

Date: 27 September 2019

Subject: Decarbonising Greater Manchester's Existing Buildings

Report of: Cllr Andrew Western, Green City Region Portfolio Lead

PURPOSE OF REPORT

The purpose of this paper is to present a report, produced for Greater Manchester by the GMCA and an expert working group, with their recommendations for decarbonising Greater Manchester's existing building stock (retrofit report). The Decarbonising GM's Buildings report forms one of the key deliverables from the Greater Manchester Green Summit and aims to support GM's achievement of the Green Summit aspiration for the City Region to be carbon neutral by 2038.

The key recommendations from the Decarbonising GM's Buildings report have been incorporated into GM's 5 Year Environment Plan, published and adopted by GMCA in March 2019. The purpose of the Decarbonising GM's Buildings report (see Annex 02) is to add further detail and justification for the actions proposed in the 5 Year Environment Plan.

RECOMMENDATIONS:

The GMCA is requested to:

1. Note the contents of the Decarbonising GM's Buildings report.
2. Commend the key recommendations of that report which have already been incorporated into the recently published GM 5 Year Environment Plan.
3. Agree to establish a Low Carbon Buildings Challenge Group (as part of the Green City Region Partnership and Mission approach agreed in the Local Industrial Strategy)

providing a means of bringing key organisations together to further examine and take forward the recommendations in this report as appropriate.

CONTACT OFFICERS:

Mark Atherton, Assistant Director of Environment, GMCA
mark.atherton@greatermanchester-ca.gov.uk

BACKGROUND PAPERS:

GM 5 Year Environment Plan https://www.greatermanchester-ca.gov.uk/media/1986/5-year-plan-branded_3.pdf

Greater Manchester Spatial Energy plan
http://es.catapult.org.uk/wp-content/uploads/2017/08/Compressed_GMCA_Spatial_Energy_Plan_2016_11_07-LATEST-ilovepdf-compressed.pdf

1. Background

- 1.1. The Green Summit, held in March 2018, set out Greater Manchester's aspiration to be carbon neutral by 2038, meeting the challenge of climate change and supporting the transition to a low carbon economy. One of the key issues identified is the reduction of carbon emissions produced from the excessive use of energy from GM's buildings. The Decarbonising GM's Buildings report sets out where GM is now and where it needs to get to in terms of the energy demand of Greater Manchester's existing domestic, commercial and public buildings. Based on that, it provides a set of recommendations for taking action.
- 1.2. In producing the Decarbonising GM's Buildings report, advice and guidance has been provided by a range of regional and national stakeholders including UK Green Building Council, Carbon Coop, Building Research Establishment, the University of Salford, Skanska, Red Coop and others.
- 1.3. The Decarbonising GM's Buildings report contents and conclusions were also tested with a wide number of key partners, through a number of working groups and consultation workshops. These workshops were held in early 2019 and their early conclusions and recommendations were used to inform the development of the GM 5 Year Environment Plan, prior to its launch at the 2019 Green Summit and endorsement by GMCA in March 2019.
- 1.4. Investing in reducing the energy used in Greater Manchester's buildings offers a significant opportunity that would bring with it multiple benefits, not just for the city-region's environmental ambitions. For Greater Manchester's residents, homes that are warmer, more comfortable and have good ventilation are healthier homes, improving people's physical and mental health. They are also cheaper to heat, meaning Greater Manchester residents and businesses would spend less on their fuel bills and be more resilient to future energy price rises. For Greater Manchester's economy, a healthier population means increased productivity and less public spending on healthcare. Businesses that use their energy more efficiently are more resilient to energy price volatility. Investing in Greater Manchester's building stock also presents an opportunity for growth in jobs and skills in the construction and associated sectors in the city-region.

2. Reducing Energy Demand In Homes

- 2.1 In Greater Manchester's homes, continued effort is needed to ramp up actions to help reduce the energy demands for those residents in or at risk of falling into fuel poverty, continuing to maximise the use of national funding streams (particularly Energy Company Obligation – ECO – funding) by using local flexibilities, whilst making the case for greater local influence so that this funding better aligns with Greater Manchester's ambitions. This funding does not currently provide for the extent and depth of improvements

needed in homes to meet Greater Manchester's environmental and wider ambitions (Recommendation 1).

2.2 At the same time, GM needs to scale up deeper retrofit of homes across Greater Manchester. This presents significant opportunities to realise the benefits set out above – for improving people's health and increasing wealth. To realise the scale of reduction in CO₂ emissions GM needs from reducing buildings' demand for energy, GM needs tens of thousands of deeper retrofits every year. At present, deeper retrofit projects are of the scale of pilots of 10s or at most 100-200 homes or are not retrofitting to the depth needed.

