

Subject:	Update on Sustainability Measures for New Homes and Housing Supply Sustainability Policy		
Date of Meeting:	20 January 2021		
Report of:	Executive Director, Economy, Environment & Culture and Interim Executive Director for Housing, Neighbourhoods & Communities		
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Ward(s) affected:	All		

FOR GENERAL RELEASE**1. PURPOSE OF REPORT AND POLICY CONTEXT**

- 1.1 In November 2019 a report to Housing Committee 'Sustainability Measures for New Homes' explained the policy context, current standards and progress to date in relation to housing and environmental sustainability; it examined the opportunities, risks, challenges of developing zero carbon homes; and proposed actions and milestones to delivering zero carbon homes by 2030.
- 1.2 This report provides an update on progress towards meeting the actions and milestones given in the November 2019 report and towards delivering zero carbon homes by 2030. It also proposes a New Build Housing Sustainability Policy, to outline our commitment to reducing greenhouse gas emissions and guide staff and contractors towards developing ever more sustainable homes between now and 2030.

2. RECOMMENDATIONS:

- 2.1 That the Committee notes the progress made to date to reduce carbon emissions and include sustainable measures in its new council housing development programmes.
- 2.2 That the Committee endorse the draft New Build Housing Sustainability Policy as a means by which the construction of new council homes supports the commitment to achieving a carbon neutral city by 2030.

3. CONTEXT/ BACKGROUND INFORMATION

- 3.1 The November 2019 'Sustainability Measures for New Homes' report noted the most important actions officers considered should be undertaken to reduce carbon emissions from the Council's new housing development programme. It was agreed a Working Group would be set up to review these actions and monitor the implementation progress.

- 3.2 The first meeting of the Working Group was postponed due to the first coronavirus lockdown, to allow officers to respond to issues arising from the pandemic and continue to deliver projects within their given timescales. During this time work continued to embed sustainability measures on developments and into project processes. To date the Working Group has met for a full meeting on 1 September 2020 and 14 October 2020. An interim meeting was held 9 December 2020 as the Working Group was further postponed as officers responded to the second coronavirus lockdown over November 2020. It will next meet in January 2021.
- 3.3 The Working Group comprises officers from the following teams: Regeneration, Property and Design, Housing Strategy, Housing Repairs & Improvement, Planning, and Building Control. Each Working Group meeting combines learning about key barriers to reducing carbon emissions in construction and reviewing and agreeing reports on carbon emissions reduction measures.
- 3.4 In response to the actions in the November 2019 Committee report, officers have:
- 3.4.1 Researched and begun to implement whole life carbon assessments on new build projects. Taking advice from industry experts, officers produced a report and business case including benefits, risks, and opportunities for implementing whole life carbon assessments on council new build housing schemes, see Appendix 2. The Working Group agreed the preferred route is to employ a Whole Life Carbon Assessor to: advise on the design approach and construction methodologies for proposed buildings, manage consultant's (i.e. structural engineers and quantity surveyors) roles in relation to reducing operational and embodied carbon emissions; produce reports on whole life carbon emissions for different design options; and support the development of project energy strategies that describe the best option for carbon emissions reduction vs cost benefit. Further work to develop the scope of work, understand costs, and training requirements will be understood by carrying out the process on the Moulsecomb Masterplan project and on the early stage Mile Oak Road housing project if it progresses.
- 3.4.2 Officers now report on cost vs whole life carbon emissions for design options related to the structure and heating and hot water systems for new homes projects. At the Victoria Road housing project officers commissioned Ricardo Energy and Environment Consultants to compare whole life cycle costs and carbon emissions for heating and hot water systems including: capital costs, fuel costs, maintenance and replacement costs and carbon emissions, with a decision to use ground source heat pumps. This study will also be used to inform future projects. Morgan Sindall, the lead contractor for the Victoria Road project, are currently preparing a report on cost vs whole life carbon emissions for different structure options. Sustainability measures for this project are described in the 'Victoria Road Housing Scheme Update' report to Housing Committee on 29 April 2020. Whole life carbon assessments and energy strategies for future projects will formalise this process and include all elements of the project, including design, materials and construction processes.

