

GM HOUSING, PLANNING AND ENVIRONMENT OVERVIEW & SCRUTINY COMMITTEE

Date: 8th March 2022

Subject: Delivering 30,000 Net Zero Carbon Social Rented Homes: Initial Implementation Plan

Report of: Paul Dennett, Portfolio Lead for Housing, Homelessness and Infrastructure and Steve Rumbelow, Portfolio Lead Chief Executive for Housing, Homelessness, and Infrastructure

Purpose of Report

To update members on the initial implementation plan for the delivery of 30,000 net zero carbon social rented homes by 2038, and for a further period of engagement and co-production with partners and stakeholders, including registered housing providers and local authorities as the primary developers of social housing in GM, on a more detailed partnership implementation plan, embodying the 'whole system challenge' approach agreed by GMCA in December 2021.

Recommendations:

Members are invited to consider and comment on the information contained within this report.

Contact Officers

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Equalities Impact, Carbon and Sustainability Assessment:

Equalities impact

Risk Management

Legal Considerations

NA

Financial Consequences – Revenue

Financial Consequences – Capital

Number of attachments to the report: 0

Comments/recommendations from Overview & Scrutiny Committee

Background Papers

Tracking/ Process

Does this report relate to a major strategic decision, as set out in the GMCA Constitution

Exemption from call in

Are there any aspects in this report which means it should be considered to be exempt from call in by the relevant Scrutiny Committee on the grounds of urgency?

No

GM Transport Committee

N/A

Overview and Scrutiny Committee

DELIVERY OF 30,000 NET ZERO CARBON SOCIAL RENTED HOMES BY 2038: IMPLEMENTATION PLAN

1 INTRODUCTION AND PURPOSE

1.1 The Climate Emergency has been recognised globally and there is a systemic need to act in order to mitigate the future damage that will be caused. Every new home that is built that is not Net Zero adds to the retrofit challenge that we face as we try to decarbonise our already poor carbon performing existing housing stock. These challenges exist alongside the longstanding social inequalities, many heightened by the impacts of the Covid-19 pandemic, that have been highlighted through the work undertaken by the GM Independent Inequalities Commission. Taking action to address these issues will also create opportunities for the residents of GM to enter into long term jobs in the rapidly growing low carbon sector.

1.2 The GMCA has committed to a stepping up of earlier pledges around affordable housing delivery, in two ways:

- Taking an existing (GM Housing Strategy, draft GM Spatial Framework and now Places for Everyone) commitment to deliver 30,000 social and affordable rent¹ homes by 2037, and focusing specifically on 30,000 social rented homes; and
- Further requiring that these 30,000 homes should be net zero carbon, as a step toward the existing 2028 target date for all new development in GM to be net zero carbon.

In simple terms, this requires us to find ways to build more and higher quality homes, and to charge lower rents for them when they are complete, while also driving down the price of construction. The paper approved by GMCA in December 2021 made the case for this commitment, and for the adoption of a whole system approach to delivering it.

¹ Affordable rents are set at 80% of market rents in an area; social rents are set by a formula drawing on local income levels, property size and value, and are usually significantly lower than affordable rents

- 1.3 This paper is the next step in the development of a detailed implementation plan. It gives a basis for engagement with partners in and beyond GM as we look to build the coalition needed to achieve the full system change required. Achieving our goals will require consistent partnership working and trialling approaches that may or may not be successful. With that in mind, we fully expect that this implementation plan will grow and evolve and the next iteration of the implementation plan may look significantly different to this initial draft.
- 1.4 Nonetheless, it is also clear that there are some immediate priority actions which can and should be commenced in the short term, not least as there are already social housing providers and local authorities active in GM in their own right seeking to develop truly affordable net zero carbon homes. Our efforts are intended to aid and accelerate those already on the journey, and to bring ever more willing partners alongside them together with the necessary funding required to deliver at the scale envisaged.

2 BASELINE DELIVERY

a. New build social rent homes

- 2.1 Recent delivery of affordable housing in GM has been approaching 2,000 per year, if all types of sub-market housing for sale and rent are included. This headline rate would generate somewhere in excess of 30,000 new homes by 2037. But continuing business as usual would see very few of these as social rented homes – in 2020/21, only 277 social rented homes were included in the 1,659 affordable homes built in GM (see Table 1 below).

