
52 Albert Avenue, Prestwich, Manchester, M25 0LX

Carbon and Energy Statement

Proposal: Retrospective application for the change of use of existing residential dwelling (C3) to prayer hall (F1(f)) to ground floor and self-contained flat (Class C3(a)) to first floor. Installation of air-conditioning units Revised Scheme.

May 2024

This Carbon and Energy Statement has been produced by EA Town Planning Ltd to support a revised retrospective application for the change of use of existing residential dwelling (C3) to prayer hall (F1(f)) to ground floor and self-contained flat (Class C3(a)) to first floor.

This Carbon and Energy Statement has been prepared to address the requirements of The Places for Everyone Joint Development Plan Document, which has now been adopted and forms part of the development plan for Bury Council. The Document states:

Policy JP-S 2

Carbon and Energy

The aim of delivering a carbon neutral Greater Manchester no later than 2038, with a dramatic reduction in greenhouse gas emissions, will be supported through a range of measures including:

- 1. Promoting the retrofitting of existing buildings with measures to improve energy efficiency and generate renewable and low carbon energy, heating and cooling;**
- 2. Promoting the use of life cycle cost and carbon assessment tools to ensure the long term impacts from development can be captured;**
- 3. Taking a positive approach to renewable and low carbon energy schemes, particularly schemes that are led by, or meet the needs of local communities;**
- 4. Keeping fossil fuels in the ground;**
- 5. Planning for a balanced and smart electricity grid by identifying geographical locations which could support energy assets;**

6. Increasing the range of nature based solutions including carbon sequestration through the restoration of peat-based habitats, woodland management, tree-planting and natural flood management techniques;
7. Development of Local Area Energy plans to develop cost effective pathways to achieve carbon targets;
8. 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.

- b. Incorporate adequate electric vehicle charging points to future proof for the likely long-term demand, taking account of the potential maximum energy demand for the site;
- c. Where practicable, prioritise connection to a renewable energy/heating/cooling network in the first instance or a low carbon energy/heating/cooling network that is adaptable to non-fossil fuels at a later date;
- d. Achieve energy demand reductions for residential development in terms of space heat demand; hot water energy demand and the delivery of on-site renewable energy generation.

For renewable energy generation priority should be given to PV installation where technically feasible, alternative technologies will be appropriate where the equivalent generation is evidenced.

- e. For non-residential developments, achieve at least BREEAM excellent standard (or equivalent) for the 'Ene 01 – reduction of energy use and carbon emissions' category rising to 'BREEAM outstanding' equivalent for ENE 01 from 2028.
- f. Include a detailed energy statement to demonstrate via site relevant evidence how the development has sought to maximize reductions in carbon emissions in line

with relevant policy targets, including the minimisation of overheating risks and appropriate measures for post occupancy evaluation. Whole life cycle emissions should be considered where possible.

District Local Plans may set out specific carbon emission reduction targets, particularly if carbon neutral targets have been set sooner than 2038, or promote other measures through which energy efficiency of buildings and renewable energy generation can be achieved.

This statement details the proposed measures which have been incorporated to minimise energy consumption, improve energy efficiency and generate renewable and low carbon energy, heating and cooling, in line with the relevant requirements as set out above.

Compliance with 2022 Part L Building Regulations

The proposed development is for the subdivision of a former dwelling house into two separate components including the conversion of the ground floor unit into a prayer hall (F1(f)) and the conversion of the first floor into a self-contained flat (Class C3(a)).

The development has been designed to fully comply with Part L of the 2022 Building Regulations. As the proposal is for a mixed-use dwelling, the proposal will comply with both Volume 1 and Volume 2 of the Approved Document L.

The specific ways in which the development will reduce energy consumption, improve energy efficiency and generate renewable energy are discussed below.

Lighting

The applicant will ensure that all fixed internal light fittings in both the prayer hall and the self contained flat will be fitted with low energy/light-emitting diode (LED) lighting. Ample lighting fittings and fixtures have been installed throughout the premises and the lighting has achieved a luminescence (lm) per wattage in excess of Building Regulation requirements.

External lighting, where installed, will also be energy efficient and be supported by passive infrared (PIR)/daylight sensor and/or time controls to reduce operation times and subsequent energy use and emissions.

Heating and Water

Both the prayer hall and the flat are currently served by conventional central heating units and boiler systems. The heating in both components is controlled by a thermostat to ensure that thermal comfort is steadily maintained throughout the premises and the boilers are not overused.

All of the windows on site are double-glazed. This helps to improve thermal efficiency throughout the building and minimise the use of the central heating system. The double glazed windows also ensure the efficiency and effectiveness of the heating system when it is in use.

In the longer term, the applicant will seek to replace the existing system with a low energy heating and water system. It is the intention of the applicant to eventually install Indoor Air source heat pumps (ASHPs) to both the Prayer Hall and the self-contained flat to provide both heat and hot water.

The applicant will look to improve insulation methods as newer and better methods become available and as required.

Smart Meters

Both the prayer hall and the self-contained flat will be supplied with Smart Meters and building energy management systems (BEMS) along with associated internal energy displays. This will further improve energy efficiency by allowing building managers/occupants to observe their energy use in “real time” and thereby manage their energy usage more effectively.

Renewable Energy

The applicant will look to Install PV Panels on the roof of the building to provide a renewable source of green energy and be less reliant on electricity providers and the electricity grid, with the potential to also feed electricity back into the grid. Whatever energy is provided from the grid will be sourced from green energy tariffs as offered by electricity providers.

Overheating

As the development is for the change of use of an existing building, and the building orientation is already set, the applicant is limited in their opportunity for adaptations to totally mitigate overheating. However, all rooms will be provided with adequate passive ventilation and blinds to minimise overheating and improve thermal comfort for the occupant. Both the synagogue and first-floor flat are dual aspect, with openable windows on opposite facades, to allow for cross ventilation. In terms of solar gain, the orientation of the building allows for natural heating from direct sunlight in the colder months of the year.

Conclusion

This carbon and energy efficiency statement sets out how the development proposal has been designed to meet the requirements of Policy JP S2 of the Places for Everyone Joint Development Plan Document.

The applicant has sought to comply with Part L of Building Regulations as demonstrated.

This statement has summarised the proposed methods adopted to achieve maximum carbon and energy efficiency of the development with consideration to the nature of the development as a subdivision and partial conversion of an existing dwelling house into a mixed use premises.

It is considered that the implementation of the above methods, both in the short and long term, will ensure maximum carbon and energy efficiency of the development in accordance with the requirements of Policy JP S2