

Design and access statement for a new dwelling in Brockley

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Design and Access Statement

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The Design and Access Statement

The Design and Access Statement has been produced to support the new planning application for a proposed one-storey single detached dwelling at land opposite Glasshouse Barn, Mill Road, Brockley, Bury St. Edmunds, IP29 4AR.

The site and wider context

The site is located in Brockley, approximately 7 miles south of Bury St Edmunds and 9 miles north of Sudbury. Brockley is a village and civil parish in the West Suffolk district of Suffolk, England.

The existing access onto the site is to the south, from Mill Road. The site currently contains access for agricultural machinery to the larger field. The site is agricultural land which is part of a larger field. There are no existing structures on site.

The site is not within a conservation area, AONB, SSSI, SPA, SAC, SLA, NNR, or article 4 site.





SKYLARK BARN



LEVERET VIEW



MULLEY VIEW



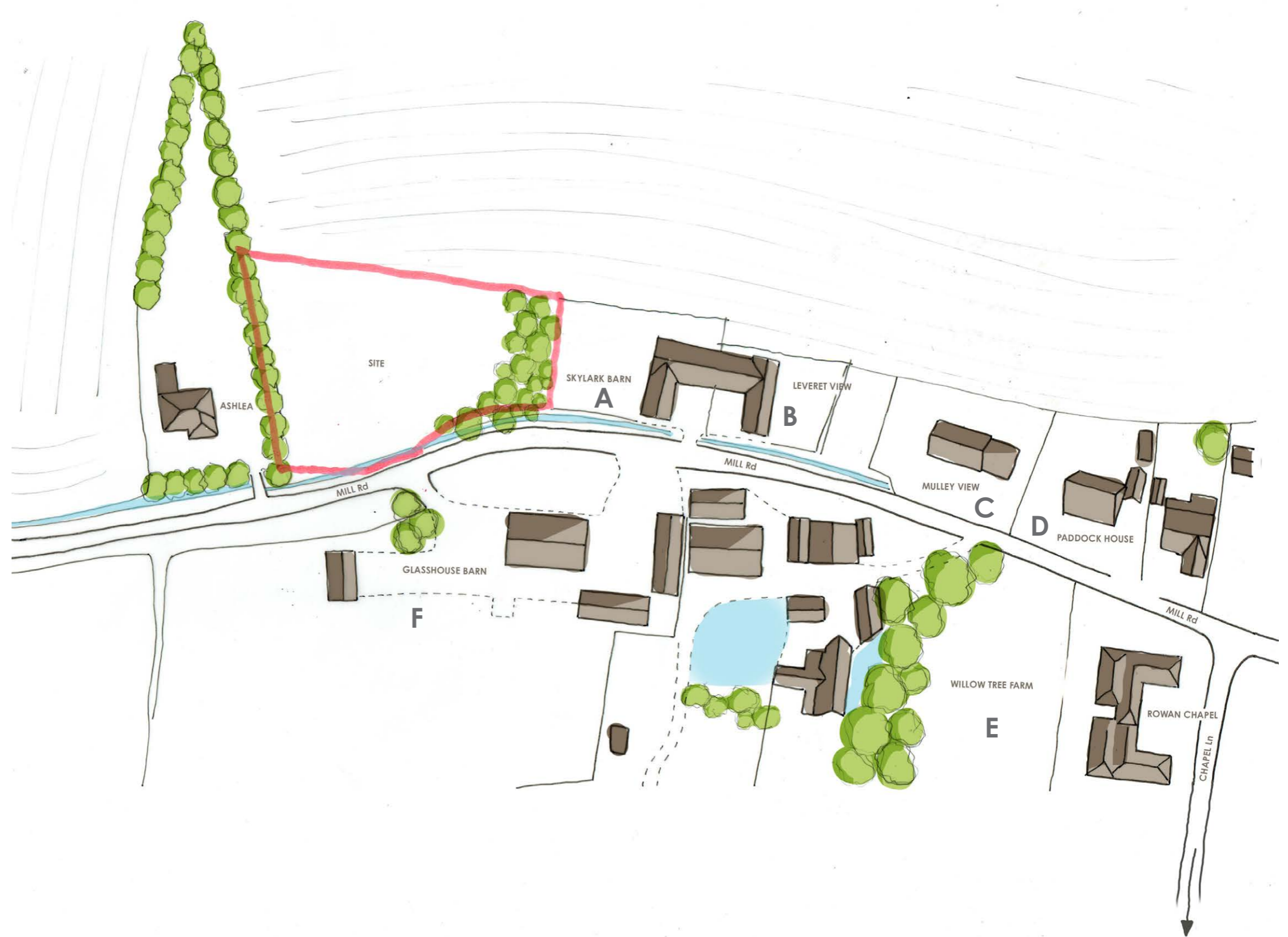
PADDOCK HOUSE



WILLOW TREE FARMHOUSE



GLASSHOUSE BARN



Surrounding context

Mill Road does not have a predominant architectural style, most buildings are built in the 20th century. There are mostly bungalows and 1 1/2 storey detached dwellings of an agricultural style.

