

Essex Climate Action

Samantha Kennedy
Director Environment & Climate Action

<https://www.essex.gov.uk/climate-action>

[NET ZERO: MAKING ESSEX CARBON NEUTRAL](#)

www.essexclimate.org.uk

Climate Challenge

UK Domestic Green House Gas Emissions (GHG) by Sector 2019

Source: BEIS, HMG



Others include Public, Industrial Processes and the Land Use, Land Use Change and Forestry (LULUCF) sectors. The percentages may not sum to 100% due to rounding.

[Final UK greenhouse gas emissions national statistics: 1990 to 2019 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/final-uk-greenhouse-gas-emissions-national-statistics-1990-to-2019)

We are legally required to achieve net zero green house gas emissions by 2050. Government agreed milestone of 78% reduction by 2035.

Transport is the largest contributor of green house gases in the UK, but is an even larger share of Essex emissions.

Our built environment is in line with the national average. As we do not host a heavy industrial sector, the contribution of our business sector is below the national average.

In 2019, UK territorial greenhouse gas emissions fell by 3% from 2018 and were 44% lower than in 1990

Essex Climate Action Commission

Set up by Essex County Council to advise the Council on how best to tackle the climate challenge and become a net zero emissions county by 2050. Over 30 Commissioners:

- Cross-party with representatives from across ECC, Districts and Parish Councils.
- Brings together internationally and nationally renowned academics and climate scientists (UN Chief Scientific Adviser, senior academics from all 3 Essex Universities); representatives from wider public sector, major businesses and land owners in Essex; national trade associations, local charities and community leaders.
- Appointed Independent Chair – Lord Randall of Uxbridge
 - Identified for his significant experience in both national government and the private sector.
 - Life peer in the House of Lords.
 - Was Special Advisor on the Environment to the former Prime Minister, Theresa May
 - served as a trustee of the RSPB & special envoy on modern slavery to the Mayor of London
 - member of the Environment, Transport and Regional Affairs Select Committee
- Appointed two Young Essex Assembly members to the Commission as co-chairs

Heavy hitting, locally networked Commissioners have dedicated significant time and expertise free of charge over the past year to develop the plan for Essex and are passionate and vocal advocates for its delivery.



Net Zero: Making Essex Carbon Neutral

Essex Climate
Action Commission



2021 EV strategy; E-Scooter Pilots running;
Ten Liveable Neighbourhoods
Community owned renewables
Essex Design Guide; Green construction training
Smart meters in schools
All new builds to have solar panels

2022 New schools commissioned net zero
25 school streets
10 local delivery hubs
5 E-cargo bike schemes
Energy sector innovation hub

2024 Network community reuse
and repair hubs

2023 Essex Housing Demonstrator net zero development
Developers to fund flood risk management via CIL
Coastal flood resilience scheme in critical areas completed

2025 All New buildings net zero and support circular
economy recycling
50% Essex schools retrofitted to net zero
All residents & businesses to have kerbside recycling
All biodegradable waste to beneficial use

2030 25% all roofs have solar panels
1.43GW solar energy
Bioenergy in difficult rural homes
Hydrogen store for renewable energy
20 Liveable Neighbourhoods
3 new park and choose sites

2030 All public sector estates in Essex NetZero
100% fuel poor homes retrofitted & supplied
with renewables
2/3 Essex houses retrofitted
1/3 commercial buildings retrofitted
100% schools retrofitted
All new buildings carbon positive

2030 25% land natural green infrastructure
(urban and rural)
50% farmland uses sustainable land stewardship
30% Essex in a Climate Focus Area
Per capita waste reduced by 10%
70% recycling rate
Zero waste to landfill

2035 All waste heat reused
All gas fired power repurposed to bioenergy
Network of community energy neighbourhoods
in every district

2040 All housing retrofitted
Zero GHG emissions from housing
Essex renewables meets all county needs
30% all land natural green infrastructure
75% farm land adopts sustainable
land practises

2050 All roofs have solar panels
75% all developments have integrated natural water management
100% farm land uses sustainable land practises



CLIMATE HAS ALREADY CHANGED IN ESSEX

TEMPERATURE AND SEA LEVEL ARE ALREADY RISING

What has happened so far?