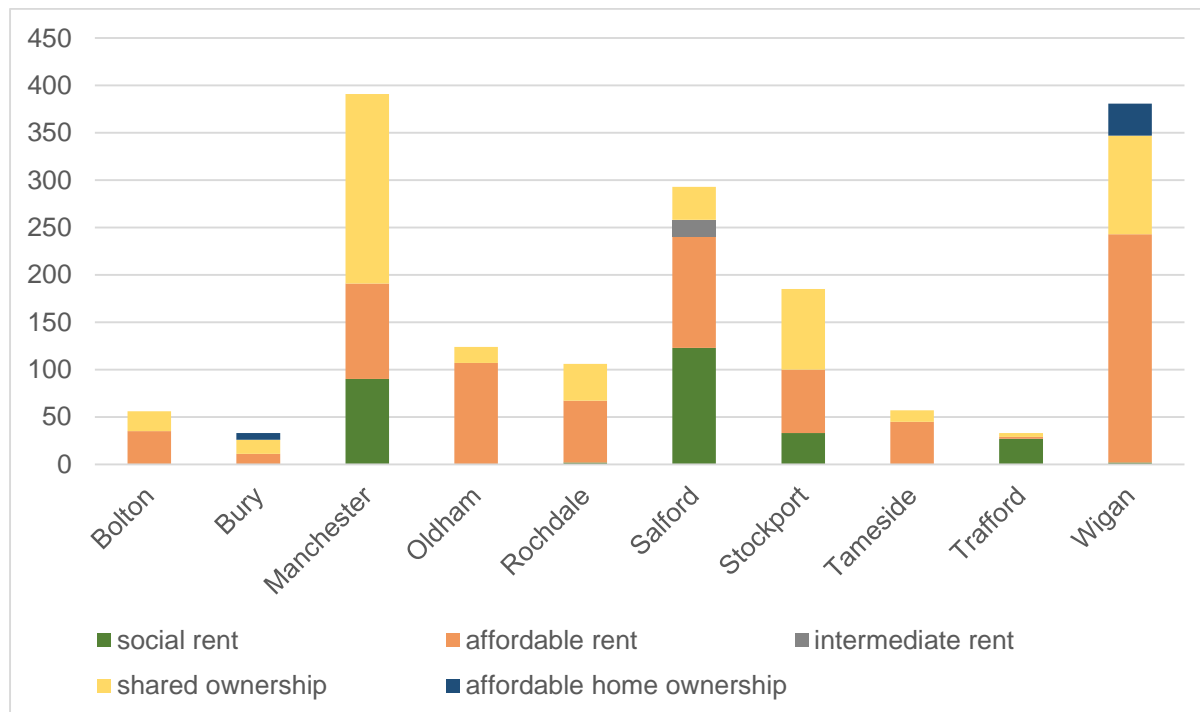
Table 1: Delivery of additional social rent dwellings

District	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Bolton	3	0	0	0	2	0	0
Bury	0	0	0	0	0	1	0
Manchester	31	0	0	28	12	69	90
Oldham	6	0	0	0	0	0	0

Rochdale	52	4	0	0	0	0	2
Salford	68	10	0	24	6	72	123
Stockport	2	6	9	16	0	3	33
Tameside	0	0	0	0	0	0	0
Trafford	0	0	0	8	2	0	27
Wigan	0	0	0	0	42	28	2
Greater Manchester	162	20	9	76	64	173	277

- 2.2 Relevant Homes England funding comes mainly through the Affordable Homes Programme (AHP) which offers registered providers of social housing (RPs) grant intended to reflect the additional long term costs of lower rents or sale prices charged to the eventual resident.
- 2.3 The AHP for 2021-26 is expected to be split roughly 50% for affordable home ownership products and 50% for affordable rent, though some higher cost per unit grant funding will be made available for social rent development where this can be justified. Figure 1 below shows the pattern of delivery between the different affordable housing 'products' across the ten GM districts for last financial year (2020-21). Crucially, social rent funding is not currently available in five GM districts (Bolton, Oldham, Rochdale, Tameside and Wigan) because of restrictions linked to measures of housing affordability imposed by the then MHCLG. So, the availability of grant funding for social rented homes is severely limited in GM.

