

Essex Climate Action Commission (ECAC) Meeting

14/11/2022 11:00-13:00 Via Zoom

Attendees:

Alastair Southgate
Bishop Roger Morris
Catharine Cameron
Chris Howlett
Claire Williamson
Cllr Paul Thorogood
Cllr Peter Schwier
Cllr Sue Lissimore
Daphne White
Dr Andrew Impey
Dr Poone Yazdanpanah
Dr Simon Lyster
Emma Hunter
Graham Thomas (speaker)
Graham Underwood
Heather Hilburn
James Abbott
John Meehan
Kerry Burgess
Liam Ashford
Loretta Hoy
Louise Tennekoon
Marl Nowers
Matt Butcher
Matthew Thomas (speaker)
Nicola Melville (speaker)
Prof. Aled Jones
Prof. Jacqui McGlade
Prof. Jules Pretty (Chair)
Renata Lins
Richard Davidson
Rufus Grantham (speaker)
Russell Smith (speaker)
Sam Kennedy (speaker)
Sarah Howard
Simon Walsh
Tom Day (speaker)
Tom Yiangou
Yarema Ronish

Apologies:

Adam Read
Cllr Holly Whitbread
Cllr Ivan Henderson
John J. Lippe
Laura Mansel-Thomas
Mark Doran
Rob Wise
Robert Mitchell
Tracey Vickers
Victoria Hills

1. Welcome and Opening

The chair (Prof. Jules Pretty) welcomed everyone to the meeting and outlined the agenda. The chair drew attention to Prajwal's update on the Schools Ambassadors' Network Proposal that was circulated ahead of time. More details will be sent out in due course.

Jacqui McGlade gave a brief summary of COP27. Although a quiet COP, with fewer demonstrations than usual, she felt it was quite productive. With China and the USA not talking to each other, other countries were filling the gap and loss and damages and adaptation were high on the agenda. The chair thanked her for the update.

2. First ECC Annual Report on Climate Action in Essex – Intro and Discussion

Sam Kennedy gave a brief introduction to ECC's First Annual Report which captures progress across the county during the first year of the climate action plan (July 2021 to July 2022). ECC is committed to producing a report every year. The report will be formally published later this week.

Simon Lyster commented that land use change is critical not only for nature but also for climate. From his perspective, the momentum is going in a positive direction.

Commissioners remarked on the lack of diversity in the photos in the report. They would like to see more diversity in the imagery, particularly younger people who we want to inspire by this work.

Bishop Roger Morris wondered how we could tailor the content of the report to those outside of Essex, in particular industries that might be attracted to Essex because of what we are doing on climate.

Commissioners commented that it would be good to see a bigger focus on local groups and local action, and how people's lives have been improved by all of this in the next report.

3. Updates on Net Zero Homes and Retrofit

Introduction to built environment agenda: Graham Thomas (speaker), ECC.

- In terms of the built environment there is still 20% of Essex to be delivered by 2050. That means new homes, new jobs, new schools and new social infrastructure.
- The easy answer for the built environment would be for the government to change the rules in relation to building regulations. If that happened, we could quickly deliver new Net Zero Carbon Homes.
- However, the government is moving ahead with the Future Homes Standard (expected 2025) which is not carbon zero.

Enabling Net Zero homes – Nicola Melville (speaker) & Matthew Thomas (speaker), ECC.

- ECAC recommendation: all new homes in Essex should be net zero by 2025. To deliver this we need consistent policy, support for/from Local Planning Authorities (LPAs), workable supply chains, knowledge, skills and we all need to be talking the same language.
- ECC has established a new unit Climate and Planning Unit (CaPU) with ECAC funding. The two main tasks are:

