV car clubs to remove the need to own a car.
- Install EV charging points at workplace car parks.
- Travel companies to introduce journey planning / smart ticketing services.
- Amend vehicle fleet procurement rules to favour zero emissions vehicles.

Individuals:

- Join car sharing schemes.
- Undertake shorter journeys on foot or by bicycle where feasible.

National Government:

- Increase current grants for low emissions vehicles and/or scrappage of fossil fuelled vehicles.
- Increase revenue funding for local authority public transport schemes.
- Make capital available to support substantially enhanced walking and cycling infrastructure.

**Key transport actions within the local plan**

The local plan must prioritise transport policy and options that resource the necessary actions to facilitate transition to a net zero transport system.

The spatial planning must prioritise reducing the need to travel, making the travel hierarchy work and allocating the investment necessary for the large shift to active and electric transportation, and zero emissions public transport.

## Energy infrastructure activities

The transformation of the energy system is pivotal to the district, regional and national pathways to net zero emissions. The regional actions are well defined within the Kent and Medway Energy and Low Emissions Strategy. East Kent and Canterbury district have been identified as high potential areas for solar and wind renewable energy generation and the district has had success in decarbonising the electricity supply through the Kentish Flats offshore wind farm and some utility scale solar generation. In order to meet the requirements to fuel efficient domestic heating and zero emissions transport, the renewable energy generation capacity requires increasing.

The key components of the energy pathways to net zero for Canterbury district are:

Energy actions	Description	Impact (emissions reduction) %
Hydroelectric power	Hydroelectric power generation grows to 34 MWh per hectare inland water in 2030; 41 in 2050.	Small
Offshore wind	Large-scale onshore wind generation grows to 4.8 MWh per hectare in 2030; 6.9 MWh in 2050.	Large
Onshore wind	Large-scale onshore wind generation grows to 1.9 MWh per hectare in 2030; 2.2 MWh in 2050.	Medium
Small scale wind e.g. farms	Small-scale wind grows to 2.8 MWh per hectare in 2030; 3.3 in 2050 (from a baseline of 1.2 MWh per hectare.)	Large
Community and utility scale solar generation	Large-scale solar generation grows to 200 kWh per hectare in 2030; 400 in 2050 (from a baseline of 50 kWh per hectare.)	Large
Rooftop solar generation	Local solar capacity grows, generating equivalent to 2500 kWh per household in 2030; 5200 in 2050 (from a baseline of 400 kWh per household.)	Small-Medium

The Anthesis SCATTER pathways demonstrate that wide scale and rapid action to enable society to reduce unnecessary energy usage combined with replacing fossil fuel power sources with renewable energy is necessary at an unprecedented scale and pace during the next decade.

A more detailed analysis of the district energy systems and policy options is provided in the report CDLP2020-CC05 Energy Strategy

## Key messages for the power sector

### Vision:

- For Canterbury district to be carbon neutral by 2050, the supply of electricity needs to be fully decarbonised by then.
- This means decarbonising the generation of electricity that feeds into the grid and creating more renewable electricity within the district for local use (distributed renewables).
- This also means developing green hydrogen as an emerging part of the renewable energy infrastructure.
- Canterbury district will continue to play a regional part in grid decarbonisation through to 2050; the power network in the district plays an important role in energy distribution through East Kent and power connections with the European continent.
- Expansion of the Kentish Flats wind farm or another adjacent offshore wind generation would be a major contributor to district and regional energy needs.
- Increasing levels of distributed generation will help limit the district's reliance on grid decarbonisation and manage the risk of not meeting its carbon neutrality target. District schemes such as community and utility scale solar energy, farm scale or utility scale onshore wind would all play a major part in building energy resilience.
- District development will include smart network management technology, local energy storage and clean technologies that maximise the chances of achieving emissions reduction goals for the energy systems.
- At the same time, every effort will need to be made on the demand-side to manage the increased need for electricity. Energy efficiency in buildings and transport will be key to success.

### Opportunities:

Kent County Council, Canterbury City Council and other public service providers:

- Ensure 100% electricity in Council buildings and infrastructure is green energy.
- Look into options for collective purchasing power and peer-to-peer agreements across the county.
- UK Power Networks to work with Kent County Council, Canterbury City Council and Ofgem to assess potential demand on grid and options for meeting this higher demand, ensuring flexibility etc.
- Review planning rules to maximise incentives for new renewable projects.
- Lead a review of renewable potential across the county
- Consider options and scope for a major, co-ordinated programme of solar PV installation in both domestic and non-domestic sectors.

### Businesses:

- Consider scope for distributed renewables on site.
- Move to 100% renewable electricity tariffs.