2.3 There are barriers which prevent scaling up what has been achieved in these projects and which would need to be overcome to realise domestic retrofit to the extent and depth required. These barriers include:

- The need to adopt a whole-property (or whole-house) approach to retrofit, understanding what level of reduction in demand (in particular for heating) and CO₂ emissions can be achieved across Greater Manchester's different types of properties (Recommendation 2). At the same time, a whole-house approach needs to be embedded to make sure that retrofit measures are always carried out as part of an overall plan for that property to avoid piecemeal change or unintended consequences.
- The need to develop attractive financial offers for homeowners and financial models for investors (in the public and private sectors) to overcome the high up-front capital costs of deeper retrofit (Recommendation 3). Patient finance, such as green mortgages, equity loans and other forms of loan funding (e.g. revolving loan fund), needs to be available at scale to overcome this barrier.
- The need to develop both the capability (upskilling) and capacity of the supply chain required to deliver deeper retrofit. The supply chain for retrofit will not develop without first seeing, real, evidenced demand emerge, meaning that the supply chain and the stimulation of demand needs to take place in tandem. In particular, the issue of a shortage of a sufficiently large skilled workforce to deliver on this scale needs to be tackled across providers, learning and skills support agencies and trade bodies (Recommendation 4).
- The need to develop delivery models that build awareness of whole-house deeper retrofit, target those people most likely to be early adopters of it, build trust in delivery and the supply chain and coordinate a smooth customer journey through the process (Recommendation 5).

2.4 Tackling these challenges in a way that then enables the retrofit of domestic properties at the required scale and depth will require innovative approaches to delivery in partnership between the public, private and third sector.

3.0 Reducing energy demand in commercial buildings

3.1 The energy demands from commercial buildings in Greater Manchester also needs to see a significant reduction, with modelling informing Greater Manchester's 5 Year Environment Plan based on a 30% decrease in commercial space heating demand by 2040.

3.2 There are similar barriers to reducing energy demand in Greater Manchester's commercial buildings. At present, the incentives for and ability of commercial property owners to retrofit their buildings to achieve these level of reductions are mixed. The valuing of energy efficiency in commercial buildings therefore needs to be built up in the market through better measurement and reporting, which would drive improvements. This includes:

- Building measurement and reporting into new developments using the planning system (Recommendation 6).
- Setting out a pathway for embedding measurement and reporting for commercial building heat demand, starting with voluntary reporting whilst looking at ways to encourage this (e.g. via nudge) or mandate this in the future (Recommendation 7).

4.0 Reducing energy demand in public buildings

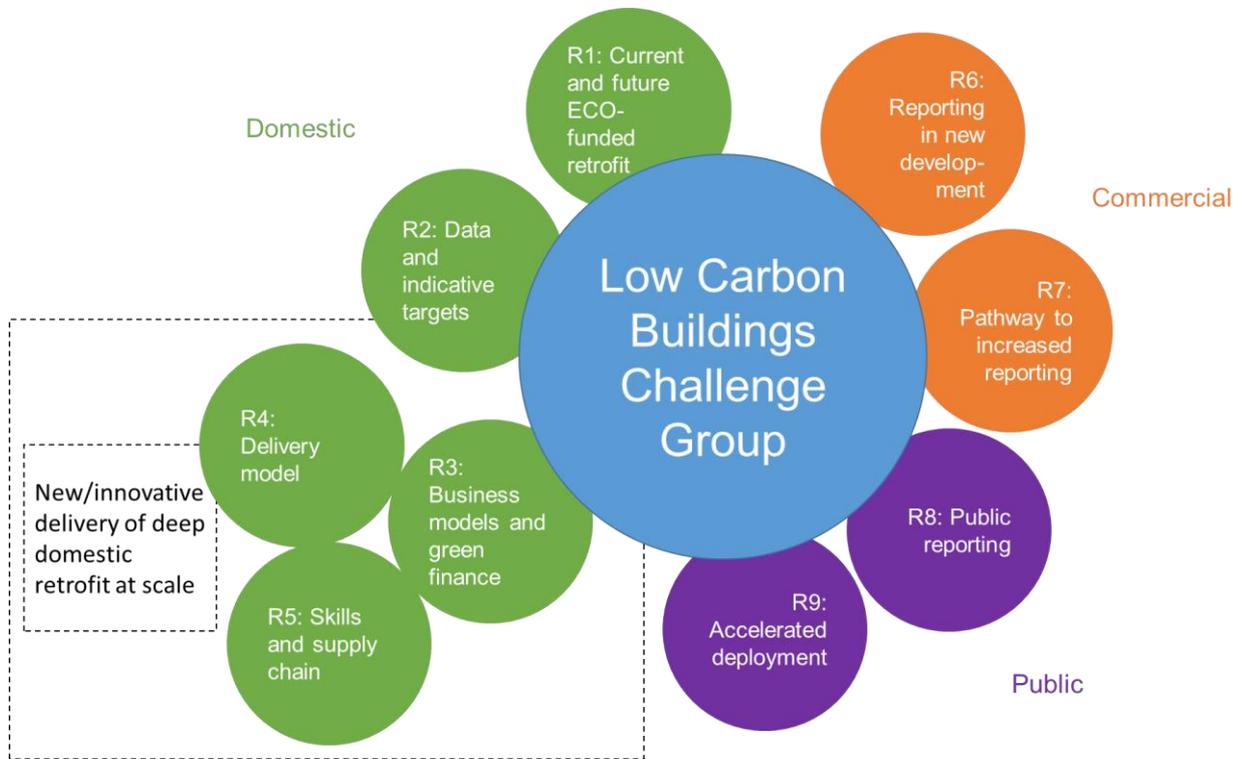
4.1 At the same time, GM's public sector needs to lead by example in reducing the energy demand of its buildings. GMCA and local authorities have already made commitments around delivering greater energy efficiency of their buildings as part of the 5 Year Environment Plan. This should be adopted by other public sector organisations in Greater Manchester (e.g. health sector, universities) and measurement and reporting standardised to help drive up standards (Recommendation 8). Other organisations beyond the GMCA and local authorities should set ambitions and targets for energy efficiency as a result and deliver improvements against these (Recommendation 9).

