

Planning Statement

Proposed Demolition of an Existing Agricultural Barn to Allow the Construction of a New Net Zero Carbon Pavilion Style House to be Certified by the Passivhaus Trust – Approved on the 26th June 2023 Under Reference NE/23/00245/FUL

Approval is sought to modify the property design as shown in the following drawings:- 'Revised Floor Plan RevD', 'Revised Elevations RevD', 'Revised Site Plan RevD'.

Three changes are requested and the reasons for these are detailed below:

Reduction in the Number and Size of Some Windows

The property will be certified by the Passivhaus Trust when completed and the conditions required to achieve this are very demanding. In its originally consented form the ratio of glass to wall was too high to achieve the required space heating demand. The U values of the windows are much higher than those of insulated walls so a reduction in glazing area is required. It is therefore proposed to eliminate some windows (predominantly on the north elevation) and reduce the size of others.

External Wall Move

The form factor of a property (ratio of treated floor area "TFA" to external thermal envelope area) has a significant influence on total space heating demand. In our case the form factor was marginally too high so we propose to move a wall on the north side of the property by 0.8m. This increases the TFA without changing the thermal envelope significantly i.e. the roof and floor area increases slightly but the wall area reduces which results in an overall decrease in form factor. This particular wall can only be seen when standing on our own property at the rear of the building and is not visible from any other vantage point in the village. As a result of moving this wall the external footprint of the property increases from 247.28m² to 255.20m² (a 3.2% increase). The internal area increases from 197m² to 208m² (a 5.5% gain) although this is partly as a result of changing the wall construction to decrease the thickness and further increase the TFA thereby further reducing the form factor.

Property Height Reduction

In order to further reduce the external wall area (and consequently reduce the form factor and in turn reduce total space heating demand) we propose to reduce the eaves level of the property from 3.4m to 3.08m. At the same time however we would like to decrease the amount of site level reduction to improve the relationship between the property and the hawthorn copse. This results in the eaves height being lower than the original building ridge height by 370mm rather than 200mm as previously consented. There will be a

slight crown to the flat roof though to aid water drainage so the total building height will therefore be 150mm less than the original barn ridge height. It's important to note though that the property level is significantly above those of the neighbouring properties, being further up the hill, and they will therefore not be able to see the slight crown and the overall building height will therefore appear to be the top of the eaves (370mm lower than the original barn).