- 3.4.3 The Regeneration Team worked with Housing colleagues to include the option of a 'block tariff' approach to the electricity supply tested as part of the EU funded 'Solarise' project at Buckley Close.
- 3.4.4 Researched and reported on monitoring the energy use of new homes to allow officers to calculate the actual 'in use' carbon emissions, see Appendix 3. This allows officers, for example, to check whether the homes meet energy performance estimated during the design phase of the development project. Officers reported on how these systems may be integrated, including taking advice from other Local Authorities on their experience with implementation on their recent council housing projects. The Working Group agreed officers continue to develop this proposal and integrate on current new build projects, in close discussion with Housing Services property management teams.
- 3.4.5 Improved client briefs and specifications to include requirements to use circular economy principles to reduce waste, reduce operational energy use, and protect and enhance biodiversity. The measures are taken from UK GBC's Circular economy guidance for construction clients, which is to be used for all Council construction projects as one of the emerging actions within the Brighton & Hove Circular Economy Routemap, presented at P&R Committee in December 2020. In recent architect's invitation to tenders a 30% weighted score for quality criteria (quality criteria are 50% of total score) was given to 'experience of design in relation to low carbon development and sustainability considerations'. The result of this is for sustainable design to be considered at the very start of a project and form a core part of the concept design strategy for early stage projects including the Mile Oak Road and Henge Way housing projects. Circular Economy principles are being considered in specifications on current projects and will form part of the ongoing development and review of the 'New Homes Design Specification', for example, the Victoria Road housing project considers using a light gauge steel structure which can be dismantled and used again at the end of the housing's lifespan, rather than being recycled into a lower value product.
- 3.4.6 The Mile Oak Road housing project has been identified as a pilot project which meets the highest of RIBA's Climate Challenge 2030 targets as given in the draft New Build Housing Sustainability Policy. If the project proceeds, this would include high targets for reducing operational and embedded carbon from which officers will learn about the practices and designs required to achieve this on future projects.
- 3.5 At George Cooper, 20-22 Oxford Street Hidden Homes project, 10 flats have installed mechanical ventilation to provide clean air to residents in an area with high air pollution. Air Source Heat Pumps have been installed for all flats and a Solarise project testing a Multi array approach for PV installations serves the residents directly in the flats on three floors. The new residents will be supported to learn how to use the new systems.
- 3.6 At 43a Manor Hill Hidden Homes project Air Source Heat Pumps and PV panels are being installed to reach at least 39% improvement on Building Regulations Part L requirements. Sprinkler systems at Manor Hill and George Cooper House use 'Aquatherm' plastic piping which greatly reduce carbon emissions vs metal pipes and are recyclable.

- 3.7 The Working Group has compiled and reviewed information relating to the energy performance and sustainable measures for New Homes for Neighbourhoods projects which have been completed and are underway. This information provides a baseline from which energy performance improvements will be measured.
- 3.8 Officers have prepared a list of training requirements for services related to housing delivery to support the development of more sustainable homes. The Regeneration, Housing, Property & Design, Building Control and Planning services have been consulted to develop this list. The next steps for this workstream is to identify training providers, budgets, and book officer training.
- 3.9 Officers have engaged with other organisations and Local Authorities to support the development of more sustainable measures, including, for example, meeting with the Housing Coalition to better understand improving design for fabric efficiency at the Victoria Road housing project. A report and plan on how to most effectively engage with other LAs and sustainable construction groups to build effective relationships will be researched and discussed by the Working Group in the new year.
- 3.10 The Planning service briefed the Working Group on the current and future local and national Planning context for sustainable building standards, identifying issues and opportunities for the development programme. It was agreed a future Working Group meeting would consider how the knowledge and information this group develops can support the wider local construction sector to improve sustainability measures in their projects.
- 3.11 New Build Housing Sustainability Policy
- 3.11.1 A sustainability policy is proposed, see Appendix 1, which describes how the Housing Supply Programme will contribute to meeting Brighton & Hove City Council's aim for a net-zero carbon city by 2030 through its new build housing developments. The policy provides a framework for action and sets objectives and targets.
- 3.11.2 The draft policy was presented to the Working Group in September 2020 and has since been improved with input from the Working Group, Architecture and Design team, and Property and Investment team. Further consultation with officers is required to improve and finalise the document.
- 3.11.3 Meeting the targets and timescales set in the policy will result in building comfortable new homes by maintaining a warm temperature in winter and preventing overheating in summer while using the minimum amount of energy. Being very energy efficient, residents' electricity and heating bills will be much lower than a normal home. The homes will be designed and built will reduce the amount of new materials used in their construction. At the end of their lifespan, more building materials can be re-used, rather than crushed, or recycled into less valuable materials.
- 3.11.4 Achieving the greatest Carbon emissions reductions while maintaining financial viability may require a different design approach for each project. The specific constraints and opportunities at each site would favour differing structures,

materials, heating systems, construction methods, and biodiversity enhancements. The preferred design approach for each site will be identified by the project team, including a whole life carbon advisor.