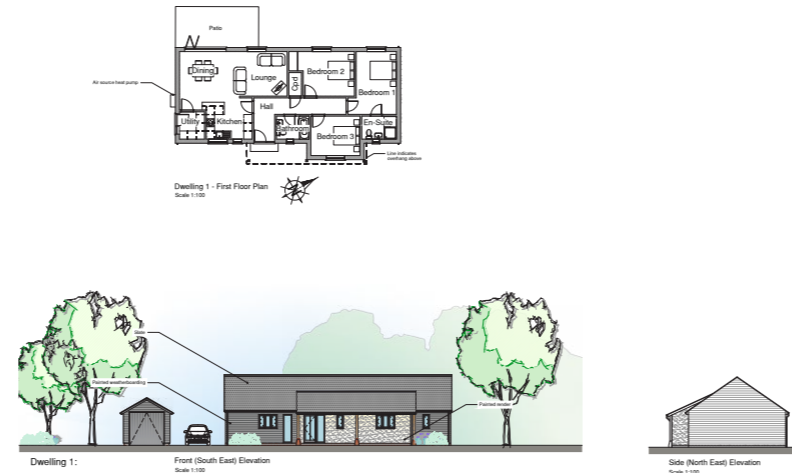
The area exhibits a variety of building materials: red brick, buff brick, different colour renders, black timber cladding, corrugated tin, slate and pantile roofs.

To the west of the site is a neighbouring dwelling, Ashlea. To the east are two new dwellings, Skylark Barn and Leveret View, both were sold recently. To the south, there is a residential dwelling, Glasshouse Barn, and outbuildings. To the north of the site is an open field. The site is surrounded by dwellings to the east, south and west. Therefore the site is within the natural urban area of the village and within the 30mph speed limit.

In 2019 a planning application for the site (DC-19-2130-Full) was submitted and later withdrawn by the applicant. The application was for two dwellings, the first was 3 bedroom bungalow with a single garage (104.4sqm dwelling + 24.6sqm garage) and the second was a 1 1/2 storey 4 bedroom family home and garage (128.7sqm dwelling + 24.6sqm garage).

Dwelling No. 1 had a slate roof, painted weatherboard cladding, and rendered porch. Dwelling No. 2 had a clay pantile roof, red brick cladding and timber clad porch.

The application was proposing maintaining existing access for new dwellings and also maintaining the access to the field for agricultural machinery. Dwelling No.1 had two external parking spaces and dwelling No. 2 had three external parking spaces.