Global average surface temperature is more than 1°C above pre-industrial levels.



UK annual average temperature is about 1.2°C above pre-industrial levels. We have experienced a 0.8°C increase since 1961-1990.



Global mean sea level has risen $\sim 21\text{cm}$ from 1900.



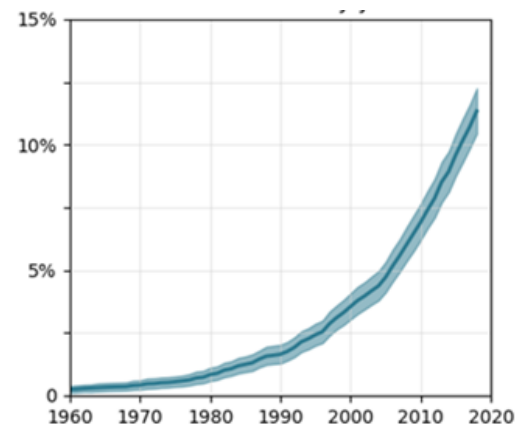
UK mean sea level has risen $\sim 16\text{cm}$ from 1900.



There are some indications of **increasing heavy rainfall** in the UK, though difficult to quantify.

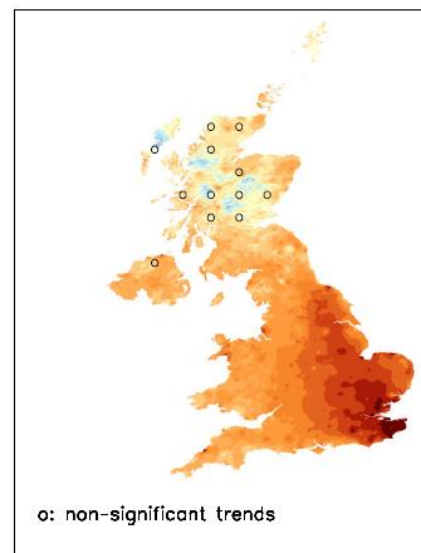


Increasing chance of UK heatwaves “like 2018 summer”. Now 10-25% chance each year, compared to $<10\%$ chance a few decades ago.



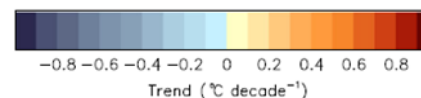
Chance of a UK “2018 Summer” increasing annually since 1960.

Chance >2018 by year
From the Met Office ‘UNSEEN’ project



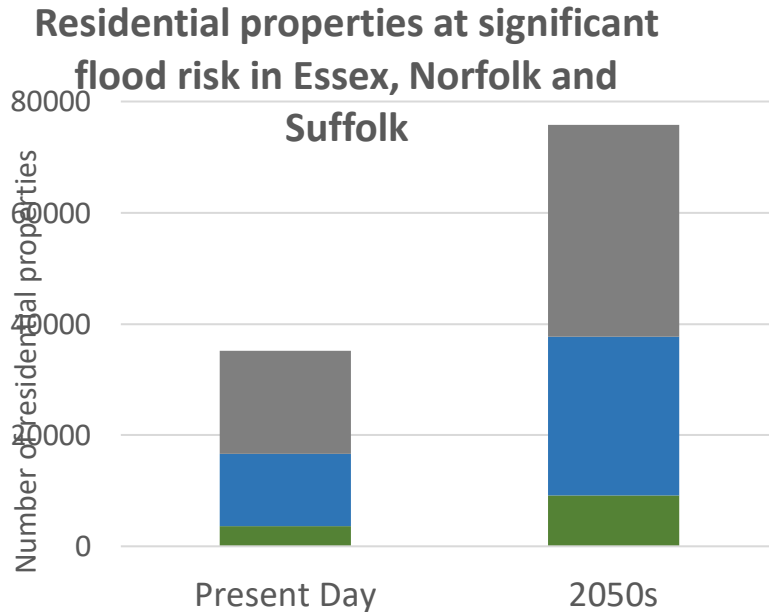
Trend in the warmest day since 1960.

