

m83 Associates Ltd

Architecture | Interior Design | Project Management

Energy and Carbon Statement

82 Ainsworth Road. Bury, BL8 2RS

1. Introduction

This Energy and Carbon Statement has been prepared in support of the planning application for the conversion of the existing dwellinghouse at 82 Ainsworth Road, Bury, BL8 2RS to a five-bedroom, five-person House in Multiple Occupation (HMO), together with a single-storey rear extension and rear dormer extension.

The purpose of this statement is to explain how the proposal has considered energy efficiency and carbon reduction in accordance with Policy JP-S2 – Carbon and Energy of the Places for Everyone Joint Development Plan.

The proposal involves the retention and adaptation of an existing dwelling rather than the construction of a wholly new building. The approach therefore seeks to improve the performance of the existing property where reasonably practicable while ensuring that the new construction meets the applicable standards.

2. Policy Context

Policy JP-S2 – Carbon and Energy forms part of the adopted Places for Everyone Joint Development Plan. The policy supports the reduction of carbon emissions and requires development to have regard to the energy hierarchy, prioritising reduction in energy demand and energy efficiency before renewable and low-carbon energy measures.

The proposal has therefore been considered against this hierarchy, with priority given to reducing energy demand through improvements to the building fabric and the use of efficient building services.

3. Existing Building

The application relates to the conversion and alteration of an existing residential property. The existing building is being retained and adapted to provide five bedrooms and shared communal accommodation. The proposed works include a single-storey rear extension and rear dormer, together with alterations to the internal arrangement.

The retention and adaptation of the existing dwelling represents an efficient use of an existing building and avoids the need for complete demolition and replacement construction. The works provide an opportunity to improve the thermal performance of affected parts of the building through modern insulation, windows, doors and construction details.

4. Energy Hierarchy

The proposal follows the principles of the energy hierarchy by seeking first to reduce energy demand, then maximise energy efficiency, followed by consideration of renewable and low-carbon energy measures.

4.1 Minimise Energy Demand

The design seeks to minimise energy demand through appropriate building fabric, natural daylight and natural ventilation. Existing and proposed windows and rooflights will provide daylight to habitable accommodation, reducing reliance on artificial lighting during daylight hours.

The rear dormer and rooflights will provide daylight to the proposed roof accommodation, while the rear extension will introduce additional naturally lit accommodation at ground-floor level.

4.2 Maximise Energy Efficiency

The new extension and dormer will be designed and constructed to achieve appropriate levels of thermal performance in accordance with the applicable Building Regulations. Particular consideration will be given to insulation levels, continuity of insulation, thermal bridging, airtightness and the thermal performance of windows and external doors.

The existing building fabric affected by the works will be upgraded where reasonably practicable. Final construction details will be developed as part of the Building Regulations package, with compliance demonstrated through the appropriate Building Regulations procedures.

4.3 Renewable and Low-Carbon Energy

The proposal will consider the incorporation of renewable and low-carbon technologies where technically feasible and proportionate to the scale and nature of the development.

Potential measures may include high-efficiency heating and hot-water systems and, where appropriate and viable, renewable electricity generation such as photovoltaic panels. At this planning stage, no specific renewable-energy

installation is being relied upon as a prerequisite for the acceptability of the proposal. The final specification will be informed by the detailed technical design and Building Regulations process.

5. Heating, Hot Water and Lighting

The proposed HMO will require efficient heating and hot-water provision appropriate to the five-person occupancy. New or replacement heating equipment will be selected having regard to energy efficiency and the requirements of the Building Regulations.

Energy-efficient lighting will be incorporated throughout the accommodation, including bedrooms, communal areas, circulation spaces and sanitary accommodation. The design will also seek to avoid unnecessary energy consumption in communal areas through appropriate controls and efficient fittings.

6. Carbon Reduction

The principal carbon-reduction measures will be achieved through retention and reuse of the existing dwelling; improved thermal performance of the new construction; appropriate insulation; thermally efficient windows and doors; minimisation of thermal bridging; efficient heating and hot-water systems; energy-efficient lighting; maximisation of natural daylight; and consideration of renewable and low-carbon energy technologies where technically feasible and viable.

These measures are intended to reduce operational energy demand and associated regulated carbon emissions. Detailed carbon calculations and Building Regulations compliance assessment will be undertaken as part of the technical design process.

7. Embodied Carbon and Construction

The proposal involves the adaptation of an existing building rather than demolition and replacement. Retention of the existing dwelling reduces the amount of new construction required and avoids the embodied carbon associated with constructing an entirely new building.

The new extension and dormer are relatively limited additions to the existing building. The design will seek to use durable materials with an appropriate service life and avoid unnecessary construction. Construction waste should be minimised through appropriate specification, procurement and site management.

8. Overheating and Natural Ventilation

The design will seek to provide adequate natural ventilation to habitable accommodation through appropriately positioned windows and openings. The provision of roof accommodation will be considered in relation to summertime overheating, particularly where areas receive increased solar exposure.

Where necessary, appropriate measures such as solar control, opening windows and effective ventilation will be incorporated into the detailed design. The final approach will be reviewed as part of the Building Regulations design where applicable.

9. Conclusion

The proposal at 82 Ainsworth Road provides the opportunity to improve the energy performance of an existing residential property while providing additional accommodation through a modest rear extension and dormer.

The design responds to the principles of Policy JP-S2 – Carbon and Energy by prioritising the reduction of energy demand and improved energy efficiency, followed by consideration of renewable and low-carbon technologies where technically feasible and viable.

The retention and adaptation of the existing dwelling, together with improved insulation and thermal performance to the new construction, efficient windows and doors, efficient building services and consideration of renewable technologies, will assist in reducing energy demand and associated carbon emissions.

The development will be designed and constructed to comply with the applicable Building Regulations requirements. Detailed thermal, energy and carbon calculations will be undertaken as part of the technical design process. On this basis, the proposal has had appropriate regard to Policy JP-S2 and the Council's request for an Energy Statement.