

Housing & Land Delivery Board

Date	2 November 2020
Report title	Zero Carbon Homes: Programme Update
Portfolio Lead	Councillor Mike Bird, Leader, Walsall Council
Accountable Employee	Gareth Bradford, Director of Housing & Regeneration, WMCA Patricia Willoughby, Head of Policy (Housing & Regeneration), Senior Reporting Officer, WMCA Rachel-Ann Atterbury, Report Author
Report has been considered by	14 October 2020: Housing & Land Delivery Steering Group

Recommendation(s) for action or decision:

The Housing & Land Delivery Board is asked to:

- 1) **Note and discuss** the proposed approach to delivering the zero carbon homes (ZCH) ambition in the 2041 Climate Change Action Plan, which includes establishing the current level of low/zero carbon building in the region, producing an agreed ZCH standard routemap to 2025 and launching a zero carbon homes charter.
- 2) **Note** the findings of the Baseline Gap Analysis report and its implications for meeting the 2025 Zero Carbon Homes target.
- 3) **Note** that the Zero Carbon Homes Taskforce has now been established, met (on 6th October and 22nd October) and that it will directly support the development of the Zero Carbon Homes Charter and Routemap over the coming months.

1.0 Purpose

- 1.1 The purpose of this paper is to seek views from the Housing & Land Delivery Board on the proposed approach to producing a 2025 Zero Carbon Homes standard and routemap, as agreed by the Housing & Land Delivery Board as key deliverables in its 2020/21 Business Plan.

2.0 Background to Zero Carbon homes

- 2.1 In January 2020, the Combined Authority launched its 2041 Climate Change Action Plan (WM2041) including a strong commitment to achieving a Zero Carbon Homes (ZCH) standard by 2025.
- 2.2 At the same time, the Housing & Land Delivery Board agreed that a major deliverable for the Housing & Land Portfolio in 2020/21 was to establish a regional ZCH standard it would seek to apply to WMCA investments/acquisitions under the Single



Commissioning Framework and to prepare a routemap with supporting guidance to meet the 2025 target.

- 2.3 The Board commissioned WMCA's Housing & Regeneration Directorate to take forward this work under the Board's instruction, leading during the year in partnership with local councils and the private sector.

3.0 Approach to the 2025 Standard

- 3.1 It was agreed at the Housing & Land Delivery Board in April 2020 that WMCA would adopt the UK Green Building Council's (UKGBC) definition - '[Net Zero Carbon Buildings: A Framework Definition](#)' to define zero carbon development in the region and guide the development of the 2025 Zero Carbon Homes standard. UKGBC defines net zero carbon for both construction and operation, as well as for whole building life as follows:

- Net zero carbon – construction: *“When the amount of carbon emissions associated with a building's product and construction stages up to practical completion is zero or negative, through the use of offsets or the net export of on-site renewable energy.”*
- Net zero carbon – operational energy: *“When the amount of carbon emissions associated with the building's operational energy on an annual basis is zero or negative. 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.”*
- Net zero carbon – whole life: *“When the amount of carbon emissions associated with a building's embodied and operational impacts over the life of building, including its disposal, are zero or negative.”*

- 3.2 Meeting net zero is currently aspirational, requiring we address all aspects of a building's carbon footprint. The benefit of the framework definition is that it identifies the steps required to shift towards whole life net zero carbon as well as defining the overall ambition.

- 3.3 This framework is being used to guide the development of the 2025 standard with an initial focus on significantly reducing operational energy (which is the focus of the Baseline Gap Analysis included with this report). In these early stages, WMCA are also considering approaches to limiting embodied carbon and will define actions to reduce this in both the routemap and charter.

4.0 Update on the Zero Carbon Homes Programme

- 4.1 In April 2020, the Housing & Land Delivery Board commissioned a comprehensive programme of work to meet the 2025 commitment. WMCA appointed Useful Projects to work with WMCA's Project Manager (Rachel-Ann Atterbury) to develop and-co-ordinate a ZCH workplan, programme and schedule of activities to accelerate the move towards zero carbon development in the region and ensure key milestones are met. This commission delivers three outputs agreed by the Board, which are essential to understanding the current and potential performance of the region in respect to zero carbon development and the associated costs. These are:



1. *A Baseline Gap Analysis* – evaluating the performance of homes currently being delivered in the region, assessing the performance gap to achieve zero carbon and modelling four scenarios to bridge this gap.
2. *A Zero Carbon Homes Charter* – framing WMCA and its partners commitment to and objectives for zero carbon homes
3. *A Zero Carbon Homes Routemap* – providing an implementation plan for the charter as well as other short and medium-term goals to meet the 2025 commitment.

4.2 The work is making strong progress against the milestones agreed by the Board. Part 1 of this work, the Baseline Gap Analysis, is complete and included as an Annex.

5.0 Baseline Gap Analysis Report Findings

5.1 This Baseline Gap Analysis report establishes the region's policy baseline (reviewing local planning policies and other relevant documents such as #WM2041 and the West Midlands Regional Design Charter) as well as performance in practice using two development case studies which followed the Single Commissioning Framework process.

5.2 It found that current best practice in WMCA (as per the case studies) was an improvement on building regulations but still not sufficient to meet the current zero carbon homes target. Furthermore, while WMCA's best practice is reflective of new development coming through the Single Commissioning Framework, a review by the Zero Carbon Homes Officer Working Group established that the reality is that most homes built in the region continue to follow building regulations and would not meet this baseline standard.

5.3 The report models two alternative scenarios to meet the 2025 commitment and details some proposed interventions and the relative costs to meet each of these. These findings are directly informing both the charter and the routemap – two key deliverables of this work.