1960-2019 observed trends
Christidis et al. (2020)





FUTURE IMPACTS: INCREASED FLOOD RISK, WATER SHORTAGES, OVERHEATING

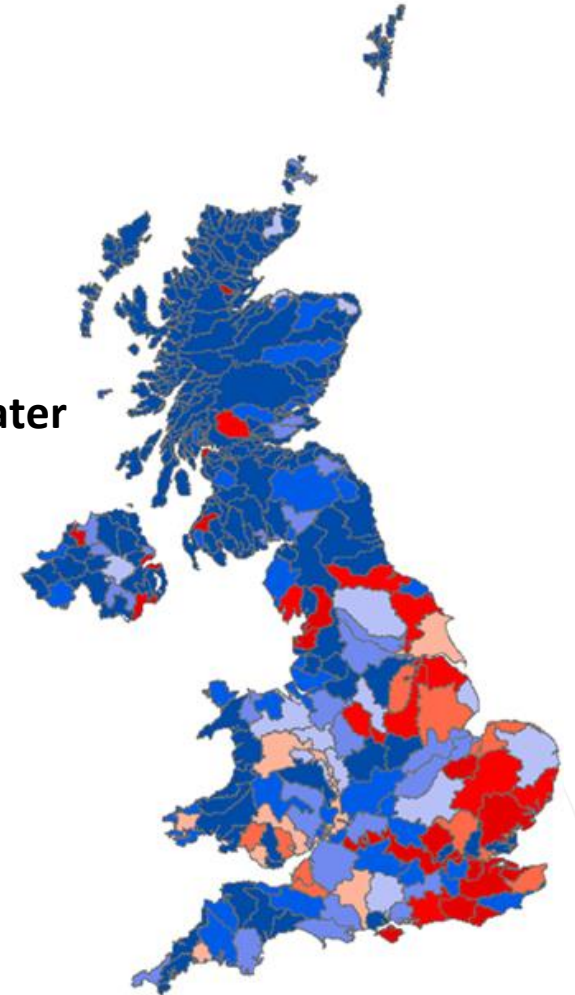
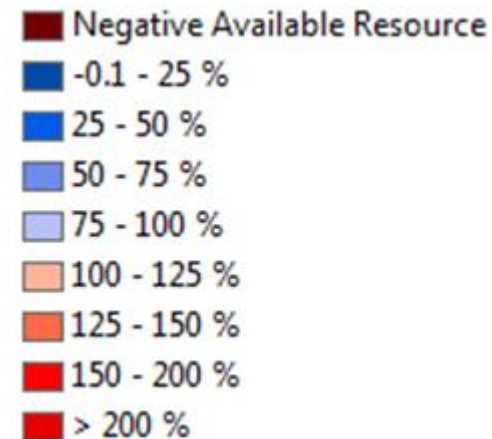


Homes at Risk

- Fluvial Flooding
- Coastal Flooding
- Surface Water flooding

Essex also has substantial issues with water scarcity and is one of the areas of the country with the highest levels of negative available water resource as a % of water available for abstraction in the country.