3.11.5 The draft policy was developed to follow best practice for reducing carbon emissions in construction. The targets chosen are linked to RIBA's 2030 Climate Challenge targets, which considered the latest recommendations from the Green Construction Board where it was asked to respond to the 2030 Buildings Energy Mission led by the Department for Business, Energy & Industrial Strategy. The targets aim to at least halve the energy use of new buildings by 2030 and have been validated through consultation with UK professional bodies and with the Committee on Climate Change. The reason these specific targets have been chosen is because they have been shown to be achievable in the short term and has wide participation and support from the construction industry. They are also likely to align with future Government strategy as they are based on the aims developed by the Government itself. As guidance on carbon emissions reduction measures for construction, such as the LETI Climate Emergency Design Guide, use the 2030 Climate Challenge targets as their standard, it is suitable that the council uses the same standard and benefit from the guidance and support that is developed.

3.11.6 Benchmarks and targets will change over time, the targets given have been developed in 2019, the first year of Climate Emergency declarations. It is expected more specific targets and improved guidance will be produced, so it is proposed the policy is reviewed every year and, if necessary, updated.

3.11.7 The policy would not disrupt the council's priority for delivering 800 additional council homes. By setting interim targets for each project, especially those which are currently in development, the aim is to improve those projects which are currently being designed, whilst not causing significant time and cost penalties.

3.12 Next Steps

3.12.1 The Working Group will ask the Housing Supply Member's Board in January to extend its programme from six months to twelve months so it can continue to expand the topics under consideration to support delivery of net zero carbon new homes and monitor the progress of including sustainability measures in projects.

3.12.2 Future topics will include, for example: engaging a wide range of council officers to develop their understanding of circular economy principles in construction; and further developing knowledge and strategies for low carbon heating systems, building structures, increasing biodiversity, and using Modern Methods of Construction.

3.12.3 The group would like to further engage with outside experts and groups to learn about sustainable materials, methods and processes, inviting them to Working Group meetings arrange Continuous Professional Development [CPD] sessions for officers. Officers from the Housing, Property & Design, Regeneration, and Planning services have and will continue to arrange officer training sessions between services and will continue to do so, engaging the Working Group to attend and discuss the topics covered.

3.12.4 In October, officers engaged with Morgan Sindall, lead contractor of the council's Strategic Construction Partnership, to talk about sustainability measures beyond discussions on a project by project basis. To begin sharing knowledge and aspirations across both organisations, to identify best practice from other Morgan Sindall projects across the country and arrange CPD sessions for officers in early 2021.

3.12.5 The draft policy will be subject to further review of internal and external experts and the group will continue to consider feedback and ensure the policy is further developed.

3.12.6 Officers will continue to collaborate and work together to ensure learning from the implementation of the draft Sustainability Policy on new build sites influences the retrofit agenda for the existing HRA stock. Equally the actions implemented as part of the retrofit programmes will influence the ongoing development of policy based on the experience of residents use of new technologies and carbon reduction plans.

4. ANALYSIS & CONSIDERATION OF ANY ALTERNATIVE OPTIONS

4.1 If the Working Group were to stop meeting, officers would find it harder to learn about and discuss together, across teams and with Councillors, the key issues to reducing carbon emissions. They will also miss the opportunity for efficient scrutiny of proposed measures and processes from this wide group of stakeholders.

4.2 Officers developing the targets and measures in the Housing Supply Sustainability Policy considered alternative options, but those which were chosen are based on evidence of deliverability and adoption of identified industry best practice for tackling the Climate Emergency.

5. COMMUNITY ENGAGEMENT & CONSULTATION

5.1 The community has not been engaged in this process as the progress and policy relating to sustainability measures do not directly affect communities until carried out within projects. Individual projects are subject to community consultations at which point relevant sustainability measures included in the project will form part of the consultation process.

6. CONCLUSION

6.1 The development of the Housing Supply Sustainability Policy considered what has been proven to be achievable by the Construction Leadership Council, it proposes high standards supported by important and influential organisations within the UK construction industry, and meets the widely accepted 2030 target for overall carbon emissions reduction in new build property development. As well as targets and aims, the policy includes methods by which the targets will be achieved and behaviours required to support implementation, which does not disrupt the council's ability to deliver its given housing delivery timescales and targets.