Figure 1: Delivery of additional affordable housing by product 2020/21



b. Net zero carbon construction

2.4 Existing Building Regulations do not achieve net zero carbon standards. As such we continue to build homes that do not meet the 2028 target set in Places for Everyone as submitted to the Secretary of State in February. Improvements to current Building Regulation Standards are therefore required, so that where possible increased costs are included within the land appraisal and land value calculation. This is the driver for GM setting the net zero requirements in Places for Everyone, but this will not be sufficient to drive the necessary change in behaviours of the construction industry nor ensure the market reflects these costs in land appraisals now such that there is no stagnation in the market when the policies do come into place. Early improvements will also overcome the 'time lag' of policy and delivery of net zero homes before the 2028 date.

2.5 Net zero carbon homes require a different approach from our construction sector, including the application of some new technologies and a commitment

to consistently achieve higher standards. This is achievable at relatively small scale, and there are successful new-build schemes in GM which have demonstrated that. However, development and delivery costs for net zero carbon homes are currently substantially higher than for mainstream, traditionally constructed homes. These additional costs are associated with elements including higher performance insulation, alternative water and space heating technologies and on-site renewable energy generation and storage, typically solar PV panels and batteries.

DEFINING NET ZERO CARBON

To help drive Greater Manchester to be carbon neutral by 2038, Places for Everyone outlines the need for all commercial/industrial buildings to achieve net zero carbon by 2028:

(there is) An expectation that new development will:

a. Be net zero carbon from 2028 by following the energy hierarchy (with any residual carbon emissions offset), which in order of importance seeks to:

- i. Minimise energy demand;*
- ii. Maximise energy efficiency;*
- iii. Utilise renewable energy;*
- iv. Utilise low carbon energy; and*
- v. Utilise other energy sources.*

With an interim requirement that all new dwellings should seek a minimum 19% carbon reduction against Part L of the 2013 Building Regulations.²

Net zero carbon development has been defined by the UK Green Building Council:

The net zero carbon buildings framework sets out definitions and principles around two approaches to net zero carbon, which are of equal importance:

- *Net zero carbon – construction (1.1):*
“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 (1.2):*

² [Places for Everyone \(greatermanchester-ca.gov.uk\)](https://www.greatermanchester-ca.gov.uk), Policy JP-S 2 Carbon and Energy, p.86

“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.”³

The summary below outlines which principles should be followed to demonstrate alignment with net zero carbon for construction and for operational energy.

- 1. Establish Net Zero Carbon Scope: Net zero carbon – construction (see step 2) and Net zero carbon – operational energy (see step 3)*
- 2. Reduce Construction Impacts: A whole life carbon assessment should be undertaken and disclosed for all construction projects to drive carbon reductions; the embodied carbon impacts from the product and construction stages should be measured and offset at practical completion*
- 3. Reduce Operational Energy Use: Reductions in energy demand and consumption should be prioritised over all other measures; in-use energy consumption should be calculated and publicly disclosed on an annual basis.*
- 4. Increase Renewable Energy Supply: on-site renewable energy source should be prioritised; off-site renewables should demonstrate additionality*
- 5. Offset Any Remaining Carbon: any remaining carbon should be offset using a recognised offsetting framework; the amount of offsets used should be publicly disclosed⁴*

2.6 At present, there is some financial leeway from Homes England to encourage social housing providers to use modern methods of construction (and specifically Strategic Partner RPs are expected to deliver 20% of their programmes using modern methods). While this potentially leads to lower carbon homes, Homes England funding does not stretch to help meet the additional cost of achieving net zero carbon standards in new affordable homes. The ongoing energy costs of net zero carbon homes are likely to be substantially less than traditional housing stock. But where the housing is built for rent, the owner of the property incurs the costs of construction and does not benefit from reduced energy bills that could otherwise pay back the investment over the longer term. This therefore requires capital subsidy to install the

³ [Net Zero Carbon Buildings: A Framework Definition - UKGBC - UK Green Building Council](#), p.6

⁴ [Net Zero Carbon Buildings: A Framework Definition - UKGBC - UK Green Building Council](#), p.7

measures. Without that additional funding, the best remaining option will be to build new homes in such a way to make future retrofit to net zero carbon more easily achievable.

