



Land at Mold Road, Stansty

Wrexham

- Planning application

Ref: P/2019/0923

-Supplemental Note to Sustainability Strategy Statement –

Revised /04-10-23

This supplemental note is to be read in conjunction with the submitted Sustainability Strategy Statement (SSS) version 2 provided by Briary Energy (October 2019).

Since the Outline Application (Ref: P/2019/0923) was submitted in December 2019, the stator guidelines have been updated and changed significantly to meet the Welsh Governments target to reach Net Carbon Zero (NCZ).

The Future Homes standards were originally proposed in a UK government statement in the spring of 2019 (and is still applicable Wales) and it sets out National targets to achieve net zero by 2050. Interim approved documents L and F were consulted on during 2021 and implemented in June 2022. The main regulation change seeks to deliver a 31% CO₂ reduction over the previous regulations, with the use of low carbon technologies to achieve this. The new SAP software (SAP10) gives greater weight to the use of technologies like Air / Ground Source Heat Pumps, along with the Photovoltaics as a supplement to the primary heating source. Importantly however, it doesn't discount the use of Fossil Fuels (natural gas), but makes it more onerous to comply with the regulations when adopting this approach.

The original SSS took a completed fabric first approach, this was (at the time of writing the report) the most effective way to meet compliance with the regulations, however as noted above, the regulations have changed significantly. Accordingly, this Note sets out key parts of the previous report that are now updated, and which will apply to this planning application, to reflect the updated regulations.

Page 6 of the SSS contains the previous U-Values (as shown in Figure 1 below)

Figure 1: Original U-Values within the submitted SSS

Element	Building Regulations (Wales)	Proposed
Ground Floor	0.18 W/m ² k	0.18 W/m ² k
External Wall	0.21 W/m ² k	0.21 W/m ² k
Dormer	0.21 W/m ² k	0.21 W/m ² k
Insulation at Joists	0.15 W/m ² k	0.11 W/m ² k
Windows	1.60 W/m ² k	1.4 W/m ² k
Doors	1.60 W/m ² k	1.2 W/m ² k
Air Perm	10.00 m ³ /hm ² (@50 Pa)	5.01 m ³ /hm ² (@50 Pa)
Thermal Bridges	0.15 ≤ Y	Calculated Constructive Details

To meet the new regulations, we are now proposing to adopt the below U-Values as shown at Figure 2. d the below should supersede the previous table noted in Figure 1.

Figure 2: New Regulations and Proposed values

Element	Building Regulations Wales	Proposed
Ground floor	0.15 W/m2k	0.15 W/m2k
External Wall	0.18 W/m2k	0.17 W/m2k
Insulated Joist	0.13 W/m2k	0.08 W/m2k
Windows	1.4 W/m2k	1.2 W/m2k
Doors	1.4 W/m2k	1.2W/m2k
Air Perm	8.0m2/hm2(@50pa)	4.01m2/hm2(@50pa)
Thermal Bridging	$0.15 \leq Y$	calculated PSI values

The previous SSS discounted (as shown in Figures 3) use of Photovoltaics (PV) and Air Source Heat Pumps (ASHO) as they were not necessary to achieve the required U-Values/Building Regulations, as we were adopting a Fabric first approach to meet the necessary regulations.

Figure 3: previous approach to meeting old regulations

Low to Zero Carbon Technology Reductions – continued

Potentially viable energy strategies considered	Number of Dwellings Applied to	Energy Saved %	Carbon Saved %	Proposed?
Solar hot water	0	0%	0%	No
Solar Photovoltaic (Approx.)	0	0%	0%	No
Wind Turbines	0	0%	0%	No
ASHP	0	0%	0%	No
GSHP	0	0%	0%	No
Flue Gas Heat Recovery	0	0%	0%	No
Waste Water Heat Recovery	0	0%	0%	No
Fabric Approach	455	7.5%	6.6%	Yes

Following the changes to the previous regulations, the development as proposed can meet the new regulation guidance in a number of ways. Whilst current legislation is guiding development away from the use of fossil flue (natural Gas) as a source for heating and hot water. Compliance with the current regulations can primarily be achieved through a fabric first approach, natural gas fired boiler which can then be supplemented through the use of Photovoltaic panels. The number of panels will depend on the orientation and location of the dwelling, however it is a practical solution.



Another option would be the use of ASHPs, this technology is deemed to be more efficient and is the option being more commonly utilised across the House Building Industry to comply with the current regulations. ASHP are said to be more than 300% efficient, this coupled with the fabric first approach and supplemented with PVs is another viable option to be compliant with the current regulations.

We have seen a notable shift in the market with increased numbers of electric cars on the roads, all dwellings, will be fitted with a min 7kwp charging point, this will make the transition from petrol / diesel cars easier for the future occupiers.