- 6.2 The Working Group has a substantial agenda of work to support the delivery of net zero carbon homes by 2030 and the Housing Supply Programme would be supported to identify and implement improvements more quickly by extending its operation by six months. By extending for a further six months, officers will have the opportunity to be able to fulfil the initial agenda and the Working Group can tackle additional subjects such as protecting biodiversity, sustainable urban drainage systems, design for sustainable living, and delve deeper into Circular Economy principles.

7. FINANCIAL & OTHER IMPLICATIONS:

Financial Implications:

- 7.1 Where capital accounting arrangements allow, it is anticipated that the cost of the external reports and specialist advice incurred is capitalised and therefore, added to each capital project, as required. The cost of advice, where it is not attributable to a specific project will be met from existing HRA revenue resources and reported in line with the council's Financial Management policies.
- 7.2 The inclusion of some of the measures, outlined in the report and the appended policy to reduce the carbon effect of building new homes could add to the initial capital investment required. The impact of the increase in costs will be reported to the Housing Committee when final scheme approval is being sought, alongside details of any mitigation actions, such as making use of available HRA resources for sustainability initiatives to ensure value for money is maintained.
- 7.3 It is not anticipated at this stage that there will be a need for an increase in resources as a result of extending the working group by a further 6 months.

Finance Officer Consulted: Craig Garoghan

Date: 21/12/20

Legal Implications:

- 7.4 Under the council's constitution, committees may establish time-limited task and finish Member Working Groups, with an option to extend for a further six months. When the establishment of the Zero Carbon New Builds Working Group was approved in November 2019, the Terms of Reference provided for the Group to form for six months and to meet 4 times within that period. The extension of the Working Group as set out in paragraph 3.12.1 is permitted by the approved Terms of Reference.

Lawyer Consulted: Liz Woodley

Date: 22/12/2020

Equalities Implications:

- 7.5 The report to Committee: 'Sustainability Measures for New Homes' in November 2019 considered the equalities impact of introducing carbon reduction measures in the development of new homes, including: cost effectiveness, to deliver on affordable rents; opportunities to avoid fuel poverty; and risks involved with introducing new technologies, which tenants may have difficulty operating.

- 7.6 Assessment of the impact on equalities is carried out through project processes, development of briefs, application of specifications, and consultation. Carbon reduction measures will be reviewed to ensure they meet the principles of inclusive design.

Sustainability Implications:

- 7.7 These are featured within the body of the report.

Brexit Implications:

- 7.8 Information sharing is an important tool to support the improvement of new, more sustainable housing. Brexit impacts on the council's ability to effectively collaborate with European partners on sustainability measures via EU run projects, however, officers have been able to become observers on such projects and are investigating collaborations which are not closed to non-EU countries.
- 7.9 The ability to access funding through EU development programmes, to support innovative sustainable projects, will no longer be available, however, officers will identify and review any new funding opportunities available to support these projects.

Public Health Implications:

- 7.10 Increasing the energy efficiency of homes and reducing resident's energy bills, particularly in vulnerable groups, will contribute to the prevention of ill health and excess winter deaths, reduce health and social inequalities, and improve wellbeing and quality of life. Supporting and enabling residents to pay less for their energy can contribute to tackling fuel poverty and cold homes.

Corporate / Citywide Implications:

- 7.11 The Zero Carbon New Builds Working Group engages several services across the council and aims to support the general improvement of officer's knowledge of sustainable construction strategies. Some topics will aim to engage a wider group of officers than the current members of the Working Group in training and knowledge development opportunities.
- 7.12 The Working Group aims to support engagement with the wider construction sector in the city and Greater Brighton area: through the development of case studies; identifying how it can support the Planning service to improve sustainability measures in Planning applications; sharing knowledge with other Local Authorities; and potentially engaging with a wide range of construction companies in the form of an event or conference to share information on sustainable practices and solve issues related to delivering cost effective carbon reductions in the development of social housing.

SUPPORTING DOCUMENTATION

Appendices:

1. New Build Housing Sustainability Policy
2. Whole Life Carbon Assessment Report
3. Monitoring Energy Performance Report

Background Documents

1. Housing Committee Report, 13 November 2019: Sustainability Measures for New Homes
2. Housing Committee Report, 29 April 2020: Victoria Road Housing Scheme Update
3. P&R Committee Report, 3 December 2020: Circular Economy Routemap
4. [RIBA 2030 Climate Challenge](#)
5. [LETI Climate Emergency Design Guide](#)
6. [Construction Leadership Council – Buildings Energy Mission 2030](#) (Background report to Recommendations from the Green Construction board in response to the 2030 Buildings Mission)
7. [UK GBC – Circular economy guidance for construction clients](#)