To add: Case Study on Off-Site Homes Alliance (OSHA)

- 2.7 As a result, while the ambitions to move toward more net zero carbon new build are clear in the work of a number of GM housing providers, and in collective work through the Off-Site Homes Alliance, there remain significant barriers to overcome before we can achieve net zero standards as ‘business as usual’.
- 2.8 We should also recognise the practical connections to our retrofit strategy and action plan. While a move to off-site models of construction will change the mix of skills needed to build new zero carbon homes, there is nonetheless overlap with those needed if we are to deliver the even larger task of retrofitting our 1.2 million existing homes. Our work on the skills of the current and future workforce needs to reflect that. We will also examine the potential in terms of collective purchasing power for key low carbon products suitable for both new build and retrofit, to maximise the benefits of coordinated strategies and programmes of delivery.

Case Study: One Manchester - Blackrock Street, Beswick

Believed to be the first true net zero carbon social rented homes in the UK, two three bedroom homes on Blackrock Street have been completed and handed over to residents. They form part of a wider 22 low carbon housing development, a mix of 2, 3 and 4 bedroom low carbon homes – a pilot build to test the potential of zero carbon social housing for the future.

Developed by housing provider One Manchester working in partnership with Manchester City Council on Council-owned land, the development is a landmark for sustainability in the social housing sector - and supports the Council’s target for Manchester to become a zero-carbon city by 2038.

These properties are built with additional insulation, triple glazed windows, an air source heat pump which provides hot water and a Mechanical Ventilation Heat recovery system

installed. All of these items installed together contribute to retaining heat and making the homes incredibly energy efficient. There is no gas in the properties and the homes are built using a holistic approach to building that reduces the carbon throughout the whole build process, giving them minimal impact on the environment.

The use of Modern Methods of Construction, including insulated panels which can be erected in days has helped drive the reduction of embodied carbon during construction. Not only is build time dramatically reduced, but the materials used are much more sustainable.

[Black Rock Street - A low carbon development | One Manchester](#)

Case Study: Salix Homes – Greenhaus, Chapel Street, Salford

The Greenhaus development will be the sixth phase of homes on Chapel Street which will bring forward 96 affordable and highly energy-efficient homes to the city. The flagship apartment block will be built opposite Salford Cathedral and will be constructed to Passivhaus standards, which is a method of low-energy construction to build thermally efficient homes with minimal energy required to provide heating and hot water.

Greenhaus will be delivered by ECF – a strategic joint venture between leading urban regenerator, Muse Developments, Legal & General and Homes England - as part of the wider, £1bn 50-acre Salford Central masterplan.

Salix Homes is the housing association partner for Greenhaus, which will comprise of one and two-bedroom apartments and will take the overall percentage of affordable homes delivered by ECF to 25% across the entire masterplan area. Salix Homes has also secured grants from Homes England and Greater Manchester Combined Authority (Brownfield Housing Fund) to help fund the multi-million-pound scheme.

Properties that are built to Passivhaus standards enjoy reduced energy consumption of around 90% compared to building regulations, helping residents to reduce their fuel bills and cut their carbon footprints. The homes at Greenhaus will benefit from triple-glazed windows and the latest in insulation technology, using minimal energy for heating and cooling.

The development also includes new public Electric Vehicle parking spaces, a public square and greatly enhanced landscaping in the area.

Construction is expected to start on site in the coming weeks and will take around two years.

