

New Passivhaus to replace large outbuilding to the rear of  
Sidelands, 40 Ham Green, Pill, Bristol BS20 0HA

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Design Statement revision B

southpoint!

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## SUMMARY

This statement has been prepared to accompany a planning application for a very similar but smaller building than approved application number 19/P/3168/FUL for a new Passivhaus to replace a large outbuilding to the rear of Sidelands, 40 Ham Green, Pill, Bristol BS20 0HA.

This statement comprises the following:

DESIGN STATEMENT

ACCESS STATEMENT

ENVIRONMENTAL STATEMENT

## DESIGN STATEMENT

### Introduction

This statement has been prepared to accompany a revised scheme submitted for planning permission for the construction of a new Passivhaus dwelling to replace a large outbuilding to the rear of Sidelands, 40 Ham Green, Pill, Bristol BS20 0HA. This is a self-build project for the current owners of 40 Ham Green. Full planning permission was granted for a new Passivhaus (reference 19/P/3168/FUL) and a Section 73 planning application to substitute new drawings was subsequently made and approved. (21/P/3343/MMA). The main change in this new scheme is a reduction in the size of the building and the omission of the garage. A separate statement summarises all the changes proposed



View of entrance to large outbuilding and sets out the reasons for making them.

The plot is currently occupied by Sidelands, a single family dwelling in a large garden.

The site of the proposed Passivhaus is a sloping area occupied by a large outbuilding, which was originally used in connection with an egg production business, and is clad in cracked unpainted cement render with a green profiled industrial metal roof. Additionally, there is a timber shed, a concrete driveway and hardstanding, and concrete block retaining walls with a raised concrete paved terrace. Overall the area is unattractive and of poor quality.

To the rear of where the new house is proposed is a large plot of land situated in the Green Belt, for which a Certificate of Lawfulness was granted for use as a domestic garden in June 2016 (reference 16/P/0891/LDE). This plot is bounded on the west side by a wooded area which extends down to Markham Brook, which forms the west boundary. The east boundary continues along the end of the rear gardens to numbers 42 and 44 Ham Green. The north boundary is the garden to 38 Ham Green and the south boundary is the plot to number 48 Ham Green.



View of site



View of site

## DESIGN STATEMENT



View from first floor of no. 40

A Passivhaus is an ultra low energy building, achieved through a rigorous process of thermal modelling, detailed design and attention to the quality of construction. The principles were developed by the Passivhaus Institute in Germany and are certified through an exacting quality assurance process. Post occupation evaluation has demonstrated that finished buildings perform closely in accordance with the exacting design standards. Ideally Passivhaus buildings are simple shapes and more than one storey, to reduce the ratio of surface area of heat loss to the floor area.

A Passivhaus consultant was appointed and their Energy Statement for the larger scheme is included with this application which shows how

the design has achieved the Passivhaus Standard. The latest changes include fine tuning to make it easier to achieve this standard.

### Use of building:

The proposed building is a two storey, four bedroom detached, single family dwelling to replace the large, single storey outbuilding and shed.

### Site:

Although no longer classified as such in planning terms, the character of the site is brownfield land – an existing building, hard paved surfaces



View from first floor of no. 40 showing site with larger shed and roof of large outbuilding



View of site from southwest

and concrete hardstanding. 35m<sup>2</sup> of poor quality lawn would be lost as a consequence of the new house being constructed, less than 1% of the total plot area. The proposed new dwelling is within the Settlement Boundary of Pill and outside the Green Belt.

### Amount of development:

The footprint of the existing single storey building is 83m<sup>2</sup>. The footprint of the proposed two storey building is 103.5m<sup>2</sup>. The gross internal area of the proposed two storey dwelling is 152.5m<sup>2</sup> (where headroom is at least 2m)



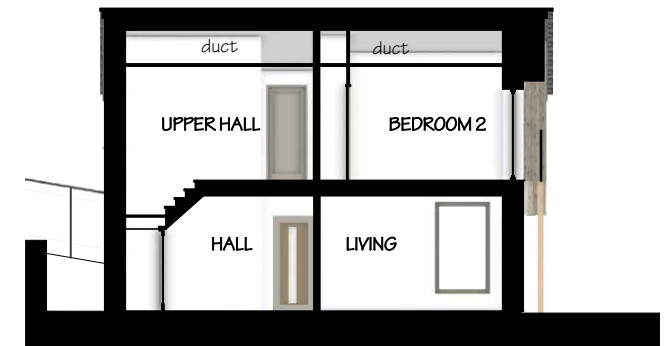
## DESIGN STATEMENT

with retaining walls on three sides. In particular, on the east side the building is over 2m below ground level. By setting the building down this depth the roof is only just higher than the roof to the single garage. This dramatically reduces the impact of the new house when viewed from Ham Green and from the existing house.

