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Project: 1338
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ENERGY STATEMENT

Description:

Outline Planning Application with All Matters Reserved for a new dwelling in the garden of 3, Trevelyan Walk, Henbury, Bristol BS10 7NY

for Mr Steven Tottle.

Application Number:

24 / 00576 / P

Introduction:

The application is an outline only application with all matters reserved.

Therefore, the detailed design of the dwelling has not been undertaken.

The energy statement at this stage has been prepared to show that a workable renewable energy system can be utilized to generate 10% – 15% of the energy demand for the development

Site / Location:

The new dwelling is proposed to be placed in the side garden of 3, Trevelyan Walk, Henbury, Bristol.

Number 3 is on a substantial corner plot with the majority of the garden to the side of the property and along Harmer Close to the south.

A ‘Proposed Block Plan’ has been produced for illustrative purposes only.

It shows how the orientation of the new house can be designed to maximise exposure to solar radiation by the inclusion of Photo Voltaics; and take full advantage of solar gain through glass on the southwest elevations particularly.

Proposed Dwelling:

The Proposed Block Plan shows how a dwelling of approximately 150m2 will sit comfortably on the site. It will be detached and can be designed to have long elevations facing south.

It is proposed to construct it using heavily insulated timber frame SIP panels for walls and roof. The floor construction will be a heavily insulated timber floor construction. All the elements will be specified to have approximately 33% more insulation than is the minimum required in the current building regulations.

Renewable Energy Sources:

Due to its location and the type of dwelling proposed, the renewable energy Sources that are proposed will achieve at least 10% -15% of energy needs from renewables.

- **Air Source Heat Pump**
- **Solar PV**

- **MVHR – Mechanical Ventilation with Heat Recovery**
- **Waste Water Heat Recovery**
- **Solar Gain**

Conclusion:

Correctly installed, air source heat pumps and Solar PV will, in themselves, achieve greater than 15% of the renewable energy required for a dwelling of the size illustrated on the Proposed Block Plan.

Incorporating insulation measures more than the requirements of the Building Regulations Pt L (BREL) will significantly reduce the demand for energy.

And finally, a good design should have as a significant part of the design brief, a statement of intent to improve on the minimum targets

Sources:

- **Building Regulations 2023 Pt. L (BREL)**
- **LABC – Construction Details**
- **Energy Lab – Fabric Element Analysis**
- **SIP Construction – A Guide To Building With**
- **Building For Life 12 – Design Council / CABE**
- **The Green Building Store – Using MVHR**

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