3 ACHIEVING A TRANSFORMATION IN NEW HOME CONSTRUCTION

- 3.1 As will be outlined below, delivery of 30,000 net zero carbon social rented homes is a huge step up from business as usual. It will not be delivered by incremental improvements or adjustments to existing programmes, investment strategies or policies, nor simply by stretching existing targets. Our social housing providers – housing associations, ALMOs and local authorities - will be absolutely central to the achievement of the delivery of 30,000 net zero carbon social rented homes, supported by Affordable Homes Programme funding from Government/Homes England, but success will only follow if they are at the heart of a much broader effort.
- 3.2 This is also an objective with wider implications and applications. Places for Everyone's 2028 target applies not just to all new housing, market and affordable, for sale or for rent, but to all new development. Government's Net Zero Strategy points to national requirements for continued progress toward net zero new build through the Future Homes Standard.
- 3.3 But the transition to net zero carbon new build homes will not simply happen – it requires a switch from substantial reliance on traditional construction techniques to modern, off-site manufacturing technologies, and with it a restructuring of the products, supply chain, skills and jobs market in the construction sector. Collaborative partnership working is needed nationally to make the necessary step change and without the support of the right actors we will fail to deliver on Government's ambitions. In that context we believe that, with our existing partnership arrangements, Greater Manchester has distinctive

advantages which uniquely place us to catalyse the necessary whole system changes:

- i. Well advanced statutory planning processes to enshrine a 2028 target for mainstreaming net zero carbon new build and to provide strategic clarity over housing land supply at a city region scale
- ii. Mature and active partnerships with the GM Housing Providers, the collaborative grouping of the major social housing landlords operating in GM, and with Homes England
- iii. Established strengths in GM universities in manufacturing, construction and advanced materials with some significant devolved levers and funds to invest in skills development, and a vision in the InnovationGM proposals made to Government for a further step change in unlocking economic value from further collaboration and investment
- iv. The opportunity to work and co-invest with the Off-Site Homes Alliance of social housing providers and GM universities in the establishment of an Off-Site Performance Centre - a physical, not for profit centre and collaborative environment to provide quality assurance, insights, testing/validation, new product development in MMC and off-site technologies, to drive the necessary innovation to dissolve the practical barriers to off-site home delivery, to the benefit of the UK construction sector as a whole
- v. Political commitment from the ten GM local authorities, GMCA and the GM Mayor to lead and convene local and national partners in building 30,000 new net zero carbon social rented homes at a volume sufficient to unlock the economies of scale needed to permanently re-engineer how new homes are built. There will be a requirement on the local authorities to utilise their own assets, where in suitable locations, to deliver against these shared objectives. GMCA will use the flexible funding we have available to support projects which progress this agenda.

- 3.4 A basis in the delivery of 30,000 social rented homes by 2038 will give this initiative the focus needed to make progress at pace. But Places for Everyone sets an ambition to deliver almost 165,000 homes to 2038, 50,000 of which will be affordable. Clearly, there are at least 20,000 further affordable homes to be delivered, and for the bulk of the Places for Everyone plan period these – and the larger number of market homes – will also be expected to meet net zero carbon standards. An important objective of our work on the 30,000 target will be to help bring the supply chain, skills base and manufacturing and delivery capacity to the point where it can viably and sustainably deliver to net zero carbon standards for all elements of the residential market.
- 3.5 Alongside the work with partners in Greater Manchester and beyond, we will therefore pursue a dialogue with Government, looking to establish a shared vision and commitment to a strategic collaboration to lead the UK's transition to net zero carbon new homes. We can move to structure an offer from Greater Manchester partners collectively to Government, setting out the accelerated innovation and delivery which could be achieved by a GM-centred initiative backed by flexible, focused engagement, policy support and investment by Departments including DLUHC, BEIS and DfE.
- 3.6 There will fundamentally be a need for the private sector to work with us in the future, to bring forward the supply chain and manufacture of low carbon components. But looking beyond just the delivery of affordable homes, from a developer perspective there is a need to work with a coalition of the willing who can utilise their own land assets and work with the public sector to achieve a greater level of delivery of net zero carbon homes for the open market across Greater Manchester. We will look to establish a forum with housebuilders and developers to take that transformation in wider delivery forward, with an eye on the 2028 Place for Everyone target for net zero carbon new development.
- 3.7 If we are successful in making significant progress, we can achieve direct progress toward carbon reduction targets, and on tackling inequality through the delivery of 30,000 additional truly affordable homes for households in need. But there are broader benefits in terms of Government's Levelling Up agenda

– driving future investment and innovation, raising productivity and supporting training and employment in the construction sector at all skills levels, important in an industry which is currently experiencing skills shortages.