To keep the ridge height down the roof is at the lowest pitch for concrete roof tiles of 17.5°.

The house is comparable in scale with neighbouring properties.

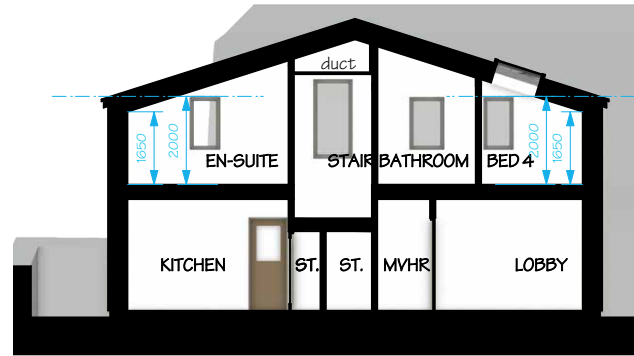
**Appearance, Detailing and Materials:** Houses along Ham Green are clad in a variety of materials including brick, render and artificial stone so there are no strong precedents for



Long section through ridge

### Site layout:

The proposed site for the building is quite steeply sloping, with a change of level of over 3m, and is accessed via the existing concrete driveway. On the west side the proposed building extends up to the current boundary of the Green Belt. On the east side the site division is where the north boundary steps in. The whole of the land to the west of the site will be associated with the new building. A decent sized



Cross section of proposed building showing low eaves

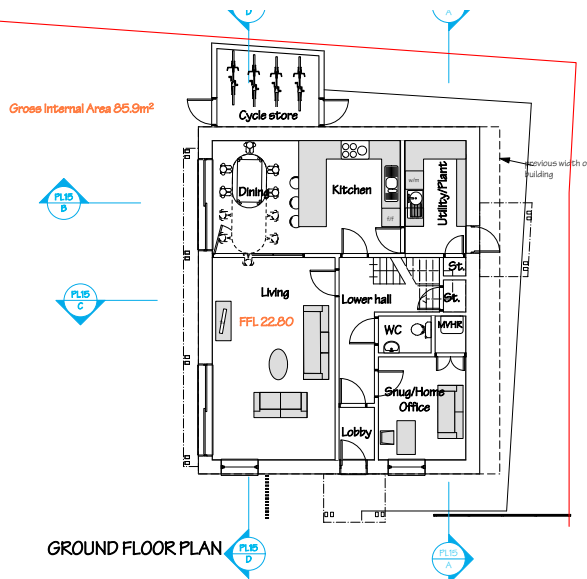
garden is retained for the existing house with amenity spaces, areas of decorative planting, a large shed for cycle and other storage, and two off street parking spaces.

### Building layout:

The proposed building is designed to take maximum advantage of orientation to the sun and views of the plot. Principal rooms are situated on the west side with service accommodation to the east. The entrance is on the middle of the elevation facing the driveway, which minimises internal circulation.

### Scale:

The building is set down into the sloping site,

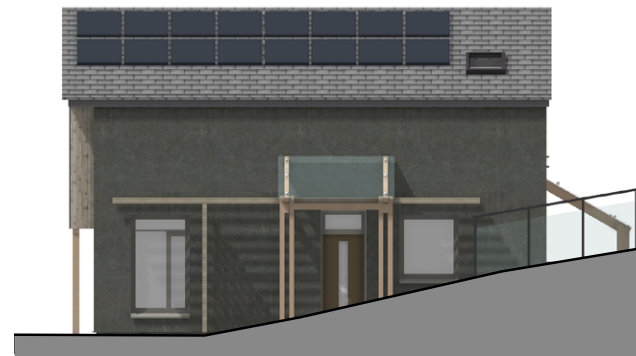


Ground floor plan



The west elevation of the new house will be visible from a few properties on Brookside and from a few gaps between these houses. The closest part of Brookside is approximately 125 metres away from the closest part of the new building.