### Individuals:

- Move to 100% renewable energy tariffs.
- Install rooftop solar wherever feasible, for example when planning a new roof.
- Form community energy schemes to encourage local renewable energy generation.

National Government:

- Remove subsidies and tax breaks for fossil fuels and phase-out the use of fossil fuels in back-up and peaking plant generators.
- Put in place consumer protection to cover flexibility services, time-of-use tariffs, peer-to-peer trading etc.
- Introduce policies to increase the rate of grid decarbonisation.

**Key power actions within the local plan**

The local plan must be clear that minimising energy consumption and maximising renewable energy production is a prerequisite for all development.

Energy priority areas of the district that encourage and mobilise renewable energy projects at pace and scale to meet the net zero challenge should be clearly identified and communicated through the plan.

## Waste activities

According to Kent Resource Partnership data, Canterbury District generated around 60,000 tonnes of waste per year. Around half of the waste is incinerated and the remainder is sorted for reprocessing. A very small proportion - mainly rubble and hardcore - is sent to land.

The carbon emissions from waste comprise:

- Emissions from incineration
- Emissions from composting food and garden waste
- Transport emissions from moving waste
- Emissions from operating waste collection and sorting centres
- Emissions from the downstream recycling of waste

It is beyond the scope of this report to fully detail the district waste management systems which also include trade waste management, sewage and waste water treatment and sludge management.

## Key messages for the waste sector

Waste:

- Emissions from waste have already fallen drastically (70% at the national level between 1990 and 2017), and waste currently is a relatively small share of overall UK GHG emissions (4% in 2017). However calls from scientists to reclassify municipal waste incineration emissions may change this evaluation.

Waste emissions in Canterbury district could be further reduced by 2030 in the following ways:

- Ongoing funding of targeted behaviour change campaigns. Widespread changes in behaviour can make significant differences to reducing carbon emissions.
- Reducing biodegradable waste being sent to incineration can have the largest impact in reducing waste system emissions; food and biodegradable waste sent for composting generates around 25% of the greenhouse gas emissions than incineration.
- Promote and support third sector and community reuse and repair activities.
- Target reduction of materials, such as textiles, aluminium, steel and plastics, based on volume and carbon intensity.
- A continued focus on a reduction in food waste to achieve the Kent Resource Partnership's target of 20% reduction in food waste by 2025.
- Increase the recycling rate from 47% household waste recycling rate to achieve at least a 65% municipal recycling rate by 2035 as a minimum.
- Use enforcement, residual waste restrictions, financial incentives and potentially service design changes (informed by carbon metrics) to reduce the overall waste quantities, increase recycling rates and reduce residual waste generation.
- Support businesses to introduce much lower material wastage and maximum separation of waste materials including glass, metal, plastic, paper and card, and separated food waste processing. It is anticipated that the forthcoming Environment Bill and new packaging regulations will also act in this area.
- Use of anaerobic digestion for food waste treatment to help generate more biogas.
- Front end removal of fossil fuel derived content (e.g. additional plastics and textiles) from residual waste feedstock to reduce emissions from waste sent to Energy from Waste.
- Whilst it is important for the sector to achieve further emissions reductions as set out above, as part of overall efforts towards Canterbury district's carbon neutrality target, achieving net zero emissions in the sector is challenging due to the difficulty of further reducing methane emissions from the landfills located within the County, and tackling emissions from wastewater treatment

#### **Key waste actions within the local plan**

Ensure that all new development has optimum waste storage handling facilities.

Optimise the reuse of materials and minimise waste through low carbon design for developments.

## Land use, natural systems and agriculture activities

Land use is a net sequester of greenhouse gas emissions at district level according to the UK Government local authority emissions data. This means that overall, the district land removes some of the greenhouse gases from the atmosphere; the national data estimates that each year the



district land removes about 1/20th of the carbon dioxide generated from district energy consumption.

Evaluation of the carbon sequestration potential for the district land area to remove greenhouse gas emissions by changing land use (e.g. by increasing woodland area) is relatively small compared to the scale of the district energy and consumption emissions. The work to better understand the sequestration potential from land use is ongoing with multiple agencies conducting research including the National Atmospheric Emissions Inventory, Natural England and the Kent Wildlife Trust.

The Anthesis SCATTER model indicates that through appropriate land use management the district land could potentially double the rate of carbon sequestration in the district by 2050.

The work to evaluate the carbon and other greenhouse gas emissions policy options is still underway and will be added to the local plan evidence in a separate report; The evidence so far is that the major focus for climate change mitigation should be on the buildings, energy and transport sectors as set out in this report.

--END--