**** **Zero Carbon** **Homes in Oxfordshire: Making it Happen**

***Background information***

The aims of this project are to:

* Demonstrate that a zero carbon housing standard is quite feasible and – in relation to council ‘climate emergency’ commitments – should be a political imperative.
* Discuss solutions to the identified obstacles and to come up with ways forward.

The principal obstacles that the survey identified include building regulations, the planning system, affordability, skills and supply chain gaps and the need for political will.

1. ***What we want and why we need it***

**The UK – like many other nations - has set a ‘Net Zero Carbon’ target, as have all our local councils. Around 25% of our carbon emissions come from housing.**As part of moves to Net Zero emissions we need to:

* ensure that all new houses are built to be carbon neutral.
* rapidly and massively improve the energy efficiency of our homes

This initiative focuses on th first point. **Current plans for Oxfordshire include up to 100,000 new homes. If new homes (however many are finally built) continue to waste energy (as most new homes will at present) then they are still contributing to the climate crisis.**

**Zero Carbon homes are technically feasible. In 2008 the government proposed a ‘zero carbon homes standard’ but this plan was dropped in 2016. Current government plans for a ‘Future Homes Standard’ will not take us to Net Zero Carbon soon enough. The government have now confirmed that local authorities will now be allowed to set their own higher energy efficiency standards for new homes in their area. This is a major opportunity to ensure that new homes do not become a major source of greenhouse gas emissions. The Oxfordshire Zero Carbon Homes Initiative (OZCHI) has the aim that all new homes built in Oxfordshire will be designed and built to zero carbon standards.**

1. ***What does ‘zero carbon homes’ actually mean?***

A genuinely ‘zero carbon’ house is one where the level of greenhouse gas emissions from both **construction** and **operation** (when people live in it) is zero or negative, through the export of renewable energy generated onsite or the use of offsets. The UK Green Buildings Council framework states that *“A net zero carbon building is highly energy efficient and powered from on-site and/or off-site renewable energy sources, with any remaining carbon balance offset.”* Their full definition is here; – [*https://www.ukgbc.org/ukgbc-work/net-zero-carbon-buildings-a-framework-definition/*](https://www.ukgbc.org/ukgbc-work/net-zero-carbon-buildings-a-framework-definition/)*.* For further information we recommend:

* The UK Green Buildings Council:  <https://www.ukgbc.org/>
* The London Energy Transformation Initiative: <https://www.leti.london/>
* The Passivhaus Trust: <https://www.passivhaustrust.org.uk/>
1. ***Can it be done?***

**Zero carbon homes are already being built in Oxfordshire. The Springfield Meadow development near Southmoor is an excellent example including both private and social housing properties. The Area Action Plan for the Salt Cross development of 2200 new homes at Eynsham calls for all these to be zero carbon. There are many more examples across the UK and worldwide. A set of case studies can be downloaded from this page:** <https://www.oxfoe.co.uk/ozchi/>**. In a net zero economy zero carbon homes will be the norm. If we are to play our part in delivering the international climate goals then this needs to happen as soon as possible.**

1. ***What about the cost?***

The major reason that is usually given for saying ‘we can’t make all new homes zero carbon’ is that **‘it will cost too much’.** This has been an argument against many forms of innovation – notably against clean energy technologies 10-15 years ago.

**A zero carbon home may cost more to construct, but as new ‘modern methods of construction’ (MMC) become more common so costs will fall.** One study suggests that going for zero carbon adds **1-2% to the overall cost which can be recouped through energy bill savings. Other work shows how the decision to scrap the new standard in 2016 has added £200 a year on to energy bills for new homes:** <https://eciu.net/news-and-events/press-releases/2019/leaky-new-build-houses-put-200-on-energy-bills>

**Recent work shows that less than 45% of the cost of new homes comes from the actual construction. Other significant costs include land costs and planning gain, infrastructure, finance and marketing, and developer profits. The Springfield Meadow development (as above) delivered zero carbon houses to a housing association at a similar cost to standard construction homes.**

1. ***There are obstacles.***

These include the lack of relevant skills within the construction industry and supply chain issues – these can and must be tackled. OZCHI is suggesting that Oxfordshire should develop a ‘Zero Carbon Innovation Zone’ to bring together all stakeholders to help resolve these and other technical issues. Underlying these obstacles are those identified as priorities in the survey:

* National policy issues - the future homes standardand the National Planning Policy Framework
* Local planning systems
* Building regulations

Any major innovation causes some disruption. We need political will and leadership to resolve these obstacles locally and nationally.