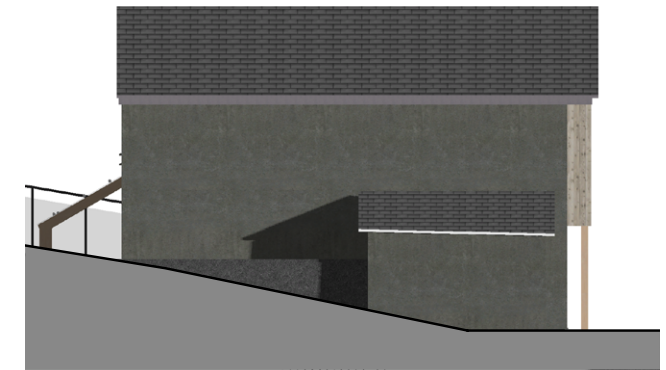
The proposed materials are neutral coloured and mid to dark toned so they read as background materials and will all reduce the presence of the building. The main cladding material is a darkish coloured textured render. To the west elevation is an untreated timber clad shallow projection at first floor level supported on timber columns. This conceals the fixings for balustrade panels and the essential sunshading



South elevation of proposed building

West elevation of proposed building materials in a new building. Furthermore, the proposed new building reads not as part of the group of houses along the road, but part of a more sparse group of buildings situated down the slope from the road. These include numbers 62 and 48 Ham Green, and are characterised by being almost invisible from the road and associated with large parcels of land. For these reasons there are no strong contextual requirements to adopt particular materials.

The new house will be glimpsed from the road and neighbouring houses along Ham Green but is low and cut into the slope, and appears as a single storey building from this location. Overall, there will be little impact.



North elevation of proposed building

blinds needed on the west elevation to avoid summer overheating. Inevitably the lower side of a building on a slope will be more prominent but by having two different materials the visual impact is reduced.

The proposed roof finish is grey and will be either interlocking concrete tiles or a standing seam metal roof if affordable.

**Green belt:**

The proposed new dwelling is outside the Green Belt. It will have little effect on the openness of the Green Belt because it is replacing an existing building. Views of this part of the Green Belt are quite restricted as it comprises a

valley with both sides sloping steeply towards Markham Brook. There are glimpse views from one position in Brookside on the other side of the valley. From here much of the Green Belt is not visible and the overall feel is suburban. As a consequence of restricted views, being set down the slope, and the proposed recessive materials, the new building will have little impact on the Green Belt.



View of nos. 38 and 40 Ham Green from Brookside



View of no. 40 Ham Green from public footpath off Brookside obscured by mature trees

**Amenity of neighbours:**

The site is already part of a dwelling so the new use is compatible with the area. The current parking on the west side of the outbuilding will be used as parking for the new house and parking for the current house will be at the front. There will therefore be no additional vehicles driving and manoeuvring in this area.

Windows on the east elevation are obscured

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glass with restricted opening to bathrooms and en-suites and a fixed light above the stair landing. This avoids overlooking the existing house and numbers 42 and 38 Ham Green. .

The new building will be more attractive than the existing outbuilding.



View of nos. 42 and 44 Ham Green from Brookside



## ACCESS STATEMENT

accessible WC on the entrance level in accordance with the Building Regulations.

### Parking:

Three new spaces are provided for the new dwelling.

Two spaces are provided for the existing dwelling. This provision has been determined using North Somerset's *Residential Parking Needs Assessment*. Secure undercover cycle parking is provided for both the existing and new houses.



