

## Some useful links on Net Zero and Fuel Poverty

1. to presentations from LTF November 2021 conference
2. other documents articles and policies on net zero
3. to LTF presentations (from our single issues meetings)

1. **[Presentations from London Tenants Federation's November 2021 on Attaining Net Zero in London and what this means to social housing tenants.](#)**

- 1.1 [Attaining net zero and why we must take embodied carbon into account](#)

Links on this page to - an audio presentation from Gina Windley, Levitt Bernstein, Gina's slides which you can download and look at while listening to her presentation and link to notes from the question-and-answer session with Gina and the conference attendees after her presentation.

- 1.2 [Gas boiler replacements - the best alternatives for social housing tenants](#)

Audio presentation by Dr Aurore Julien, Sustainability Research Institute, University of East London, her slides which you can download and look at while listening to her presentation and link to notes from the question-and-answer session with Gina and conference attendees.

- 1.3 [The Mayor of London's net zero targets, policies and 'retrofit revolution' – a GLA presentation](#)

Audio presentation from Catherine Barber, Assistant Director, Environment and Energy, Greater London Authority, links to her slides, which you can download and look at while listening to her presentation and notes from the question-and-answer sessions with Catherine and conference attendees

2. **[Other documents articles and policies on net zero](#)**

- 2.1 LTF briefing on [Net Zero targets, funding and plans](#)

- 2.2 The Mayor of London's – [Whole Life-Cycle Assessments Guidance](#) (March 2022).

- 2.2 Articles on why we must stop demolishing existing buildings to attain net zero

- (i) [We have reusable cups, bags and bottles: so why are our buildings single use](#) – Charles Gillott, PhD student in Engineering, University of Sheffield - published in *The Conversation* in November 2021.

This article highlights that

- the construction industry is lagging behind in reducing consumption and waste generation. This is concerning given that it is responsible for 38% of global greenhouse gas emissions and 62% of the UK's waste
- we might be forgiven for thinking that many new buildings in the UK are created sustainable, as many claim to be 'green', 'eco' or 'low carbon'. This is because most emphasise on the 'operational emissions' (like lighting, heating and electricity) while overlooking embodied carbon which can represent 70% of a building's carbon emissions over its lifetime
- the Government's 'Building Back Greener' (see point 6 below) – acknowledges the importance of embodied carbon emissions but exclusively in respect of new buildings
- the widespread adoption of construction polices such as that of the Mayor of London (see above) is a good start (see point 2 above)
- the VAT regime, which currently favours new build, but is not applied to refurbishment, should be changed
- we must stop the demolition of existing buildings.

- (ii) [We can't afford to just build greener. We must build less](#) – Johannes Novy, Senior Lecturer in Urban Planning, School of Architecture and Cities, University of Westminster – published in *The Conversation* November 2021

Novy says

- in the UK alone, an estimated 50,000 buildings are torn down each year, which 'begs the question: is building greener really the solution'
- that the UK VAT rates encourage new build and penalise renovation
- there are economic incentives for those who profit from the current system – i.e., those who sell construction materials, carry out demolitions and whose business model exclusively focus on new, instead of reckoning with existing buildings, refurbishing them and integrating them in new schemes

- buildings today are usually built to last notably shorter periods of time than they used to<sup>1</sup>, so returning to more robust and adaptable construction would make significant carbon savings
- buildings designed for a shorter life span can be made more sustainable provided a whole-life carbon approach is adopted and components and materials are easy to dismantle and reuse
- but we cannot afford to only build greener. We need to build less.

(iii) [Embodied Carbon: why truly net zero carbon could still be decades away](#). *Ljubomir Jancovic, Professor of Advanced Building Design, University of Hertfordshire – November 2021*

Jancovic sets out how the embodied carbon in new buildings can be reduced – including fitting solar panels and using hempcrete (made from mixing hemp shiv with a lime binder)<sup>2</sup>.

He provides an example how his lab has monitored the energy use of the carbon emissions of a Birmingham zero carbon house. The house was built in 1840 and was extended and renovated in 2009 with solar panels and solar thermal collectors for heating water.

The retrofitting materials required low amounts of energy to make – such as unfired clay blocks, bricks from demolished buildings, recycled newspaper insulation, lime plaster with ground recycled glass, rammed earth floors and reclaimed 200-year-old timber from a silk factory

The calculation show that the house will not reach net zero until 2030, showing that not taking embodied carbon into account could mean overshooting carbon emission targets by several decades.

2.3 [Eight biodegradable materials](#) – that the construction industry needs to know about. *Ella Thornes, Archdaily*

Thornes says that 70-105 million tons of waste is created from demolishing buildings and only of that is biodegradable according to a study by Cardiff University<sup>3</sup>

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<sup>1</sup> Susan Macdonald of Conserving Modern Architecture Initiative says that traditional buildings – those made of brick, stone and timber is 60 years before the first minor repairs (restoring interior finished for example) and 120 years for the first major repair (fixing damage to structural members).

<sup>2</sup> <https://www.ukhempcrete.com/>

<sup>3</sup> [https://www.witpress.com/Secure/elibrary/papers/DN06/DN06009FU1.pdf?utm\\_medium=website&utm\\_source=archdaily.com](https://www.witpress.com/Secure/elibrary/papers/DN06/DN06009FU1.pdf?utm_medium=website&utm_source=archdaily.com)

Biodegradable materials mentioned in the article are cork, bamboo, desert sand, linoleum, bioplastics (soybean), medium density fibreboard (MDF) that uses potato starch, timber, mycelium.

[In a further article](#) she mentions seven more - hempcrete (see link<sup>2</sup>), ash-crete, recycled plastic, steel dust, wool, grass/straw and corn.

2.4 [What is whole house retrofit – Sustainable Traditional Buildings Alliance](#)

2.5 [The Government's Net Zero Strategy: Build Back Greener](#) October 2021

### **3.0 LTF presentations and guidance on Net Carbon Zero and Fuel Poverty**

3.1 [LTF May 2022 single issue meeting on fuel poverty – retrofit](#)

3.2 [LTF September 2022 single-issue meeting on fuel poverty – Carbon Net Zero](#)

3.3 [Principles and Guidance for social landlords. - Involving tenants and residents in discussions and decision-making about net zero works to their homes.](#)