Water demand as a % of water available for abstraction

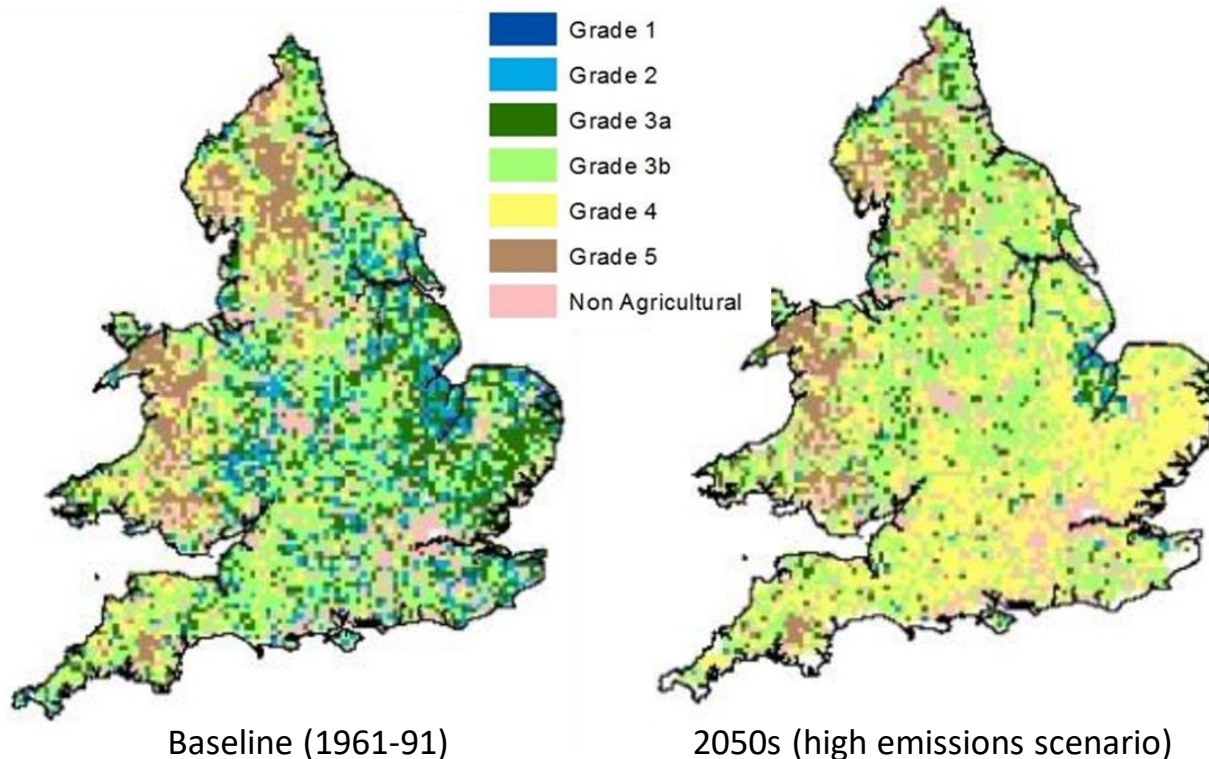


Sayers et al. 2017 (CCRA2)

The Environment Agency estimate that for every £1 spent improving protection from flooding and coastal erosion, we avoid around £5 of property damages

FUTURE IMPACTS – AGRICULTURE, SOILS AND SUBSIDENCE

AGRICULTURAL LAND CLASSIFICATION IN ENGLAND AND WALES



Agriculture

Climate change will cause soil erosion – soil washed away in heavy rainfall in winter and blown away in drier summers - leading to degradation of our agricultural land and impacting our farming economy.

Subsidence Risk for Buildings & Roads

Climate change leading to hotter, drier summers, shrinks and cracks ground under houses.

British Geological Survey reports risks of clay related subsidence increases by a third by 2030 and triples by 2050.

This means the 1m homes at risk in the UK in 1990 is set to rise to 2.4m by 2030.

Essex is one of the key areas that will be affected.

ECC ORGANISATION STRATEGY (PROPOSED)

HIGH QUALITY ENVIRONMENT

6: NET ZERO - we will work across the Council and the County to hit our net zero targets, by ensuring that the Council significantly reduces its carbon footprint whilst also supporting an acceleration in the progress towards sustainable housing and energy, and active and alternative forms of travel across the county.



AMBITION

7: TRANSPORT AND BUILT ENVIRONMENT - we will deliver a step change in sustainable travel across the county, by growing passenger transport and active travel and will ensure we support the move towards net zero, climate resilient developments including our new garden communities, by delivering sustainable and healthy neighbourhoods for the future.



