

Proposal: Erection of Detached Dwelling and associated access

Location: Land between 701 & 703 Whitefield Road, Bury, BL9 9PL

Application Ref: 71623

Energy Efficiency Statement regarding carbon reduction and digital connectivity

INTRODUCTION

1. This statement is provided to fulfil the requirements of Bury Council's Validation Checklist for Full Planning applications and The Places for Everyone Joint Development Plan Document which has been adopted to form part of the development plan for Bury as from 21st March 2024. Planning Law requires that applications for planning permission be determined in accordance with the development plan, unless material consideration indicate otherwise.

HOW ENERGY EFFICIENCY HAS BEEN TAKEN INTO ACCOUNT IN THE DESIGN AND LAYOUT OF THE SCHEME

2. The scheme adopts a 'fabric first' approach to energy efficiency. Part L1A and L2a of the Approved Building Regulations 2021 concern the conservation of fuel and power in new dwellings and new building other than dwellings. These cover the matters :
 - Building performance and design;
 - Conservation of fuel and power;
 - CO² emissions and;
 - Air permeability.

In addition to these minimum requirements, the following design features are incorporated into this scheme:

Building form.

This includes orientation, height to floor area and passive ventilation and cooling. This reduces the heating and cooling loads of the building.

Thermal envelope.

The shell of the building acts as a thermal barrier to unwanted heat or mass transfer between the interior of the building and the outside conditions. The Building Regulations standards will be adhered to. This reduces the envelope and air exchange heat loss reducing heating requirements by a factor of two or more.

Insulation

This maximises the long term thermal performance of the building element overall. The strategy is to reduce heating, cooling and lighting loads by using high levels of insulation, optimising the glazing area and minimising the infiltration of outside air.

Windows

The windows will use multiple glazing layers and low conductivity gases to increase thermal performance and use framing materials with very low conductivity.

Heating systems

The residential unit will use a boiler that is 98% energy efficient. This will be by the use of condensing combi boiler or ground source heat pump that produce high efficiency systems. Solar panels with energy battery storage will be used to supplement high output usage.

HOW THE DEVELOPMENT WILL MAXIMISE THE EFFICIENT USE OF RESOURCES

3. Heating.

The following measures will be incorporated into the heating systems:

- Water saving fixtures;
- Use of tankless (condensing or non-condensing) water heaters;
- Water heaters located close to point of use;
- Recover of heat from warm waste water;
- Use of solar energy
- Use of solar thermal water heaters where possible.

The integrated effect of all these can produce savings of up to 90% over traditional methods.

4. Lighting systems.

A reduction in energy use from lighting can be achieved by:

- Use of daylighting with occupancy;
- Use of the most efficient lighting devices available and ;
- Use of such measures as ambient/task lighting.

The lighting required for ambient lighting in large buildings can be reduced by 50% or more compared to fluorescent lighting by the use of efficient lamps, sensors and zone lighting. A low level of background lighting can be used with local levels of task lighting.

Water

The following measures will allow efficiency in water usage:

- Low flush toilets;
- Modify equipment such as lower flow taps; water efficient appliances and showerheads;
- Use high pressure hoses and low volume cleaning systems;
- Install sub meter systems;
- Look for leaks by monitoring trends for increased usage.

HOW THE RISKS FOR FUTURE CLIMATE CHANGE HAVE BEEN PLANNED FOR

5. The risks to the building associated with future climate change are :

- Natural cross ventilation for overheating;
- Attenuation measures to hold increased rainfall on site;
- A resilient and adaptable building to repair work and risk of damage;

All of the above measures if well designed and implemented, will result in an environmentally friendly and cost-effective building in its design and construction, fulfilling the policy objectives for energy efficiency.

The proposed development would also provide an electric vehicle charging point as required under building regulations.

CONCLUDING REMARKS

We consider that the above information is sufficient to satisfy Policy JP-S2.

POLICY JP-C2 (DIGITAL CONNECTIVITY)

Internet connections will be operational and immediate accessible to network providers upon occupation of the dwelling. Provision will be made during construction to permit full fibre connectivity.