- To help local authorities develop a consistent policy approach across Essex to net zero and other climate related policies, including establishing a robust, sound evidence base.
- To help local authorities push for higher standards aligned with net zero on current planning applications.
- We need a robust evidence base to underpin work to embed net zero into local plans. The first 'Essex specific' evidence to support local plan policies published is the [Net zero carbon viability Study](#) by Three Dragons.
- Three Dragons report key findings: (1) Net zero (regulated) carbon in operation homes are viable in most places in Essex. (2) Building homes to Passivhaus 'classic' fabric standards, with a heat pump and solar PV is recommended as a basis for achieving net zero (regulated) carbon buildings now. (3) The difference in cost between FHS (2025) and net zero (regulated) new build is marginal (between £2,000-£3,000). (4) Changes beyond the Building Regulations are needed to deliver net zero development and align with local climate targets and UK legally binding climate targets.
- Why should policy go beyond the FHS? There are many reasons, including improved comfort and wellbeing, plus significantly reduced energy costs, for occupiers; less pressure on national electricity grid; aligned to UK climate targets; future proof homes.
- Building to Passivhaus fabric standards reduces space heating energy demand by over 70%.
- We are watching emerging policy in other areas including Cornwall Council and Bath & North East Somerset Council who frame their policies on an energy based approach. The difference is that they address the unregulated energy use, which accounts for 50% of a building energy use. They also require an energy balance to be achieved on site.
- Policy Implications for Essex: (1) high fabric efficiency – Passivhaus levels of efficiency; (2) use low carbon heat source – air source heat pump; and (3) integrate renewables on site – roof top solar PV. To deliver this, key performance indicators for Space Heating Demand and Total Energy Consumption need to be set in policy too.
- Next Steps:
 - Response to recommendations of Three Dragons Study - prioritising 'Net Zero carbon in operation' evidence and policy.
 - Successfully secured ECAC funding for: Net Zero in operation policy 'top up' evidence and legal advice.
- Other measures to support LPAs: Survey evidence in 2021 identified huge demand for climate change training for town planners. Support is needed for policy development, for best practice guidance and at planning appeals.
- We have worked closely with the Essex Developers Group to commission research and to initiate positive action – including Essex Developers Climate Action Charter.

Discussion: the presentation prompted a wide-ranging discussion covering the Passivhaus model and embodied carbon, offsetting of residual emissions, and the importance of thinking about siting of communities to reduce the need for carbon-intensive modes of transport.

Introduction to retrofit agenda: Tom Day (speaker), ECC.

- The UK has the least energy efficient housing stock in Europe. More than 98% of homes will require some form of retrofit pre-2050. Retrofit is a key growth sector with significant social value return.
- ECAC Retrofit recommendations:
 - Two-thirds of all dwellings to be retrofitted as far as possible to net zero carbon standards by 2030 and all by 2040 with incentives introduced to accelerate the shift to low carbon heating solutions.

- Existing homes – carbon emissions reduction of 50 percent by 2030 and carbon zero by 2040.
- 100% of fuel poor homes to be retrofitted and supplied with affordable energy by 2030.
- All retrofit schemes should include water efficiency alongside energy efficiency.
- The UK Climate Change Committee has said that there are three key solutions to this challenge: (1) reducing energy demand, (2) electrifying heat, and (3) behaviour change.
- Barriers to retrofit include lack of a clear householder offering, inconsistent policy, cost and finance, tenure issues, supply chain and technical challenges.
- What are we currently doing? Five key pillars to our action plan:
 - Gather data to target retrofit programmes,
 - Secure government funding to support low-income households,
 - Promote retrofit in self-funded households,
 - Boost skills and support local SMEs,
 - Adopt a people and community led approach.

Building a retrofit service for households - Russell Smith (speaker), MD, Parity Projects.

- Parity Projects has focused on energy and housing for the last 14 years. Currently there are 20 million homes under analysis.
- Scenarios for Essex Domestic Decarbonisation: Detailed analysis of every address in Essex. Scenarios modelled are:
 - Net Zero without disruptive fabric measures
 - Net Zero with disruptive fabric measures
 - Current common solutions only
- Without disruptive fabric measures there is a £13bn cost to get every house to net zero. That will only be possible by 2050 with an intervention. Households need to be educated and existing contractors need to grow.
- In terms of trades that means we need almost 4,000 people immediately if we are to get that 2050 target met.
- What needs to happen is a circular process, because very rarely is someone going to do this all-in-one go. Doing this phased over time is the sensible approach.
- The Retrofit Works model brings all the key organisations together under one bracket.:
 - Customers: the offers are narrow and unattractive; not aware of measures and benefits; no confidence in supply chain to deliver.
 - Advocates (Local Charity/ Council etc): want to drive change; struggle to identify customers; no defined, reliable, local supply chain; local economy.
 - Finance: needs confidence in outcomes and ability to deliver to invest.
 - Practitioners: have the capabilities but limited confidence in the market; could use some help to deliver.
- [Cosy Homes Oxfordshire](#) (CHO) run with Low Carbon Hub is the first local retrofit programme now to stand on its own without any external funding.
 - We do need to charge people since it's a service, but it is graduated, they spend a bit more each time they go to the next stage.
 - Lessons from CHO for the next iteration of launch:
 - The offer was made with no firm supply chain in place – it was built over time – this delayed the ability to install.
 - The offer was very wide and not targeted at particular customer areas.