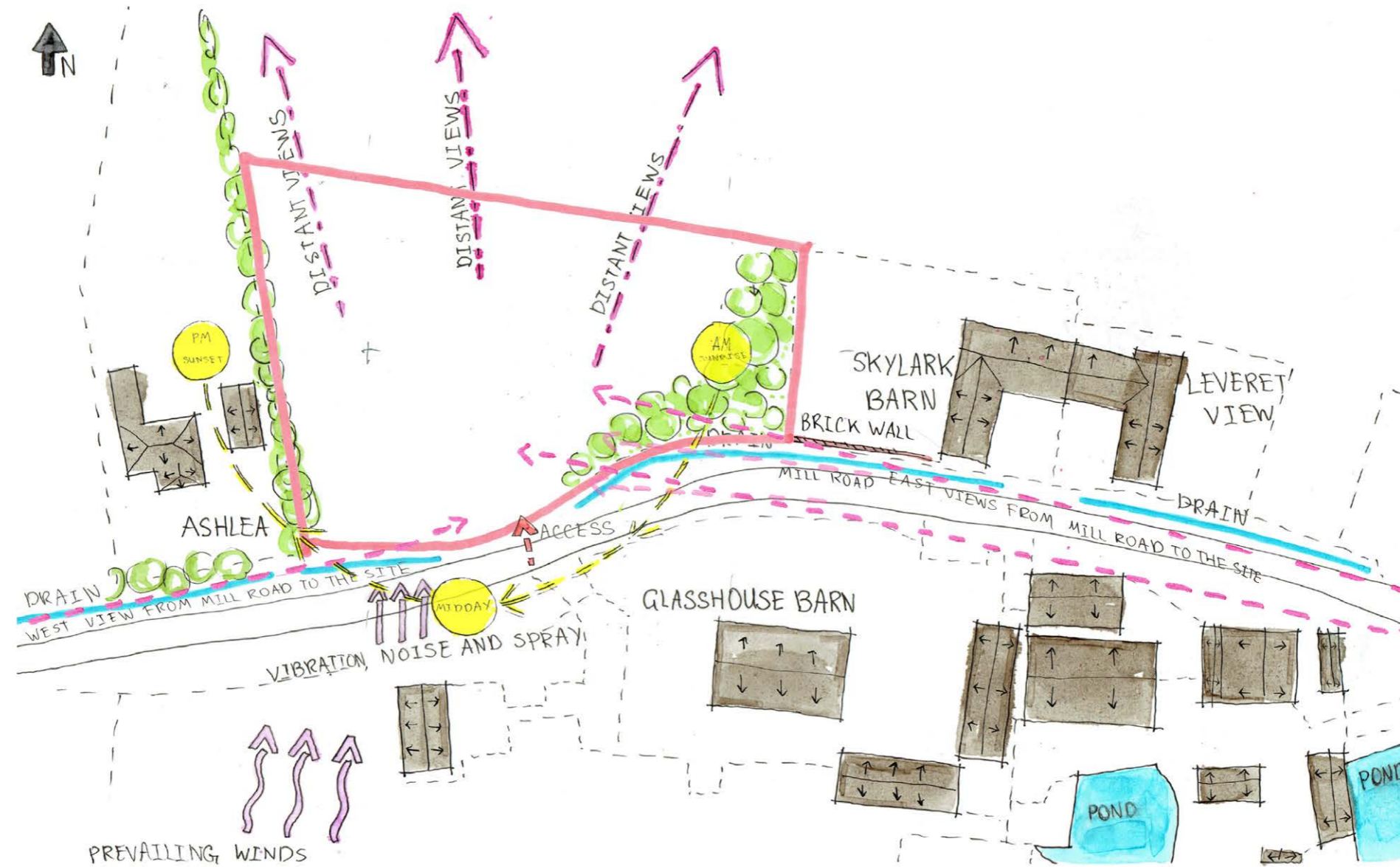
Previous planning application dwelling 1 elevations and plans



Previous planning application dwelling 2 elevations and plans



Previous planning application proposed roof and block plan



Analysis

The land gently slopes down from north to the south and from east to west. There are no trees in the proposal development area. The applicant already planted a copse to the south-east and plans to plant more to the east (see sketch to the right).

A ditch that is collecting runoff surface rainwater from the field is to the south and west.

The site boasts stunning distant views into the open field to the north. Other key design considerations

are the passage of the sun, views onto the property, neighbouring privacy and relationship to adjacent building typologies and ridge heights.

Initial Design Drivers:

- Capturing and enhancing views towards tree canopy and short views within the site;
- Creation of the potential for solar capture;
- Formation of sheltered outdoor seating;
- Staying coherent with neighbouring building styles

conforming to the wider context of the village - Skylark barn (East of the site) in particular;

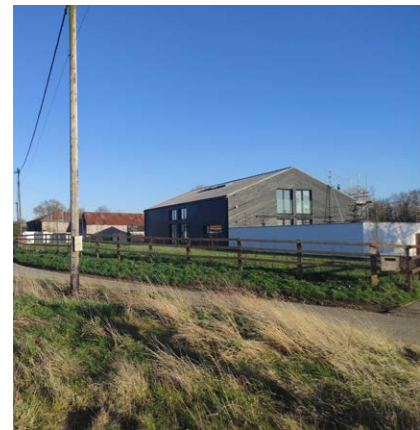
- Conforming to the hierarchy of neighbouring structures. Size, shape and height;
- Positioning of tree lines to the east and west of the site to block sightlines between structures and help frame key outdoor spaces.

