

New Build Housing Sustainability Policy



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Document summary

The purpose of this policy is to describe how the Housing Supply Programme will meet Brighton & Hove City Council's aim to become a Carbon Neutral city by 2030. The policy provides a frame work for action, setting objectives and targets.

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1. Introduction and background

- 1.1. Brighton & Hove City Council is developing a ten year programme with an aim of making the city Carbon Neutral by 2030. The Housing Committee Work Plan 2019-2023 includes commitments for 800 additional council homes and to develop a policy setting out how it will work collaboratively to ensure housing contributes to the a Carbon Neutral city by 2030.
- 1.2. The council's Brighton & Hove Circular Economy Routemap focusses on actions to reduce Carbon emissions and materials waste in the built environment. This policy matches the targets and actions given in the Routemap as a constructor and commissioner of buildings and infrastructure.
- 1.3. This policy refers to both operational and embodied Carbon emissions. Operational Carbon refers to Carbon Dioxide which is emitted as a result of a building's energy use, for example: heating, hot water, cooking, and lighting. Embodied Carbon refers to Carbon emitted when producing a building's materials, their transport and installation on site, and their disposal at end of life.
- 1.4. Whole life Carbon emissions comprise both operational and embodied Carbon emissions. Measuring whole life Carbon allows the council to move towards homes that generates lowest carbon emissions over their whole life span.

2. Scope

- 2.1. This policy applies to projects delivered through the New Homes for Neighbourhood's programme and the Hidden Homes programme.
- 2.2. It does not apply to the retrofit work to current housing stock, or to non-council housing development projects.

3. Principles

- 3.1. The objectives detailed in this policy include targets to reduce greenhouse gas emissions from housing development projects, supporting The Climate Change Act commitment to reduce greenhouse gas emissions by at least 80 per cent by 2050 when compared to 1990 levels. The targets are proven to be achievable and Construction industry leaders believe new homes must meet these targets within the timescales given to be able to meet The Climate Change Act commitment.
- 3.2. To ensure new homes can be let at affordable rents, are robust, and are suitable for our client group, a balance must be struck between reducing whole life Carbon emissions and achieving value for money. Any Carbon emissions that cannot be eliminated will need to be offset to achieve net Carbon neutrality. This could occur on site or elsewhere, and a strategy for offsetting emissions from the new build housing supply programme needs to be developed.
- 3.3. The council aims to build all new homes to very high energy efficiency performance levels, meeting the [RIBA 2030 Climate Challenge Targets](#) for operational energy, embodied Carbon, potable water use and health and wellbeing. However, it is acknowledged there may be exceptional circumstances, in which in which meeting these performance targets will not be achievable due either to very high costs or site-specific constraints.

- 3.4. As new information and guidance becomes available this policy will be reviewed each year and updated, if necessary, to include improvements in targets and process which match best practice for the construction industry.

4. Objectives

- 4.1. Whole life Carbon assessments are undertaken for every project – to consider the feasibility of different carbon reduction measures and advise on design strategy, measure embodied carbon and estimate operational emissions.
- 4.2. Designing more sustainable homes must not disrupt the council’s ability to meet the 800 additional council homes by 2023 target. The targets given in this policy will only be set for projects that have not passed RIBA Stage 2 as at January 2021 to limit the risk of causing time and cost penalties.
- 4.3. The professional development needs of council officers in relation to sustainable housing development will be identified and reviewed on a regular basis. A programme of training and Continuing Professional development will be created in order to ensure that relevant officers have the knowledge and skills to deliver this policy.
- 4.4. Suppliers and contractors will be expected to have the relevant experience to deliver more sustainable projects, or to have a plan to develop such experience.
- 4.5. Council officers, suppliers and contractors will be expected to participate positively with actions which address the climate emergency and actively identify improvements.
- 4.6. The council will actively develop formal and informal relationships with other local authorities to share knowledge and information.
- 4.7. Sustainability outcomes and a sustainability strategy will be prepared for each project. Project teams will be challenged to identify and include sustainable measures at all stages of the project and to defend decisions made. The whole life Carbon assessment process will provide gateways for information to be gathered and options agreed on before progressing.
- 4.8. A sustainability register will be created for each project listing items for investigation and review including, for example, operational energy efficiency, materials specification, construction methods, and waste management and recycling. The sustainability register will be reviewed at each Project Team meeting (design team design team and construction site meetings construction site meetings) as a permanent agenda item.
- 4.9. The in use energy performance of new homes will be measured to make sure benefits are achieved, to support tenants to realise benefits, and to share information with the wider construction industry. This will support the wider industry effort to deliver cost-effective, sustainable homes.

5. Targets

- 5.1. From January 2021 all new projects will:
 - 5.1.1. Sustainability Outcomes will meet the below [RIBA 2030 Climate Challenge Targets](#). If there are specific site constraints or high costs related to carbon reduction measures which make the scheme unfeasible, other options may be explored, with a robust defence of the decision not to meet this target.

RIBA 2030 Climate Challenge target metrics for domestic buildings

RIBA Sustainable Outcome Metrics	Current Benchmarks	2020 Targets	2025 Targets	2030 Targets	Notes
Operational Energy kWh/m ² /y 	146 kWh/m ² /y (Ofgem benchmark)	< 105 kWh/m ² /y	< 70 kWh/m ² /y	< 0 to 35 kWh/m ² /y	UKGBC Net Zero Framework 1. Fabric First 2. Efficient services, and low-carbon heat 3. Maximise onsite renewables 4. Minimum offsetting using UK schemes (CCC)
Embodied Carbon kgCO ₂ e/m ² 	1000 kgCO ₂ e/m ² (M4i benchmark)	< 600 kgCO ₂ e/m ²	< 450 kgCO ₂ e/m ²	< 300 kgCO ₂ e/m ²	RICS Whole Life Carbon (A-C) 1. Whole Life Carbon Analysis 2. Using circular economy Strategies 3. Minimum offsetting using UK schemes (CCC)
Potable Water Use Litres/person/day 	125 l/p/day (Building Regulations England and Wales)	< 110 l/p/day	< 95 l/p/day	< 75 l/p/day	CIBSE Guide G

RIBA 2030 Climate Challenge target metrics for all buildings

Best Practice Health Metrics 		References
Overheating	25-28 °C maximum for 1% of occupied hours	CIBSE TM52, CIBSE TM59
Daylighting	> 2% av. daylight factor, 0.4 uniformity	CIBSE LG10
CO ₂ levels	< 900 ppm	CIBSE TM40
Total VOCs	< 0.3 mg/m ³	Approved Document F
Formaldehyde	< 0.1 mg/m ³	BREEAM

5.1.2. be recorded on the sustainability outcomes, sustainability strategies and sustainability registers as part of the project management process.

5.2. A programme of training and development for officers is identified and agreed to start in 2021.