- The offer covered the whole county from the start - a lot of cost was built in travel before income was steady.
 - No local authority involvement at all.
 - Improvements required for any new scheme:
 - Cover all possible measures with the supply chain from day 1.
 - Target certain job types at first, then widen.
 - Commence in one or two parts of the county with a focused offer, then widen.
 - Involve Local Authorities and Community Groups to build the brand.
- Conclusions:
 - Customers don't know what they want, don't want to deal with contractors, want things put right if there's a problem.
 - Contractors have no idea how to sell it and how to install it.
 - Access to finance is key.
 - Nimble, responsive, local supply chain is needed.
 - Community based advocates at the heart of making it work.
 - Digital toolbox links everyone up.

Retrofit: the challenge of scaling up - Rufus Grantham (speaker), Global Head of Urban Transition Finance, BWB.

- Goal of Net Zero Neighbourhoods: To develop a replicable funding and delivery model for creating low carbon communities on a street-by-street or neighbourhood-by-neighbourhood basis.
- Cities Commission for Climate Investment (3CI):
 - Founded by Core Cities, London Councils & Connected Places Catapult
 - Membership expanding across UK local government now representing 60+ cities and regions
 - Directly engaged with BEIS to fund a demonstrator programme
- Lots of challenges to decarbonising population centres. Top of the list are cost and complexity and low financial returns. Decarbonisation would require a massive public subsidy.
- By aggregating homes together into neighbourhoods, we can bring in institutional funders who typically need to be able to invest at scale. Because we are bringing in private patient capital, which has a much longer investment horizon, the value of those energy savings is much greater, which would also reduce public subsidy.
- Another benefit is that if you do this at scale, the cost of doing it goes down. And because the cost comes down, so does the public subsidy. When you are retrofitting whole streets at a time, you can do other things at the same time such as green infrastructure, travel infrastructure, community infrastructure. That allows you to rewrite the narrative of engagement with communities around regeneration rather than a technical conversation around retrofit, which we think will improve engagement. That does mean we would need more public money, but it also means the social and environmental outcomes would be greater.
- Net Zero Neighbourhoods combine all sectors:
 - Building Demand Reduction
 - Renewable Heat Generation
 - Renewable Energy/ Storage
 - Smart Mobility
 - Waste Management/ Circularity
 - Green Infrastructure

- Community Assets

- Multi-intervention, place-based funding & delivery: Funding vehicle in partnership with local government that delivers all of the work fully funded, with no cost to the resident, into a neighbourhood and then captures through a property linked legal mechanism part of the energy saving. The resident will make a net saving and will have no upfront capital contribution, which we think will improve the uptake. That creates an annuity income stream for the funding vehicle that can then support the finance.
- Benefits of exploring a place-based approach: (1) scaling for capital – aggregation makes it attractive to institutional capital; (2) improve challenging economics – significant scale economies; (3) consent – regeneration is a more engaging offer to residents; (4) deployment at pace - “planned & co-ordinated” vs. “market-led”; (5) supporting levelling up – avoiding regressive individual debt.

Discussion: The presentation prompted a discussion around the need to avoid indebting individuals to deliver retrofit and the potential for job creation in the supply chain.

4. AOB and Chair’s closing remarks

The next meeting will be part of an in-person event on **Tuesday 07 March 2023**, at the [Gridserve Electric Forecourt in Braintree](#). The event will run from 10am until approx. 3pm. The commission will cover travel expenses. More details will be sent out before the end of the year.

5. Items from the Chat

Graham ... to Hosts and panelists 11:12 AM

GU

Thanks Jacquie, really interesting update direct from COP!

Mark No... to Hosts and panelists 11:23 AM

MN

Seconding what Simon is saying. The co-ordinators of the Cluster are excellent and you could sense the positivity in the room at the cluster meeting last week.

Jacquie ... to Hosts and panelists 11:24 AM



Excellent start for farmers and land owners

Graham... to Hosts and panelists 12:11 PM

GU

I agree on the whole system thinking point. Very important not to create other demands through poor transport, linkages, etc. when developments take place. A case in point is the expanding Tolgate retail area in Colchester, totally structured around driving in cars from shop to shop.....