6.0 Zero Carbon Homes Taskforce

6.1 It was also agreed at the April meeting that WMCA should seek to draw on expertise across the low and zero carbon construction sector in the region and beyond through a new Zero Carbon Homes Taskforce. This group would co-develop the charter and routemap, informing and challenging the emerging documents, as well as any future investment cases for funding relating to the programme.

6.2 The Taskforce has now been established and will meet three times between October and December this year. Julie Hirigoyen, Chief Executive of UKGBC, has agreed to chair the Taskforce during this period. The taskforce membership represents a range of sectors and areas of expertise, including innovation, finance, engineering, training providers, supply chain, architects and developers.

7.0 Next steps

7.1 Based on the findings of the Baseline Gap Analysis, a draft version of the Zero Carbon Homes Charter will be developed and brought to the next meeting of the Housing & Land Delivery Board in December.

- 7.2 Simultaneously, thought will be given to the format and structure of the routemap, with the view to bringing an outline of the contents of the routemap to the next meeting.
- 7.3 Throughout this process, WMCA will engage internally, and with local authority and other public and private sector partners to ensure both the charter and routemap are reflective of these partners aspirations and their understanding of the opportunities and challenges in meeting WMCA's 2025 zero carbon homes commitment.

8.0 Financial Implications

- 8.1 There are no direct financial implications from the information contained in the report. The Single Commissioning Framework provides a single set of criteria and governance systems that will be applied to all applications for available devolved WMCA Housing, Land and Property Development funds, together with a consistent process and timelines for decision.
- 8.2 WMCA investment in any proposed Zero Carbon Homes projects, due diligence, feasibility or studies would be governed and administered through the Single Commissioning Framework, WMCA Single Assurance Framework, Commission Pathway and in line with the accounting and taxation policies of the WMCA and HMRC.

9.0 Legal Implications

- 9.1 Section 113A(1)(a) of the Local Democracy, Economic Development and Construction Act 2009 gives WMCA a power of competence appropriate for the purposes of carrying-out any of its functions. Part 4 of The West Midlands Combined Authority Order 2016 (2016 No 653) confers that the functions relating to any economic development and regeneration in the constituent councils are exercisable by WMCA. Part 3 of The West Midlands Combined Authority (Functions and Amendment) Order 2017 confers functions corresponding to the functions of the Homes and Communities Agency has in relation to the combined area. Paragraph 10 (2) (a) of the 2017 Order confers the function of improving the supply and quality of housing to the Combined Authority, 10 (2) (b) to secure the regeneration or development of land or infrastructure in the combined area, 10 (2)(c) to support in other ways the creation, regeneration or development of communities in the combined area or their continued well-being and 10 (2)(d) confers the function of contributing to the achievement of sustainable development and good design.
- 9.2 It is noted that the purpose of this paper is to seek views from the Housing & Land Delivery Board on the proposed approach to producing a 2025 Zero Carbon Homes standard and routemap. Although there are no direct legal implications of producing the standard and routemap legal advice should be sought as and when required. Once the requirements have been established and included within the Single Commissioning Framework then the requirements would need to be implemented through the funding agreements on a case by case basis.

10.0 Equalities Implications

10.1 There is no equality impact in relation to these reports.

11.0 Inclusive Growth Implications

11.1 The Zero Carbon Homes programme will seek to improve the performance of residential properties across the region, as part of wider transition to a more resilient, people-centred low carbon economy. Improving building performance means addressing some of the key impacts of deprivation, such as fuel poverty, reduced levels of comfort and higher risk of disease related to poor air quality. It will also involve limiting exposure to future climate risks. This means that a key output and measure of the programme would be the degree to which it reduces climate inequities related to housing.

11.2 Additionally, the programme would seek to provide new opportunities for local residents and businesses to prosper, through the creation of a low and zero carbon pipeline that brings with it new employment, upskilling and growth opportunities across the region.

12.0 Geographical Area of Report's Implications

12.1 The results of the Zero Carbon Homes programme would inform WMCA investment decisions across the whole geography of the WMCA area, including the 3 LEPs and non-constituent Member authorities.

13.0 Other Implications

13.1 There are no other implications.

14.0 Schedule of Background Papers

14.1 There are no background papers.

PLEASE NOTE THAT THE APPENDIX IS AVAILABLE ON REQUEST FROM:

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Appendix 1: Defining Zero Carbon

- 1.1 Existing UK climate policy largely focuses on operational energy, such as heating, cooling and electricity use with limited consideration given to the embodied energy of new builds.
- 1.0 Whilst building operations do account for a significant proportion of overall UK emissions (30%), this percentage does not include embodied emissions in construction, which contribute up to half of the carbon impacts of a new building. In the West Midlands, failure to address embodied emissions would translate to 107,500 new homes being delivered at the current baseline in the next decade, regardless of any wider commitments to in-use performance. The extent of the region's commitment to zero carbon will therefore depend on the definition used.
- 1.1 It is important to note that whilst definitions of whole life net zero carbon exist, there is still work to do around developing this approach in detail. Meeting net zero carbon in the built environment will require a transitioning phase, including identifying new approaches to construction, education around building use, deployment of new skills programmes and changes to energy management and monitoring.
- 1.4 Identifying the separate aspects of zero carbon within the definition is necessary to ensure that not only are all aspects of the home's carbon footprint addressed, but also that the WMCA has some flexibility during this transition to apply parts of the definition on a site by site basis, whilst still encouraging an overall shift towards whole life net zero carbon.