AMBITION

8: MINIMISE WASTE - we will minimise the impact on the environment by supporting residents and businesses to reduce waste and increase the amounts recycled, and by working with others to deliver a more circular economy whereby we better protect our natural resources through the efficient and ongoing reuse of materials.



AMBITION

9: LEVELLING UP THE ENVIRONMENT - we will help all our communities to enjoy a high-quality environment by making them more resilient against flooding, heat stress and water shortages, by enhancing our county's green infrastructure and by reducing air pollution.



EQUALITY

10: GREEN COMMUNITIES - we will work with communities and businesses, providing advice and support to enable and empower local action to reduce greenhouse gas emissions and build climate resilience.



AMBITION

BUILT ENVIRONMENT

ECAC RECOMMENDATIONS

Anchor Institution Estates to be Net zero by 2030

New build net zero by 2025 and carbon positive by 2030

New homes Net Zero by 2025; existing residential buildings 50% reduction emissions by 2030 and 100% by 2040

100 per cent of fuel poor homes to be retrofitted and supplied with affordable energy by 2030

Anchor Institutions net zero by 2030

New schools Net Zero by 2022; Schools to be retrofitted to net zero 50% by 2025; 100% by 2030

Delivery Programme Already Underway

ECC Estate

- ECC policy for the estate to net zero by 2030

Schools

- 4 EPC A+ rated school extensions built
- Smart meter programme underway for 200 schools
- Retrofit programme underway

Planning Policy, supporting Local Planning Authorities

- Updating Essex Design Guide to provide best practice guidance and advice
- Undertaking a construction skills audit to inform skill development
- Supporting a viability toolkit and train local authority planning officers.

Net Zero Pilots

- Work with LPAs, Homes England and Developers to bring forward net zero developments.
- 62 net zero homes have been granted permission by Brentwood Council.

Housing Refurbishment

- Working with partner authorities to deliver £800k grant to refurbish fuel poor homes
- Working with CAB to deliver £859k grant funded website for advice on energy and finance.

LAND USE & GREEN INFRASTRUCTURE

Farmland in Essex adopt Sustainable Land Stewardship practices: 50 % by 2030; 75% by 2040 and 100% by 2050

30% of all Land in Essex will enhance biodiversity and the natural environment by creating Natural Green Infrastructure: 25% by 2030 AND 30% by 2040

Increase urban greening: 30% greening of our towns, villages and new developments by 2040

Create a Climate Focus Area to accelerate action and provide exemplars

Develop and agree new policy and action plans on coastal flooding and erosion risk to manage and adapt specific shorelines. Coastal flood resilience schemes in critical areas implemented by 2023.

Develop schemes to increase flood resilience by 2050, ¾ of schemes to be nature based

Delivery Programme Already Underway

Essex Green Infrastructure Strategy

- Awarded a Building with Nature Accreditation of Excellent – one of eight LAs with this accreditation.
- Selected by Natural England as one of ten trial projects across England to test the National Green Infrastructure Standards

Essex Forest Initiative

- Essex Forest Initiative planted 38,615 trees with farmers, charities, city, district and borough councils in 2020/21 and plans to exceed its 50,000 target for 2021/22
- ECC partnership with the Woodland Trust offers Local authorities, Parishes, and landowners 90% funding for tree planting

ECC Woodland and Country Parks

- Commissioned a review of ECC green space to unlock Country side Stewardship grant funding and enable green space management to maximise climate resilience and biodiversity benefits.

Flood Management

- Invested £2.6m this year as part of ongoing flood defence improvements (50% grant funded)
- Advice on 500 planning application improving Sustainable Urban Drainage Systems on over 62,000 properties

TRANSPORT

ECAC RECOMMENDATIONS

**Develop EV strategy & charging network roll out
E Scooter trials by 2020.**

Walkable Neighbourhoods: 10 by 2021, 20 per annum each year to 2030

Walkable School Streets: 25 by 2022: 20 per annum each year to 2050

Introduce e-cargo bike pilots in five locations by 2022, leading to wider introduction through 2030

