



Housing & Land Delivery Board

Date	27 th April 2022
Report title	Advanced Manufacturing in Construction (AMC): Enabling Infrastructure for delivery of AMC in the West Midlands
Portfolio Lead	Housing & Land - Councillor Mike Bird
Accountable Employees	Gareth Bradford, Director of Housing & Regeneration Rob Lamond, Strategic Planning Manager (report author)
Previous reports	<ul style="list-style-type: none">April 2022: Housing & Land Delivery Steering Group presentation

Recommendation(s) for action or decision:

The Housing & Land Delivery Board is recommended to:

- a) **Note** the background regarding the WMCA's work to date with partners to develop the AMC Charter and Routemap (approved by the Housing & Land Delivery Board in November 2020); and
- b) **Discuss and endorse** the proposed next steps for work led by WMCA around AMC and the Future Homes Standard in the region, as set out in Section 4.2 of this report, to establish the West Midlands as a national leader for this agenda.

1.0 Purpose

- 1.1 The purpose of this paper is to provide the Housing & Land Delivery Board with an update on the regional picture for Advanced Manufacturing in Construction (AMC) and to highlight the scale of opportunity for the West Midlands, potentially to be the vanguard for this agenda across the UK.
- 1.2 This paper follows a discussion at the meeting of the Housing & Land Delivery Board in March 2022 in which members noted the role of AMC in delivering cheaper and more energy efficient homes and the need to attract AMC manufacturers to the

region in order to leverage wider outcomes including productivity, pace of delivery and carbon savings.

2.0 Background

- 2.1 WMCA's AMC work programme and its outputs were identified as a key Housing and Land Portfolio Deliverable for 2021/22 and also as a key component of the region's post Covid19 Plan and "Recharge" strategy, Investment Prospectus and Plan for Growth. WMCA's Corporate Aims for 2022/23 include "*To reduce carbon emissions to net zero, enhance the environment and boost climate resilience*", with an agreed objective for the Housing and Land Portfolio that "*We will be national pioneers in advanced manufacturing in construction, zero carbon housing and brownfield regeneration and delivery, informed by research at the National Brownfield Institute*". This being the case, AMC sits front and central to the work of WMCA's Housing & Land Delivery Board.
- 2.2 WMCA's AMC Expert Advisory Group, chaired by Mark Farmer (UK Government's Champion of AMC in housebuilding) was established in April 2020. Its members include private sector developers and suppliers, academia, innovation, industry bodies and finance across regional and national businesses and institutions. To date, the Advisory Group has provided expert insight into the future of construction and advanced manufacturing, informing the direction of Advanced Manufacturing within the region and synergies with work further afield, alongside acting as a critical friend throughout the development of the AMC routemap and programme.
- 2.3 The AMC work programme overseen by WMCA's Housing & Land Delivery Board was outlined in the AMC Routemap agreed by the Housing & Land Delivery Board in November 2020. The primary purpose of the Routemap is to set out how AMC delivers not only significant new homes and jobs but also social value, inclusive growth and environmental benefits central to delivery of other programmes such as brownfield regeneration, and zero carbon homes in the region.
- 2.4 In parallel with the development of the Routemap, an investment case for an AMC Acceleration Fund was prepared by WMCA officials in partnership with the AMC Taskforce and a working group of local authority officers. This funding was intended to increase the uptake of AMC in the region by bridging the gap between the cost of AMC versus traditional methods of construction and providing the certainty business needs to invest and develop in new technologies and training in the region. To date, this additional funding has yet to be secured and is part of wider negotiations of WMCA with Government on a Levelling Up Regeneration Fund.
- 2.5 In line with the Single Commissioning Framework's (SCF) requirements for investment, WMCA seeks demonstrable commitment to AMC in all housing and land schemes funded through the SCF devolved Housing and Land Funds.

3.0 AMC Routemap and the wider context

3.1 The WMCA AMC Routemap was approved by Housing & Land Delivery Board in November 2020 (see Annex 1 to this report). The document set out the challenges for the construction sector, the opportunities for AMC in the West Midlands, and the key data related to the sector (accurate at the time of publication).



3.2 The Routemap set out how increasing the region’s delivery of AMC developments could support a number of the region’s wider housing, land and regeneration objectives including:

- Accelerating housing delivery
- Investing in the region and inclusive growth
- Delivering a zero carbon future, and
- Design that reflects the character, context, and aspirations of our communities.

3.3 The region’s existing AMC expertise, and potential to seize the opportunity to become a national and international leader in new construction techniques, is identified in the Routemap which notes that there is a noticeable concentration of related businesses in the West Midlands alongside nine “Tier 1” AMC manufacturers based in the region.

3.4 Furthermore, within the context of the Government’s **Levelling Up** agenda (as per the White Paper published in February 2022) it is important to note the further wider outcomes that could be unlocked through more investment and delivery of AMC, such as:

- Increased productivity
- Research and development investment
- New high-tech skills development and workforce growth in new industries

- Supply chain developments and agglomeration of high-growth businesses
- New training, curricula and innovation hubs
- Private sector investment and leverage
- Innovation in the construction industry.