Due to the village of Brockley's agricultural nature, we felt it was important that the proposal referenced the style of an agricultural barn. This has been achieved with three key design refernces:

The building forms three blocks that recreate the typical ad-hoc construction of barns, with many additions over time. These commonly have varying ridge heights and this design language has also been referenced in the proposal. The tall open spaces within the interior that this creates will be celebrated with vaulted ceilings.

The planform creates two U shaped sections, resulting in courtyard areas typical of East Anglian barns.

The fenestrations of the proposal are primarily vertical and tight in nature, particularly on the street-facing elevation.



Glass House Barn



Willow Tree Farm (Grade II Listed)



Skylark Barn & Leveret View

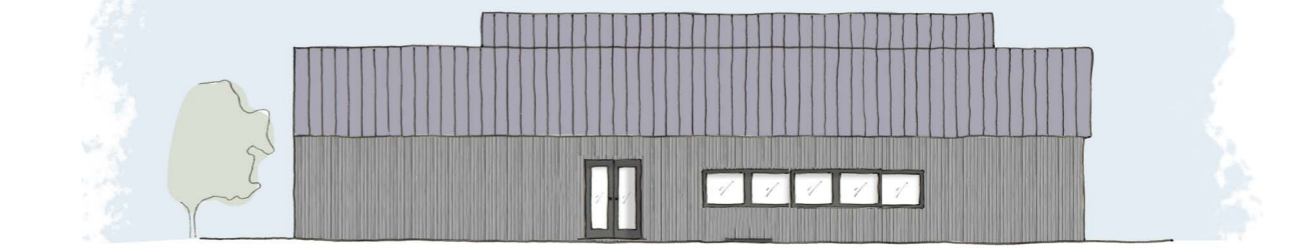
North Elevation



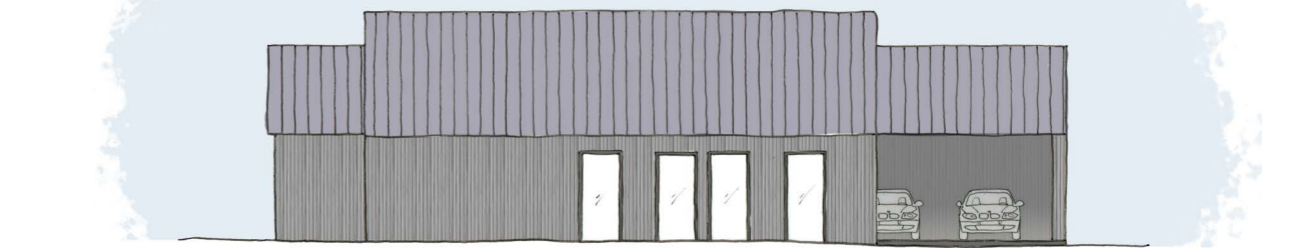
South Elevation

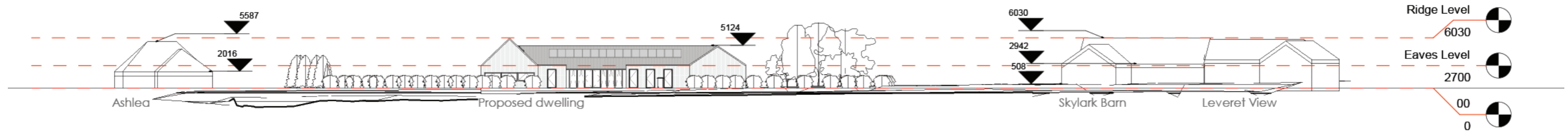


East Elevation



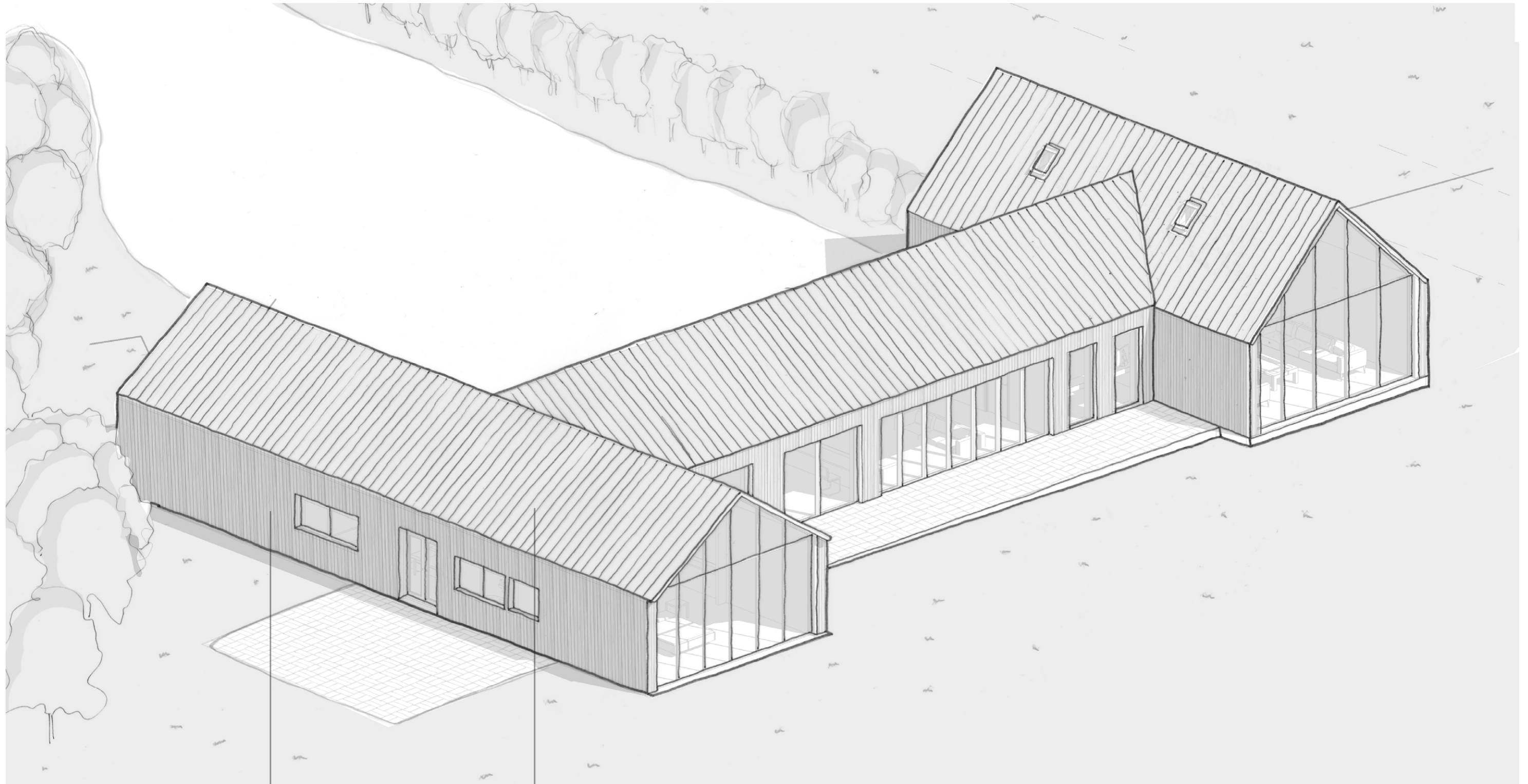
West Elevation





Contextual Sensitivity

The building has been designed from the outset to work with its immediate context. To do this, we utilised a single storey that achieves a primary ridge height of 5124mm, which is 906mm lower than Skylark Barn. The main living space of the barn features a taller ridge line - in order to create an agricultural barn form - this matches the ridge height of Skylark Barn.