3.8 It is worth noting the following extract from the Levelling Up White Paper, published by Government on 2 February:

“The £11.5bn Affordable Homes Programme will deliver up to 180,000 affordable homes with 75% of these delivered outside London, and lever in an additional £38bn in public and private investment in affordable housing. The UK Government will also increase the amount of social housing available over time to provide the most affordable housing to those who need it. This will include reviewing how to support councils to deliver greater numbers of council homes, alongside Housing Associations. The UK Government will also ask Homes England to play a wider role in supporting mayors and local authorities to realise their ambitions for new affordable housing and regeneration in their areas, as discussed earlier in this chapter. Homes England will use its resources, expertise, experience and buying power in dealing with developers to help local leaders leverage all the funding available in a place. This will build on the lessons of the successful partnership with Greater Manchester Combined Authority, Homes England and local housing providers in Manchester.”⁵

As yet we are unclear what this ambition to deliver additional social housing, apparently beyond the existing Affordable Homes Programme, might translate to in terms of possible additional Government support, but it is at least an indication that Government’s door may be open to further dialogue with Greater Manchester.

Possibly add: The Opportunity in Numbers: summary of scale of potential delivery/investment/jobs outcomes

4 DELIVERY TRAJECTORY

⁵ [Levelling Up the United Kingdom White Paper \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/86481/levelling-up-white-paper.pdf), p.224

- 4.1 Given the extremely limited past and current delivery of net zero carbon social rented homes, we need to make some realistic assumptions about the pace at which delivery can be ramped up. Places for Everyone includes a commitment that all new development should be net zero carbon by 2028. The current version of Places for Everyone considers the available housing land supply and identifies the collective Local Housing Need for the nine Places for Everyone districts at almost 165,000 over the period 2021-2037. Stockport's Local Housing Need is around 18,000 homes over the same period.
- 4.2 While further modelling will be carried out as the implementation plan is developed, discussed and refined, Table 2 sets out a suggested baseline profile for the delivery of net zero carbon social rented homes that needs to be achieved to meet the ambitions set out in this paper:

Table 2: Suggested delivery trajectory

	2022/3	2023/4	2024/5	2025/6	2026/7	2027/8	2028/9	2029-2038
Starts on site	0	100	200	500	900	1,400	2,000	2,490 p.a

5 DEVELOPING AN IMPLEMENTATION PLAN

- 5.1 It follows from the whole system nature of the challenge that implementation planning needs to evolve over time and be an inclusive, collaborative exercise if successful delivery is to follow. What is set out in the rest of this document is therefore subject to proper engagement with the many partners and stakeholders who will need to play their part if we are, in reality, to deliver the 30,000 homes as intended.
- 5.2 In the coming [six] months, we will facilitate a thorough process of engagement, debate and consensus building to upgrade and update this first implementation plan, so the next iteration of the plan provides greater certainty, incorporates

the best available evidence, lessons already learned and innovations to be adopted, and aligns the work of partners as effectively as possible. The implementation plan will then be updated every two years to accommodate new evidence and changes through the evolutionary process and continue to support acceleration of delivery against the overall objective.

- 5.3 We will be guided by the views of partners through that engagement process and propose to establish a cross-sector group to steer the coalition we hope will emerge to help drive this initiative forward. The GM Retrofit Task Force may provide a template for that group.

6 INITIAL ACTION PLAN

- 6.1 The remainder of this document sets out the key workstreams which have been identified in the first phase of development of our approach to the delivery of the 30,000 net zero carbon social rented homes our communities need, and the broader objectives outlined above. We suggest here some of the major tasks to be achieved in the short, medium and longer term. As will hopefully be clear from this note, we know that our progress will fully depend on the many partners, including Government, who have a part to play.

