AVON Energy Surveyors Ltd

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Energy Statement

Project: Sladacre Barn, Bath Rd, Blagdon BS40 7TH

June 2023

We have now completed our 'as built' assessment of this project as requested.
We have carried out the assessments using Government Approved SAP 2012 software to calculate the energy requirements and carbon emissions for the whole building in compliance with Part L of Building Regulations.
We have followed all calculation conventions and government requirements during this process.

Planning requirements

The following is the relevant extract from the North Somerset District Council's Core Strategy:

CS2: Delivering sustainable design and construction.

New development both **residential (including conversions)** and non-residential should demonstrate a commitment to sustainable design and construction, increasing energy efficiency through design, and prioritising the use of sustainable low or zero carbon forms of renewable energy generation in order to increase the sustainability of the building stock across North Somerset. The greatest potential for energy saving opportunities is likely to be at larger scale.
When considering proposals for development the council will:
1) require designs that are energy efficient and designed to reduce their energy demands.
2) require the use of on-site renewable energy sources or by linking with/contributing to available local off-site renewable energy sources to meet a minimum of 10% of predicted energy use for residential development proposals involving one to nine dwellings, and 15% for 10 or more dwellings.
Consequently, the requirement for this proposal is to provide a **minimum of 10% of the total energy** requirements of this building from renewable energy sources.

Please note that the calculations are for the purpose of the planning application only. There is no implication that this is a design calculation for renewable energy technologies, as we do not have the expertise to design any specific system. It is an indication that the objective can be achieved. The choice of any specific technology remains with the client who should consult with a reputable installer/designer at an early stage to establish that any proposal is workable in practice, and in due course to establish the final design.

Any subsequent fit-out will need to comply with Part L of the Building Regulations. The services installed will either be as assumed or more energy efficient if the tenant chooses a more energy efficient specification.

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The requirements of the local authority Planning Department must not be confused with the requirements of Part L1A of the Building Regulations, however as part of this exercise we can confirm that, based on these assumptions, the proposals meet the requirements of the Building Regulations.
In due course, the Building Control Body will require different calculations to those presented below.
Before sale or lease of the property is undertaken a separate EPC will be required based on actual construction and services used.
These figures have been used to populate the Energy Strategy Table

This Development
Creation of a dwelling.
It is noted that the North Somerset planning guidance requires the renewable energy requirement is to be expressed in terms of kWh.
Mains gas is not available to provide either space heating or domestic hot water. Both the energy usage calculations and proposed solution take due account of this.
The baseline for the purpose of this exercise is the theoretical total "regulated" energy (i.e., for space and water heating, lighting, pumps and fans) that would be consumed by the occupied building over a year, if they were built to Building Regulations minimum standards as required by EPC legislation. (Approved Document Part L1A Conservation of fuel and power in new buildings other than dwellings, which came into effect on 6 April 2016).

This development has been designed to reduce energy use, and has taken into consideration the guidance document 'Creating Sustainable Buildings in North Somerset', particularly:

2.14 This overarching climate change policy includes a range of sustainability aspects that are integral to creating sustainable buildings and places. The requirements of CS1: 1. development should demonstrate a commitment to reducing carbon emissions, including reducing energy demand through good design, and utilising renewable energy where feasible.
8.6 The Future Homes Standard consultation in 2019 outlined two approaches to increasing the energy efficiency standards of Building Regulations. The government's response has confirmed that it will implement 'Option 2 – Fabric plus technology' approach. …..
8.18 in this instance the approach the fabric performance design exceeded Fabric Energy Efficiency Standard (FEES) level, without incorporating renewable and low carbon technologies. This achieves overall emissions at or below the carbon compliance level.
10.4 *In circumstances where all possible ranges of appropriate technologies have been explored and none are suitable, then this must be demonstrated at the earliest opportunity in the development management process.*
The Energy Report submitted with this application made this clear and detailed the levels of fabric efficiency to be adopted. These levels have been met or exceeded.
The condition imposed stated that this was to be *'in accordance with details that have been approved in the Energy Statement submitted with this application.'*
This confirms that this approach was approved at the outset.

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Conclusion

The attached Energy Strategy calculation sheet shows the comparison of thermal values and reduction in energy demand and carbon emissions.
The measures proposed will result in an overall saving of some **13%** of energy demand and **13%** of carbon emissions compared to the baseline model. (Minimum Part L requirements)

In conclusion I am pleased to confirm that this proposal fully complies with the requirement to show an improvement of at least 10% over the Gross "Baseline" energy demand of this development.

Tim Winsland MRICS, Dip DEA, Dip NDEA (level 4).