Black Timber

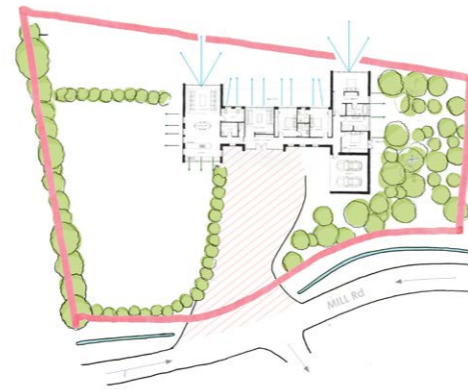
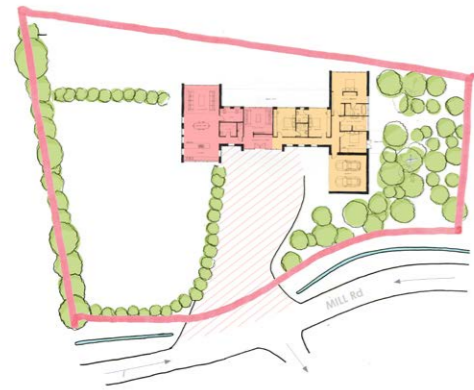


Dark standing seam zinc

Materials

The simple materiality of the project - black timber cladding and dark standing seam zinc - reflect the agricultural context of the proposal.

Private
 Open Living



Open Living - Private

The building is split into two halves, an open living side and a private side. The private side primarily features the sleeping quarters and is to the east of the site, hidden from view of the road and the neighbouring building by a visual barrier of existing trees and proposed trees. To the west of the building, there is the open living area, which contains living and entertaining spaces. This opens up to the western section of the garden.

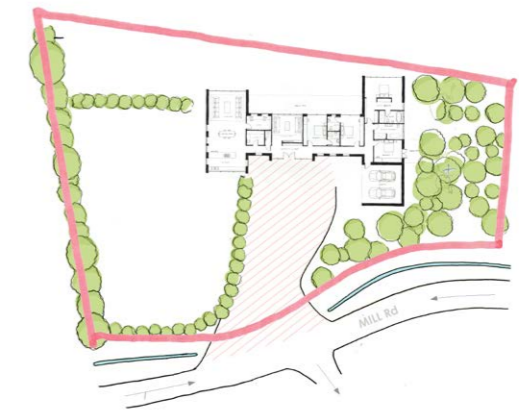
Views out

As identified in the site analysis, the key views from the site are to the north. The building takes full advantage of these stunning countryside views through the use of glazed gable ends on the northern facade. Other views around the proposal focus on the garden and the copse to the east.



Flooding

Part of the site is in flood zone 2. The building has been carefully sited so as to avoid this area.



Planting Strategy

To prevent overlooking between the proposal and Skylark Barn, as well as the public highway, additional trees will be planted to provide a visual barrier. The new trees will be a mix of native species.



Visibility looking east along The Mill Road



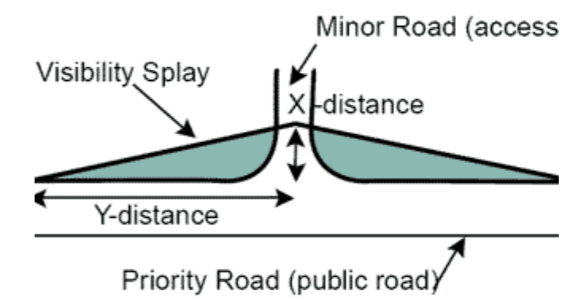
Visibility looking west along The Mill Road

ACCESS

Access from the road (Mill Road) will be via an existing site access which will follow SCC Highways standard drawing DM01. There is good visibility along The Street in both directions.

A new drainage channel will be added to new and existing site access to divert surface water runoff.

The access will not be maintained for agricultural machinery, as there is already a good access to the field outside the village envelope.



Design

The sustainable performance of the building will be a constant consideration and design driver throughout the project. A fully integrated approach for sustainable systems, products and materials on the site.

Thermal Performance

The dwelling will be super-insulated to Passivhaus standards. This will reduce the requirement for dwelling heating and thus reduce the size of the heating system required. A super-insulated house's internal temperature fluctuates less with external conditions and thus the internal temperature and comfort level is easier to control.

Airtightness

An airtight building is as important as insulation. There is no point insulating a space if a cold draught is allowed to remove all the heat. An airtight dwelling solves this issue. Again, it is about giving control of the internal environment back to the occupier. The proposed dwelling will achieve the Passivhaus standard of airtightness.