**Discourage Unnecessary car use with road user charging and parking charges.
3 new park and choose by 2030**

Build behaviour change strategy and education campaign focussing on active travel, public transport and discouraging unnecessary car use

Delivery Programme Already Underway

Electric Vehicles

- Electric Vehicle Strategy being commissioned
- Plan to begin electrification of ECC fleet
- Supported £5.3m innovate bid for Braintree EV charging station
- E Scooter trials ongoing in Basildon, Braintree, Brentwood, Chelmsford, Clacton and Colchester - ~750K rides, 82% would have used car.
- Escooter operator is partnering with ecargo bike provider in Colchester on scooter redeployment and balancing

Essex Highways

- Warm Tarmac on Essex Highways: trialled on A13, east of Hadleigh high street saving 20% on energy costs and cutting GHG
- 45,000 LED streetlights installed and investing to replace the remaining 82,000. Saving approximately £2.2M a year in energy and maintenance costs, as well as reduced carbon taxes

Active Travel

- £7.6m funding from DfT to support active travel. Investment in new cycleways, walkable neighbourhoods and school streets ongoing.
- Essex Pedal Power launched in Jaywick
- Safer Greener Healthier campaign launched and Stop Swap Go sub-campaign has reached over 1 million people
- Walking Bus guide under development
- Bikeability training developed for adults - family programme offered this summer
- Go Jauntly launched, complete with local walks

ENERGY & WASTE

ECAC RECOMMENDATIONS

1.43 GW of large scale solar and a hydrogen store by 2030

Network of community energy neighbourhoods by 2035

Essex produces enough renewable energy to meet its own needs by 2040

Solar panels on every available roof by 2050

Community network of reuse and repair hubs by 2024, and kerbside recycling for all home and businesses by 2025

Per capita waste down by 10% and recycling rate of 70% by 2030

Zero landfill by 2030

Establish waste innovation fund and adopt lifecycle analysis

Delivery Programme Already Underway

Energy

- Feasibility Study commissioned to use utility procurement to drive investment in renewable capacity in Essex
- Grant aid to install solar panels on 15 schools and Essex Record Office
- £1.3m grant programme to support SMEs investing in renewables, EVs or energy efficiency


Community Energy

- Seed funding community energy groups in Essex. Two community energy groups have recently been launched in Essex, making them the first ones of this kind in the county – Saffron Walden Community Energy group and Colchester Community Energy.
- Energy Switch over 2,000 households switched this year to a renewable supply, saving money (average saving £161 per household) & carbon
- Solar Together open now: delivered panels on 305 households last year and 857 households are going ahead this year.


Waste

- In sourcing recycling centres and waste transfer stations – will give greater scope for reuse and repair
- £1.4m to support Blueprint for a circular economy with targets to upskill 2,000 disadvantaged people and engage 78,00 people in behaviour change
- Love Essex campaigns supporting reusable hygiene products, cloth nappies, recycling, composting and library of things projects across Essex.

Community Engagement




Essex Climate Action Commission
Powering positive change




Essex County Council


ESSEX COUNTY COUNCIL
CLIMATE ACTION CONSULTATION
REPORT

PREPARED BY LAKE MARKET RESEARCH





MRS Evidence Matters
Company Partner



Lake Market Research | www.lake-research.com | 01622 357060



Essex Climate Action Commission



- About
- Reports
- News
- What Can I Do?
- Climate Initiatives
- Events
- Place-Based Climate Action Network (PCAN)
- Contact Us

Welcome to the Essex Climate Action Commission website. Here you will find information about the Commission and its work, as well as news concerning the environment and climate action across Essex.

Essex Pedal Power launches in Clacton and Jaywick Sands

A first-of its kind community-led project in Essex will make cycling more accessible for people living in Clacton and Jaywick Sands, as 1,300 free new bikes will be given to eligible residents over the next two years.

In a launch event at the Jaywick Community and Resource Centre on the 12th June, the first bikes were given away to successful applicants and arrangements are being made to distribute the rest of the bikes in stages between now and 2023.