Delivery area and key external partners	Action area	Phase 1 0-9 months (Mar-22 to Dec-22)	Phase 2 9 – 24 Months (Dec-22 to Mar-2024)	Phase 3 24 – 48 Months (Mar-24 to Mar-26)
Land Supply, Site Evaluation and pipeline	Land Commission	Re-establish the Land Commission	Continued meetings of Land Commission	Continued meetings of Land Commission
Homes England, DLUHC, GM districts, wider public sector landowners, housing providers, developers	One Public Estate	Establish pipeline of sites and action plan	Draw up plans for disposal/development by site	Implement action plan recommendations
	Delivery and Planning Capacity	Embed and expand development and planning skills and capacity within LAs	Delivery and Planning Strategy Document to GMCA	

	Land Supply	Establish initial pipeline of potential short term schemes and draft Baseline Land Supply	Develop 5 year Net Zero Social Homes Land Supply Strategy	Develop strategy implementation plan
Design and Procurement GM Housing Providers and Off-Site Homes Alliance (OSHA), InnovationUK, University of Salford	Supporting establishment of Off-Site Performance Centre (OPC) in GM, to provide quality assurance, testing/ validation, new product development in MMC and off-site technologies.	Develop OPC concept and business plan with OSHA, University of Salford and other potential partners	Identify funding sources and formally establish OPC	Provide national MMC guidance
	Supporting OSHA to find a suitable site to construct a modular factory		Identification of potential large sites for construction of modular factory	Identify funding sources (including potential CA investment)
	Modular net zero innovation cluster	Work with OSHA, University of Salford and others to understand innovation potential and relevant GM	Develop business case for MMC cluster creation	

		strengths to support growth of a cluster of expertise		
	Understand supply chain trajectory	Commission research to examine and understand potential delivery trajectory	Develop action plan to provide supply chain support in MMC	
Construction skills and capacity	Understanding capacity constraints on construction sector		Review of Construction Skills Intelligence Report	
Colleges, universities, training providers, CITB, professional bodies, housing providers, construction firms and supply chain	Low Carbon and Construction skills strategy	Release of Green Economy Skills Intelligence Report	Low Carbon and Construction Skills Strategy to GMCA	
	Developing skills capacity, in alignment with retrofit skills programmes	GMCA research into curriculums for trade and specialist roles	Evaluation of programmes, redevelopment of funding	

		Reskilling and upskilling for traditional building trades, electrical and plumbing installation	Ongoing deployment of AEB, other skills funding	
		Upskilling CPD for professionals (architects, surveyors, planners, project managers) to increase employability.	Shared training facilities for upskilling and new entrants	
		Design training which meets UKGBC new build standards to upskill and retrain as well as embed in existing pathways.		
Funding our ambitions	Ensure that a greater weighting is provided towards net zero homes within brownfield housing funding allocations	Implement new brownfield grant allocations process to ensure greater weighting towards net zero homes for new allocations of funding		
Homes England, DLUHC,	Lobby for national change in eligibility criteria for social	Engage with Homes England and DLUHC to promote		

Treasury, housing providers and developers	housing funding through national programmes	change to national programme		
	Identify scale, nature and timing of further funding to deliver objective	Develop an analysis of scale and nature of funding required, by partners and GMCA to deliver ambitions	Develop funding and new financial model options to meet wider objectives	
	Engage with Government to create joint partnership to deliver Net Zero homes within Greater Manchester	Initial engagement with DLUHC / BEIS / HMT around partnership concept	Enter GM Net Zero Homes Partnership Agreement with relevant departments	Implement Partnership action plan
People and Communities GM Housing Providers, academic experts, community organisations and installers	Learn from experience with retrofitting existing homes, where the best outcomes in terms of energy and carbon savings, impact on fuel poverty and improved quality of life have come where residents have been engaged in the design and implementation of the improvements to their homes.	Gather and share best practice from work in GM and beyond to inform choices for new build programmes		

	Approach to development – connecting delivery to needs	Continue work on strategic work to prioritise supported housing delivery		
	RP work streams – retrofit and low carbon tech		Build lessons from evaluations of retrofit and low carbon new build into ongoing practice	