Richard Davidson to Hosts and panelists

12:13 PM



I think the report is comparing the costs of reaching Government Future Homes Standard with Passivhaus. It isn't suggesting it costs £3,000 to go from current B.Reg's to Passivhaus.

graham.thomas to Hosts and panelists 11:49 AM

G It is really good news that the viability study has confirmed that NZ carbon new homes are viable in almost all places in Essex. And this additional cost of providing such homes is a very minimal cost over the 2025 building regulation standards.

Jules Pretty to Everyone 11:50 AM

JP really interesting and important - thank you Matthew and Nicola! Key financial data and energy savings for occupiers

Aled Jones to Hosts and panelists 11:53 AM

AJ That legal advice part is key and great to see this as a focus.

Richard... to Hosts and panelists 11:57 AM



We also uncovered some evidence that consumers are prepared to spend more on an energy efficient homes which then gives the developers comfort their costs are going to be covered.

graham... to Hosts and panelists 11:58 AM

G Embodied carbon will be the next more challenging phase of work.

graham.... to Hosts and panelists 12:04 PM

G James, this work is looking to exceed building regulation standards. With the legal work we aim to have this point clarified to sit alongside the technical evidence and the Local Planning Authorities having the correct policies in their Local Plans.

Simon ... to Hosts and panelists 12:09 PM

SW

any wood/timber product used in a building is a potential carbon store.

graham.thomas to Hosts and panelists 12:16 PM

G James the Commissions recommendation on NZ homes is 2025. The work underway will build the evidence, base, we will have also covered the legal step and are currently working with those District Councils who are updating their Local Plans. So at this point in time it looks like we ought to be able to be delivering in some Districts NZ housing shortly after this 2025 date. I am very encouraged by the position we have reached in such a short period in time.

Samantha.Kennedy, Essex Co... to Hosts and panelists 12:20 PM

SE re Water Supplies under pressure. WRE have published the Water Resources Plan for the East of England for consultation (responses by 20th February 23).
<https://wre.org.uk/the-draft-regional-plan/>

[\(The Draft Regional Plan - Water Resources East \(wre.org.uk\)\)](https://wre.org.uk/the-draft-regional-plan/)

Graham Underwood to Hosts and panelists 12:25 PM

GU Are these Essex specific numbers, I may have missed that point?

loretta.hoy to Hosts and panelists 12:35 PM

L On the retrofit front I should say "Essex has been chosen as one of a handful of national authorities to work together with the Connected Places Catapult for their Innovation in Procurement Challenge. This will give us the opportunity to benefit from the considerable research and expertise of the Catapult and to learn from other authorities taking part in the Challenge.

The Challenge will focus on using procurement to bring together the public sector Anchors across Essex to create a pipeline for estates retrofit. This work can then be staged, phased and sequenced so that businesses of all sizes can see - and be part of - this future opportunity over the next 5 to 10 years.

The project will help to secure green growth within the county"

loretta.h... to Hosts and panelists 12:50 PM

L The sector development strategy published earlier this year has all the data modelled for retrofit jobs

James A... to Hosts and panelists 12:09 PM



It is hopeful Graham but where we are now is a long way from Net Zero. Obv the BR flow is different to the PP flow although they sit alongside each other. Our LP in Braintree DC (Adopted July this year) was pushed back by the Inspector on this issue - we were forced to accept on his requirement that we could not specify a % of renewable energy on new builds.

Roger Morris to Hosts and panelists



Very happy to advocate for a Passivhaus standard - but would want to go further in terms of embodied carbon and the 'healthiness' of materials used. Huge amounts of insulation are required for Passivhaus standard - so looking at how we can do this well is crucial.

Catheri... to Hosts and panelists 12:12 PM



2 points: firstly on language: can ECAC stick to the Just Transition to a Green Economy and Net Zero language. Secondly: slides 17-19 - need for more clarity on what is advisory: e.g. guidance, Charter, and what can be made mandatory - regulation, policy, and all important - procurement.

Russell ... to Hosts and panelists 12:50 PM



Its 3,700 jobs in retrofit

500,000 in the UK

graham.... to Hosts and panelists 12:51 PM



Every new build home is 3 jobs, so building 9,000 per year is 27,000 just in relation to building the homes. There is then the wider supply chain associated with this.

Catheri... to Hosts and panelists 12:57 PM



Really positive two sessions - can we share and pool knowledge on this through e.g. PCAN?

can we pool travel from a nearby rail station?

Louise T... to Hosts and panelists 12:57 PM



yes we are working on it!

Sarah H... to Hosts and panelists 12:58 PM



We have a demand responsive electric fleet in that area, I will pass the details on