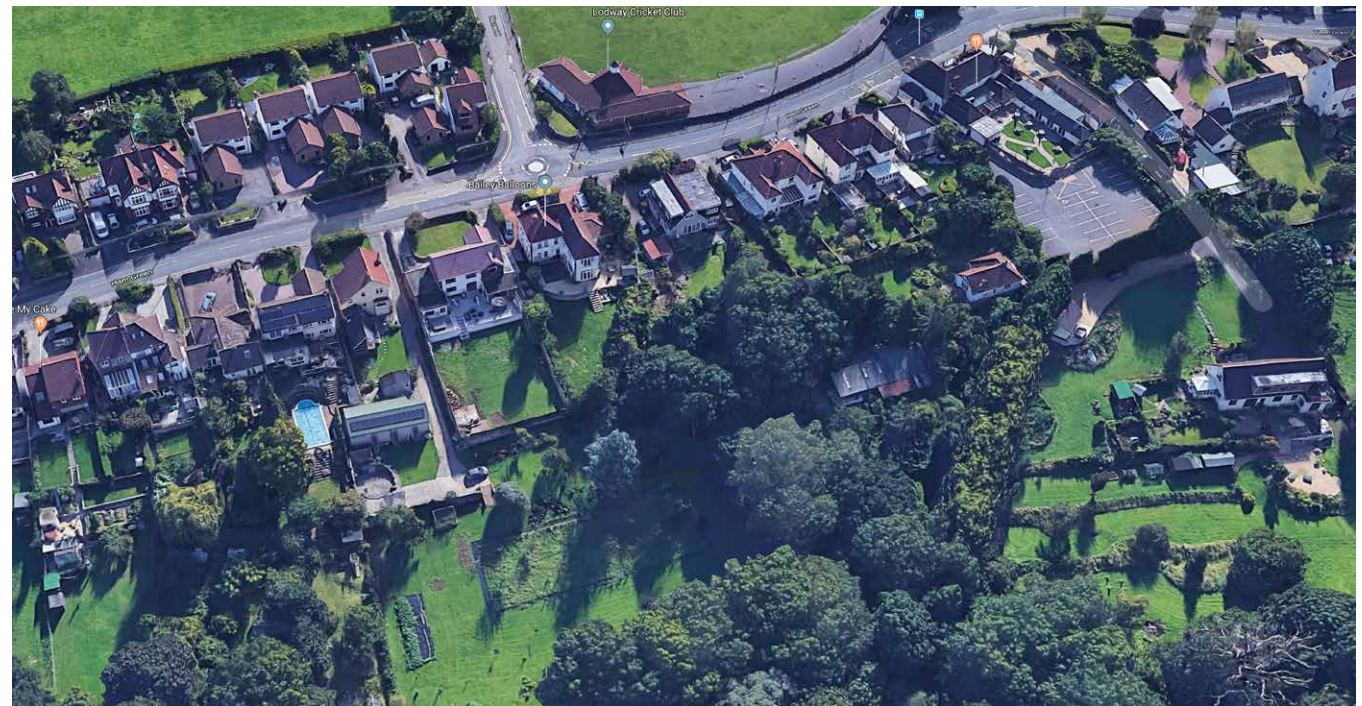
Aerial view of site and neighbouring houses

### Access within the site:

Vehicle access to both the new and existing houses is via the existing drive. There is a proposed new pedestrian access to the existing house off Ham Green.

### Access within the dwelling:

The site is sloping but the front door is situated to give level access. There is a wheelchair



Aerial view of site and neighbouring house showing buildings below Ham Green road



## ENVIRONMENTAL ISSUES:

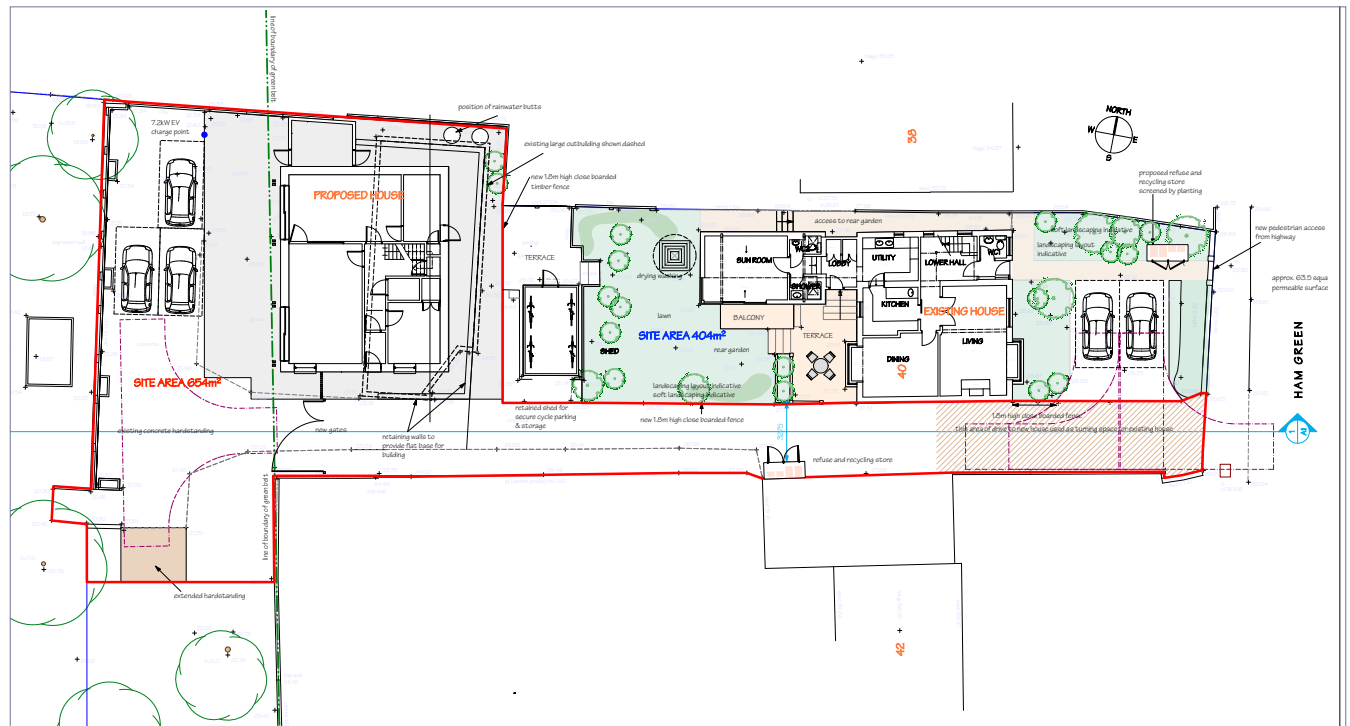
Please also refer to the report by the Energy Statement prepared by the Passivhaus Consultant.