***Issues for break-out discussion sessions***

**Topic: 1. Affordability**

Who needs to do what to ensure that affordability is not an obstacle to the accelerated adoption of the Zero Carbon standard for new housing in Oxfordshire?

**Potential remedies from the Stakeholders’ Survey**:

* Clarity and honesty on actual costs
* Myth busting – strong evidenced case studies
* Volume housebuilders. Accept the facts, embrace & welcome the opportunities

**Topic: 2. Building Regulations and Future Homes Standard**

Who needs to do what to ensure that building regulations are not an obstacle to the accelerated adoption of the Zero Carbon standard for new housing in Oxfordshire

**Potential remedies from the Stakeholders’ Survey**:

* Planning/inspection regime is not fit for purpose. We don't even know what we're building; only what developers claim
* Post Occupation Monitoring & enforcement actions on non-compliant builders. Name, shame & penalise
* Market Transformation – needs clear targets, pathway, milestones and dates

**Topic: 3. Planning system**

Who needs to do what to ensure that the planning system is not an obstacle to the accelerated adoption of the Zero Carbon standard for new housing in Oxfordshire

**Potential remedies from the Stakeholders’ Survey**:

* the Oxfordshire Plan - if it sets an overarching consistent definition of Zero Carbon Homes, could drive design standards across the county
* easier route to planning for zero carbon homes
* planning law must promote green solutions & relaxed stringent rules against modern design

 **Topic: 4. Skills and Supply Chain gaps**

Who needs to do what to ensure that skills & supply chain gaps are not an obstacle to the accelerated adoption of the Zero Carbon standard for new housing in Oxfordshire?

**Potential remedies from the Stakeholders’ Survey**:

* **Market transformation** requires culture change. Everything people learn should be climate led. Information, training, incentives & regulation (including on Building Regulations and planning). Needs a roadmap with clear targets, pathways, milestones & dates
* **Lack of skilled labour** - upscale tradespeople through apprenticeships, and CPD for all environment professionals. How to use lower-embodied-carbon materials & how to build more airtight houses
* **Supply chain** Supply chain - ensure there is an integrated supply team as part of the integrated project team. Understand the cost and buildability of the brief from the outset to ensure that the client’s expectations are met and the performance gap is minimized.

**Topic: 5. Legislation & political will**

Who needs to do what to ensure that legislation and political will is not an obstacle to the accelerated adoption of the Zero Carbon standard for new housing in Oxfordshire?

**Potential remedies from the Stakeholders’ Survey**:

* Government must make ZCH major priority. Reposition “Homes England” as a pioneering organisation
* Government must persuade and force volume house builders to build to ZC standard
* Sector must speak to government with a single loud voice; and groups like 0ZCHI must lobby for change at all levels of government – central and local. Be consistent and persistent

***OZCHI is a partnership between Oxford Friends of the Earth, Greencore Construction, Bioregional, Transition by Design, Jessop and Cook, and SowSpace. We welcome new interest.***

***https://www.oxfoe.co.uk/ozchi/***

**Oxfordshire Zero Carbon Homes Initiative: making it happen: Reporting**

We would welcome feedback from participants on their own interest in pursuing the matters being addressed by the webinar over the coming weeks and months. Please use this template and email@ homes@oxfoe.co.uk

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| --- | --- |
| Your name |  |
| Your email address |  |
| Your stakeholder type – please choose one of the following:* Architects
* Developer/Builders
* Housing Associations
* Local Government
* Planners
* Building Institutes & Consultancies
* Consultants
* Building control
* Finance
* Estate Agents
* Universities & academia
* Contractors (Supply Chain)
* Landowners
* Other – please indicate what type
 |  |
| Your discussion group number |  |
| Your discussion group topic |  |
| Your own action(s): What will you do to take actions following this event. And by when? |  |
| Other people’s required actions: What do others need to do to take action. And by when? And how can they be influenced to act? |  |
| And finally…about the way forward:  |  |
| Would it be useful for discussions on this topic to continue (facilitated by the Oxfordshire Zero Carbon Homes Initiative)? |  |
| Are there other topics which need to be addressed? |  |
| Would you want to participate in any future discussions on your group’s topic or other topics? |  |
| Would you be interested to help prepare recommendations to top level decision-makers – to those who control the levers of power & can make change happen? |  |