3.5 Additionally, since the date of the Routemap’s publication, several **structural economic changes** have occurred that have had significant effects on the construction sector. For example, supply issues and increased costs of materials¹, a tightened labour market leading to higher wages and shortages of skilled workers, and global logistics issues have all combined to exacerbate issues with traditional construction methods.

3.6 These changes, alongside shifts in market demand following the Covid-19 pandemic towards homes with dedicated workspace provision and more living space, increasing energy costs, and the move towards reduced carbon construction

Future Homes Standard

In the 2019 Spring Statement, the Government announced its intention to introduce the 2025 Future Home Standard (FHS). The standard would apply to all new build homes, non-domestic buildings and home expansions in England. Similar standards are expected to be introduced elsewhere but with different deadlines. The aim is to future proof homes by delivering low carbon heating and energy efficiency with a goal of a 75-80% reduction in CO₂ emissions. After its introduction, **all new homes will need to be built to this standard as a minimum, though individual local authorities will be permitted to go above and beyond the regulations.**

In order to ease in the new standard, transitional legislation will be introduced prior to 2025. This will include alterations to Part F (ventilation) and Part L (conservation of fuel and power) of the Building Regulations. The timeline of the transition is detailed below:

From June 2022: New homes will be expected to produce 31% less CO₂ emissions, to be achieved through carbon saving technology and improvement to the fabric of the building.

From Spring 2023: There is expected to be a further uplift to current standards, following consultation on the full technical specification for the FHS. June 2023 will be the deadline for work to commence on transitional arrangements.

From 2025: There will be no fossil fuel heating in new ‘zero carbon ready’ homes and CO₂ emissions must be at least 75% lower than current regulations. New homes will no longer be able to connect to the gas network.

¹ For example see <https://www.rics.org/uk/news-insight/latest-news/news-opinion/construction-materials-cost-increases-reach-40-year-high/>

methods in all new buildings (see box below), provide a unique opportunity for a fundamental transformation in how we build in the West Midlands and a real opportunity for the region to lead the way nationally in this transformation.

4.0 Proposals for next steps

4.1 This report sets out the **context** and summarises the development to date of WMCA's approach to AMC. As noted by the Housing & Land Delivery Board at its meeting in March 2022, there are significant opportunities and existing assets in the region that could be further unlocked and maximised to help establish the West Midlands as **an exemplar for advanced manufacturing and future homes standards**.

4.2 To maximise these opportunities and take forward the region's ambitions for AMC and Future Homes Standard **together in an integrated way within a defined emboldened AMC Programme**, it is proposed that:

- The WMCA AMC Taskforce, chaired by Mark Farmer (HM Government's advisor on AMC), is asked to help the region be the national frontrunner in AMC and Future Homes Standards – ahead of the national timetable
- This approach will be driven by an overarching AMC Strategy that sets out the vision, rationale, mission and outcomes sought by the region
- WMCA co-ordinates a series of roundtables and engagement events with the AMC industry, developers, skills providers and other stakeholders to inform our approach and the measures to be taken
- WMCA through its work on a Trailblazing Devolution Deal seeks to secure more power, funding and influence at a regional level to support the uptake of AMC across the West Midlands

4.3 Subject to the Board's views and decisions on these proposals, further updates and progress reports will be brought to future meetings as part of the annual work programme for the Housing and Land Portfolio in line with the agreed Corporate Aims and Objectives noted under Section 2.

5.0 Financial Implications

5.1 There are no direct financial implications arising from the Advance Manufacturing in Construction (AMC) paper. There may be, in future, financial implications arising from decisions to progress projects in delivering a regional increase in AMC homes but any such decisions would be subject to WMCA's approved governance and assurance processes.

5.2 At present there is no dedicated AMC funding, any investment in AMC through WMCA will come through the existing devolved funding. An investment case for an AMC Acceleration Fund was previously submitted by WMCA, to date, this additional funding has yet to be secured.

5.3 Any WMCA investment into Advance Manufacturing in Construction (AMC) delivery would be governed and administered through the WMCA Single Assurance Framework and in line with the accounting and taxation policies of the WMCA and HMRC.

6.0 Legal Implications

6.1 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.

6.2 It is noted that the purpose of this paper is to update the Housing & Land Delivery Board on the work undertaken by WMCA, the AMC Officer Working Group and Expert Advisory Group in producing a routemap for accelerating Advanced Manufacturing in Construction in the region. Legal advice should be sought as and when required in the development of the AMC strategy and routemap. Once the AMC requirements have been established the existing requirements for AMC in the Single Commissioning Framework would need to be strengthened and implemented through the funding agreements on a case by case basis.

7.0 Equalities Implications

7.1 There are no direct equalities implications in this report.

8.0 Inclusive Growth Implications

8.1 The proposed AMC strategy will be used to inform WMCA's approach to growing the AMC sector in an equitable way, maximising economic benefits, housing quality and job/skills opportunities across the region's communities.

9.0 Geographical Area of Report's Implications

9.1 The recommendations of this report apply to the whole of the WMCA area.

10.0 Other implications

10.1 None.

11.0. Schedule of Background Papers

11.1 None.