### Waste and recycling

- There is space in the utility room and externally for the separation and storage of non-recyclable and recyclable household waste. New refuse and recycling stores are proposed for both the existing and new houses.

### Drying washing

- There is plenty of outdoor space for drying washing



Site plan

### Materials

- There is the opportunity to use materials with long life and low embodied energy.
- Softwood timber is an environmentally friendly building material with low embodied energy, grown in a sustainable way. Its use as a building material encourages the creation and

management of forests, which also provide a habitat for wildlife.

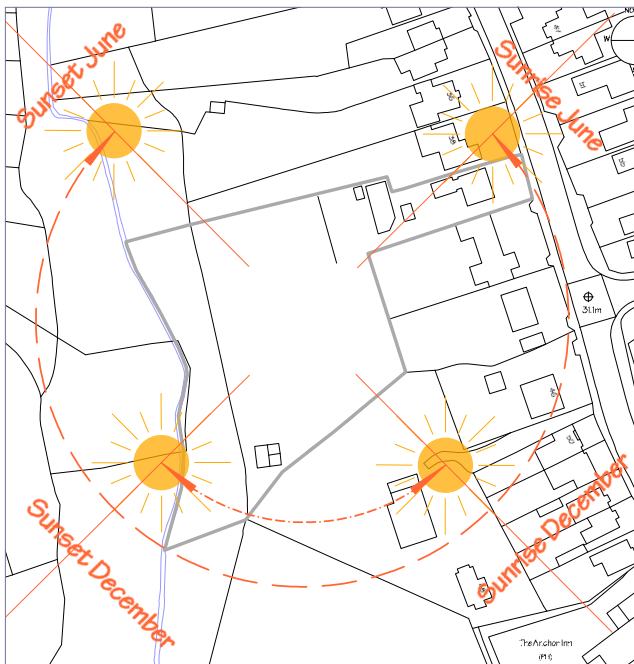
### Pollution

- There is potential to use low GWP insulants in the timber frame wall and roof construction. Recycled newspaper is one of the insulants being considered



View of generous width access drive between nos. 40 and 42

## ENVIRONMENTAL STATEMENT



Sunpath diagram

and invertebrates. It would be possible to include nesting boxes and bat boxes to further encourage wildlife.

- Many native trees and shrubs, together with fruit trees have been planted on the plot and around 600m<sup>2</sup> of previously low mown grass is being turned into a perennial wildflower meadow, which is beneficial to wildlife, particularly bees and other insects.

### Water consumption

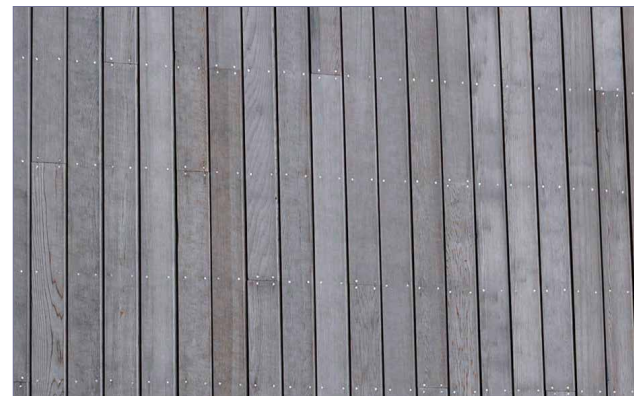
- There is space shown on the plans for water butts to collect water from the roof for garden watering.



Wildflower meadow developing well

### Drainage and SuDS

- The information from the Environment Agency shows the site is in an area not vulnerable to flooding. Overflow not collected in water butts will be discharged into soakaways or ditches. There is little additional hardstanding proposed.



Untreated softwood cladding

### Health and Wellbeing

- There is the opportunity to increase sound insulation within the building above the standards set out in the Building Regulations.

### Biodiversity

- Adjacent to the site is a paddock and woodland which offer good habitats for birds, mammals