Low Energy Use

A key component to reducing the environmental impact of a dwelling and saving money at the same time is to reduce the energy demand as much as possible. Super-insulation and airtightness mean there will be a very low requirement for heating. However, in addition to this, all appliances in the dwelling will be highly efficient; white goods will be a minimum of A** rated; all lighting will be provided by low energy LEDs and a smart energy meter will be installed to help the residents monitor their energy usage and understand how to reduce it if possible.



natural sheeps wool insulation

Ventilation

Good quality ventilation is important for the health and wellbeing of the residents. Background ventilation to the dwelling will be provided by Mechanical Ventilation with Heat Recovery. Mechanical ventilation gives the most control to the user and allows a more constant and reliable source of ventilation throughout the dwelling. Coupled with heat recovery technology means that the incoming air is gently heated so it does not chill the internal spaces while the heat from the outgoing air is captured before it is released. This again reduces the need for additional heating to the space and saves fuel and cost.

Further purge ventilation will be provided by openable windows in all rooms. The position of the windows and internal layouts will allow passive cross and stack ventilation to quickly move air through the space if ever required. This can help let out hot air and draw in cool air on the warmest summer days.

Heating

Heating will be supplied through underfloor heating to all areas. Heating requirements will be minimal. Hot water will be provided primarily by Ground Source Heat pump in the winter and in conjunction with Solar PV in the summer.

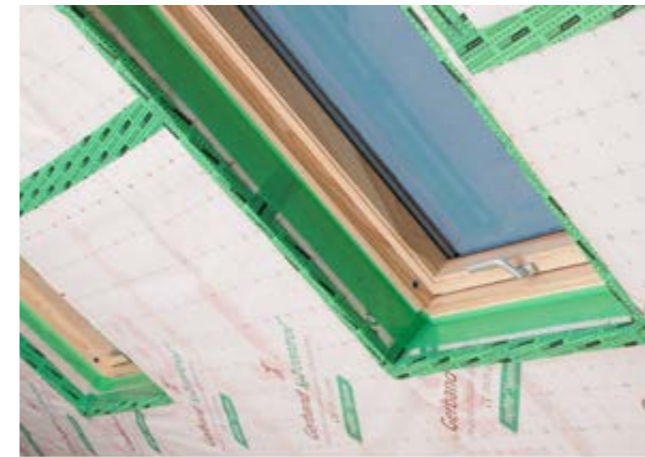
Cooling

The heat recovery feature of the mechanical ventilation system can be turned off to provide unheated ventilation to the internal spaces. The potential for overheating of internal spaces is minimised by reducing internal gains through good specification of lighting & low energy-consuming equipment.

Materials

All materials chosen will be scrutinised for their environmental credentials. Key aspects include their embodied energy and sustainable sourcing. Where possible materials will be procured from local suppliers. Materials that take less energy and do not give off harmful substances when being produced will be prioritised.

All materials specified will have a BRE Green Guide rating of A or A+. The dwelling will be designed as breathable construction using natural materials which allow moisture to pass through the building fabric and hence help mitigate the internal humidity of the internal environment. Materials derived from petrochemicals will be avoided. Natural materials generally have the lowest embodied energy associated with them; they do not give off toxic gases and are fully breathable.



maintaining the airtight layer

Construction longevity

The dwelling will be designed for flexibility of use so over time the residents can change how they use the spaces. The entire ground floor will be designed to meet the accessibility requirements of Part M of the building regulations

Building Whole Life Cycle

Natural materials can be recycled or returned to the environment at the end of the building's useful lifetime without causing harm.

Energy Performance Rating and Environmental Impact

The dwelling will be designed to achieve a high A rating on its Energy Performance Certificate (EPC) as well as a high A rating for its Environment Impact.

Health and Wellbeing

The dwelling will be designed with the residents' health in mind; from the ventilation strategy to the choice of materials that are free from toxic emissions (VOCs), and providing good levels of daylight and sound insulation.

Water Use

By installing low use appliances and efficient low-flow taps along with supplementing the supply with the rainwater harvesting system, the proposed dwelling will be designed to achieve very low usages of water. The target usage of mains water is a maximum of 80ltrs per person per day.

Travel

All vehicle parking spaces on-site will be equipped with fast electric charging points to promote the use of electric cars.



PV array integrated into roof design



electric car charging points next to all parking spaces