

Zero Carbon Housing

Sat 27 February 2021



This event was the first in a series of Zoom events designed to celebrate and prepare for the 26th UN Climate Change Conference of the Parties (COP26) in Glasgow in November. These events will cover different themes and address the actions needed to achieve a zero carbon society. At this event two small scale eco-housing developers talked about how we can build more zero carbon homes in Chesterfield and Derbyshire. A recording of the session can be [found here](#) (note this is a new link)

The speakers

Dave Bradley-Bowles of [Pure Haus Ltd](#) played a short [video about passive house design](#) (which removes the need for heating) and introduced his company's Beattie 'passive house' zero-carbon home developments in West Yorkshire. These are timber-framed, wrapped with breathable membrane and injected with insulation (ecobeads) for high levels of air-tightness (with mechanical ventilation) and achieve 250kgCO₂e/m₂, better than the [RIBA 2030 climate targets](#). He also introduced the model of [Gravenhill](#) near Bicester, the UK's largest self and custom build community which has been subdivided into plots for large and small developers, helping to break up the monopoly of the volume housebuilders and allow more innovation from smaller developers.

Martin Valentine of [Positive Homes Ltd](#) who have built a very low energy development in Chesterfield (energy bills of <£1/day). He noted that Derbyshire's housing stock was worse than the national average in terms of energy efficiency (and only 2% of Chesterfield's homes are A-rated for efficiency), and that the government's plan to make homes 'net zero carbon ready' by 2025 involved installing air source heat pumps into slightly more efficient buildings rather than building truly net zero homes. His homes are manufactured rather than constructed and craned into position, enabling very high levels of air-tightness and energy efficiency. He described local Councils' lack of interest in eco-housing developments,

despite declaring climate emergencies. He noted that when councils sell their land they can set minimum standards for contractors, or keep the land and set up joint ventures to build to the highest standard. He noted that while councils have to obtain 'best value' from land this doesn't need to mean the highest price. He encouraged people to respond to the government [consultation on the National Planning Policy Framework and National Model Design Code](#) (ends 27 March).

Dave and Martin welcome opportunities for low carbon home projects or joint ventures.

Top 12 Recommendations from discussion

For Councils with land for housing developments

1. If selling off for housing Councils should ensure that it is sold on the basis of eco-development (which Nottingham, Newark and Exeter are doing) ie a minimum of EPC A-rated and preferably net zero carbon homes
2. Alternatively Councils should retain ownership of the land (for public good) and develop eco-housing on a joint venture basis
3. Councils should consider sub-dividing large plots to facilitate eco-development by small scale developers (like Gravenhill near Bicester) rather than selling en bloc to volume house-builders

Other recommendations for Councils

4. Councils should develop their own model Design Codes - to guide developers on energy efficient and high quality design
5. Local Plans should specify energy efficient standards that go beyond outdated Building Regulations - as has been done by many other councils - and push big developers to build better homes.
6. Councils should review their Highways requirements for new developments and not insist on large amounts of tarmac for carparking or to facilitate turning by bin lorries
7. Councils should require a carbon lifecycle assessment for all projects and see if these align with their climate emergency declaration
8. Councils should ensure that policy is joined up across departments - so that planning, asset, climate and housing teams all have a shared agenda

For Government

9. Carbon targets need to be brought into law and make developers who are building high carbon homes pay a tax on carbon and reward those who are building low carbon homes.
10. All new homes should be built to zero carbon standards (rather than zero carbon 'ready') by 2025.

For individuals

11. Audit your Council's Climate Action Plan and push for improvements.
12. Lobby councillors for better housing, local Design Codes and support for eco-developments



Useful Links

Government confirmation that local authorities can set higher energy efficiency standards in local plans: www.ukgbc.org/news/government-confirms-local-authorities-can-set-energy-standards-beyond-part-l-in-nppf/

Local Government Association response to debate on energy efficiency in buildings: www.local.gov.uk/parliament/briefings-and-responses/debate-energy-efficiency-measures-buildings-achieve-net-zero

Interactive map from Green Building Council on local authorities that have good policies: www.ukgbc.org/interactive-policy-map/

Energiesprong – Dutch method of retrofitting existing homes to net zero energy, being applied in Nottingham: <https://energiesprong.org/country/united-kingdom/>

Government draft National Model Design Code
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957205/National_Model_Design_Code.pdf

Transport for New Homes – a campaign for new housing to be better integrated with sustainable transport. <https://www.transportfornewhomes.org.uk/>

Create Streets – the bin lorry effect. How new homes and places are ruined by highways' regulations and how we can fight back <https://www.createstreets.com/wp-content/uploads/2021/01/The-bin-lorry-effect-4a.pdf>

Acknowledgements

Many thanks to Martin Valentine and Dave Bradley-Bowles, for their time and expertise, and Margaret Hersee and Alastair Meikle for technical support.

For details of more *Countdown to COP* events please visit www.transitionchesterfield.org.uk