All News



Green Growth Opportunities

Construction In Essex

- 200,000 new homes & 40+ schools,
- Retrofit c800,000 existing homes of which 70% are EPC D or below
- 67,000 homes in fuel poverty

Construction contributed £117 billion to the UK economy in 2018 and supports over two million jobs.

Green construction expected to create 1.8m new jobs of which 0.5m in Wider South East.

Energy Transition

In 2018 there were 185,000 full-time workers in England's low-carbon and renewable energy economy (ONS).

LGA forecast that in 2030 across England there could be as many as 694,000 direct jobs employed in the low-carbon and renewable energy economy, rising to over 1.18 million by 2050.

In Essex it is estimated that 15,908 jobs will be required by 2030 and 27,741 by 2050.

ECC ORGANISATION STRATEGY (PROPOSED) STRONG, INCLUSIVE AND SUSTAINABLE ECONOMY

1: GOOD JOBS - we will work hard to address the impacts of the Covid pandemic on unemployment by supporting business recovery and building a stronger economy for the future, enabling people to build the skills they need to be part of it, and working alongside Essex businesses to help reduce barriers to employment for disadvantaged groups.



RENEWAL

2: LEVELLING UP THE ECONOMY - we will work to level up the economy by addressing the drivers of socio-economic inequality (including income, education, employment, health and housing), based on the foundation of good jobs and a higher skilled and healthier workforce.



EQUALITY

3: INFRASTRUCTURE - we will deliver and maintain high quality infrastructure to improve opportunities for people living in Essex as well as supporting a growing economy and the delivery of new homes and communities by investing in the region of £1bn by the end of this Council.



AMBITION

4: FUTURE GROWTH AND INVESTMENT - we will help grow existing businesses and the economic sectors of the future in Essex, including the arts, and secure high levels of new investment by working with partners to promote the County, by creating the conditions for growth and by maximising the impact of public sector spend within the county.



AMBITION

5: GREEN GROWTH - we will develop Essex as a centre for innovation, supporting new technologies and business models to enable our economy to transition to net zero and secure green jobs for the future by ensuring we have the right local skills and drawing in investment opportunities.



EQUALITY



ECC SUPPORTING GREEN GROWTH



Over the course of three facilitated workshops in 2021, ECC is working to create the partnerships and appetite for innovation in Essex focussed on achieving carbon zero outcomes for the County.

The three sessions will focus on bringing together to:



Build the foundations



Enable project delivery



Report, evaluate, disseminate next steps

The most recent workshop held on **7th July** focused on bringing forward project concepts to tackle the four key themes that have been identified.

These themes are *Waste, Transport, Built Environment & Energy*

Community Engagement (Businesses)

ECAC Recommendations

Establish Essex as a centre of excellence for innovation in addressing the climate crisis.

A Net Zero Innovation Network should build on excellent networks across the County.

ECC's New Sector Development Strategy

- The Sector Development Strategy is part of the county's economic recovery programme
- The strategy will set out the economic sectors that Essex should focus on supporting and growing
- The strategy will make recommendations on investment and actions that will deliver real, tangible results for Essex
- The strategy will drive the direction of our wider work across the authority and in our collaboration with our partners

The interim report was announced at Full Council on **13th July** and highlights the following sectors for future support. The final report is due at the end of Sept 2021 and will set out an action plan for ECC to take forward.

Essex Climate Action Commission

Over 2021/ 22 the Commission will focus on:

- **Green growth for the future:** we will look at ways we can embrace a greener economy where we not only care about business, but we care about our planet too. This will unlock new opportunities for businesses, but also for residents in the form of more sustainable homes and jobs.
- **Green finance:** we want Essex to be a place where we can attract green investment to create a resilient and net carbon zero Essex by 2050. If we manage our resources sustainably, we will be attractive to businesses that want to invest and this, in turn, will reap social, economic, and environmental benefits for everyone.
- **Delivery of Net Zero: Making Essex Carbon Neutral recommendations.**





NEXT STEPS



1. EEC Response to Net Zero: Making Essex Carbon Neutral
2. Final Organisation Strategy adoption at Full Council