5.0 How to take this forward

5.1 Tackling forward this challenge and implementing the recommendations in this report must be a joint effort between the public, private and third sectors. These organisations can each bring different areas of expertise to help take forward these recommendations. In addition, national government has some of the most powerful levers to tackling the issues set out here – this report provides a means of engaging government on Greater Manchester's needs and priorities for all organisations above.

5.2 Given that, and the ambition of the 5 Year Environment Plan to adopt a mission-oriented approach to its implementation, it is recommended that a Low Carbon Buildings

Challenge Group be established in Greater Manchester as part of the Green City Region Partnership, providing a more formal means of bringing these organisations together to take forward the recommendations in this report and drive the change needed in Greater Manchester’s buildings (Recommendation 10). This reflects the complex nature of the challenges faced and the need for coordinated action across sectors.



A summary of the Key Actions of the Report is provided in Annex 01.

6.0 Recommendations

It is recommended that GMCA:

- Note the contents of this report and its recommendations
- Note that the key recommendations of this report have already been incorporated into the recently published GM 5 Year Environment Plan.

ANNEX 01 Summary of the Report's Recommendations

The report provides 10 key recommendations to accelerate delivery:

No.	Detail
1	Partners across Greater Manchester should develop proposals for and push for changes to current the current ECO framework when it ends in 2022 to better align it with the city-region's ambitions.
2	Further research should be carried out to identify appropriate space heating demand targets for Greater Manchester property types, informed by the emissions reductions in the SCATTER model. This work would provide a set of indicative targets required from the retrofit of homes to meet Greater Manchester's ambitions and that can be feasibly delivered at Greater Manchester's property types.
3	The GMCA, key partners and investors should work together to develop commercially attractive business models for investment in retrofit of social and private housing. At the same time, GMCA, working with key partners and government (to consider this as part of national policy and green finance initiatives), should develop options for the potential use of council tax as a "nudge" to increase energy efficiency.
4	The GMCA, learning and skills support agencies, providers, innovation hubs and existing trade bodies should come together to understand the future needs and opportunities presented by whole-house deep retrofit and develop packages of work to tackle the issues this identifies.
5	Partners in Greater Manchester should collaborate to develop a delivery model to build up local markets for whole-house deeper retrofit. This should build on the findings of recent work in this area, including government funded pilots like People Powered Retrofit and RetrofitWorks.
6	GMCA and local authorities should explore the potential for introducing requirements for new developments to report on operational energy performance, and as part of that, on space heating demand.
7	Working with key partners, GMCA should develop and implement a pathway to lead to an increase in the measurement, reporting and improvement of energy efficiency in commercial buildings, and as part of that, on space heating demand.
8	GMCA, local authorities and the public sector across Greater Manchester should ensure standardised measurement and annual reporting (as part of reporting against the 5 Year Environment Plan) on the energy efficiency of their buildings, including their Display Energy Certificate ratings and a measure of space heating demand.
9	GMCA and local authorities should work to deliver agreed targets for the energy efficiency of their buildings, including their Display Energy Certificate ratings and developing a measure and targets for space heating demand, and encourage other public sector organisations to do likewise.
10	Put in place Greater Low Carbon Buildings Challenge Group, which, through establishing specific task and finish groups, would provide cross-sector approach to tackling the systemic challenges associated with retrofit across all building types.

