

SUPPLEMENTARY STATEMENT

Proposed Passivhaus at 40 Ham Green, Pill BDS20 0HA

1. Summary

1.1. This proposal is substantially similar to minor material amendment to planning permission 19/P/3168/FUL reference 21/P/3343/MMA. The changes are described below.

2. Purpose of changes

2.1. As a result of the pandemic, the war in Ukraine, trading changes due to Brexit and, more recently, high inflation, the cost of construction has significantly increased. As the sale of our current house is needed to fund the new build, the drop in house prices has compounded the problem for us. The proposed changes forming this planning application are designed to reduce construction costs by making the building smaller and simpler. Also to fine tune the design to suit the Passivhaus standard which includes reducing the area of glazing, which will reduce costs while remaining true to the original design concept.

3. Changes and detailed reasons:

3.1. The width of the building has been reduced by 650mm which equates to nearly 15m² less floor space to build.

3.2. The roof pitch has been amended to suit concrete interlocking tiles, so that this roof finish can be used if the budget cannot run to a more expensive standing seam metal roof. This change in pitch was achieved by lowering the eaves and modestly increasing the ridge height. This increase does not affect the prominence of the building because a corresponding reduction in eaves height slightly reduces the overall silhouette of the west elevation of the building. This is illustrated on drawing 269/PL20. Should funds permit the design will revert to a standing seam metal roof.

3.3. There is a reduction in glazed areas overall to avoid both excessive heat loss in winter and summer overheating. Windows to the north and east elevations have been amended because the lower eaves height means it is not possible to have first floor windows on the north elevation. The staircase has been turned through 90° and is now a dog-leg stair rather than a single flight. Daylight to this area can now be provided with a window rather than a more expensive rooflight. The area of glazing to the west elevation has been reduced.

3.4. The garage has been omitted. This is a cost saving and also gives a more generous plot for the existing house and allows the existing shed to be retained. This is larger than the previously proposed shed can incorporate garden storage as well as space for cycles. There is an electricity supply to this shed so it can also be used for charging an e-bike.

3.5. Canopies to the entrance and back door have been changed from flat to pitched which is more practical, particularly as these are both glazed now.

3.6. The main roof overhang on the south elevation has been reduced because this is an awkward detail for a Passivhaus as it can create a cold bridge by extending rafters.

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- 3.7. The cladding to the west elevation has been canted on the south side of the windows to bedrooms 2 and 3 to increase solar access from the south.
- 3.8. Changes have been made to the proposed parking, the reasons for which are set out in a separate statement. (reference 269.PL3.ResParkNeedsAssess)
- 3.9. Two spaces are now proposed for the existing house. The third space for the proposed house is a tandem parking space, which is acceptable as this is private and not communal parking.
- 3.10. The diagram below shows how the relative output of solar panels varies depending on pitch and orientation. Although the roof where the solar panels are mounted has been reduced in pitch from 25° to 17.5° by interpolation this change results in only around 2% reduction in output.

	West		SW			South			SE		East		
Horiz	270°	255°	240°	225°	210°	195°	180°	165°	150°	135°	120°	105°	90°
0°	90	90	90	90	90	90	90	90	90	90	90	90	90
10°	89	91	92	94	95	95	95	95	95	94	93	91	90
20°	87	90	93	96	97	98	98	98	97	96	94	91	88
30°	86	89	93	96	98	99	100	100	98	96	94	90	86
40°	82	86	90	95	97	99	100	99	98	96	92	88	84
50°	78	84	88	92	95	96	97	97	96	93	89	85	80
60°	74	79	84	87	90	91	93	93	92	89	86	81	76
70°	69	74	78	82	85	86	87	87	86	84	80	76	70
80°	63	68	72	75	77	79	80	80	79	77	74	69	65
90°	56	60	64	67	69	71	71	71	71	69	65	62	58

Vertical

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