Planning Application for the alteration and extension of an existing agricultural building at Kerry Hill Farm, Eaves Lane, Bucknall, Staffordshire Moorlands, ST2 8NA

Design & Access Statement

Use:
The property is a two storey brick built barn with a tiled roof, with a concrete block built annexe with a corrugated steel flat roof to the Northwest and a single storey brick built store to the South. The barn is also attached to several steel built sheds to the North and East. The building was most recently used as a byre and cattle holding facility in connection with Kerry Hill Farm, which has ceased trading as a dairy farm. The barn is one of several former agricultural buildings on the site, some of which are brick built, whilst others are of steel and/or timber construction, and all in various states of repair. Permission has been granted for change of use of the barn to a domestic dwelling under GPDO (2015) Schedule 2 Part 3 Class Q., Reference DET/2016/0057. This Design & Access Statement is submitted in support of a Planning Application to convert the barn to domestic use, as amendments to the existing structure and layout proposed are beyond those permitted under the GPDO above.

Amount of Development:
The existing barn has a total footprint of 154 sqm, including a small single storey brick store to the South, the main body of the two storey brick built barn and a single storey concrete block annexe to the North. There are several steel and timber sheds to the North and East that will be removed as part of the development and the extent of this is shown on the Block Plan.

The main body of the existing two storey barn has an eaves height of 3.07m and ridge height of 4.87m. This was adequate to create first floor storage use for the original barn; the ground floor height, as evidenced by joist holes in the external walls, was only 2100 from floor to the underside of the original joists, which had a depth of 150mm. In order to create more usable space within the barn, it is proposed to increase the eaves height to 4.07m and ridge to 5.95m. Whilst increasing the available living space within the dwelling, the overall footprint will be reduced to 130sqm by removing the single storey store and reducing the size of the single storey annexe.

It can be seen from the photo below that increasing the height of the barn by one metre will not be visually intrusive, as the barn is screened by an existing tree and the adjacent farmhouse is significantly higher when viewed from the road in front of the proposed development.

Layout:
The layout of the proposed conversion has been designed to accommodate the needs of the family who will live in the dwelling. There is a central entrance hall, which gives access to the stairs leading to two first floor bedrooms, one of which has an integral dressing room and ensuite bathroom. The family bathroom and a utility room are adjacent to the entrance lobby, with a corridor leading to the guest bedroom at one end of the dwelling and a sitting room at the other end. The kitchen & dining area is located within the former block built annexe, with oak folding sliding doors leading to an external patio area and the garden. The applicant is a self-employed electrician and has need of a home office for administering his business. This is located on the first floor to the South of the dwelling and is accessed via an external wrought iron staircase. Should the office no longer be required by the applicant for his business, the space is ideal for use as a games/hobby room.

Scale:
The footprint of the existing barn and annexe, including the single storey store, covers 154sqm. The associated sheds cover a further 620sqm. It is proposed to remove 420sqm of these sheds,

retaining 200sqm for the use of the applicant as a covered area for vehicles, stabling for a horse and associated feed storage area. The 420sqm footprint of former sheds to be demolished, plus a further 100sqm that is currently uncovered yard area, will be converted to a garden and patio area for the use of the family.

Landscape:
The entire site is currently covered in hard standing, either floors to existing sheds or concrete yard areas associated with the previous use of the site as a dairy farm. There are three mature ash trees and a low hedge along the Southern roadside boundary and these will be retained and enhanced as part of the overall landscape plan for the site. Two of the ash trees frame the entrance to the site. It can be seen from the photo below that the single storey store to the South of the two storey main barn impinges on the entrance, reducing the available width when entering and leaving the site. One of the reasons for the proposal to remove this store as part of the overall development is to improve the access to the parking area within the site.

Kerry Hill Farm was divided into several lots when dairy farming was discontinued. The current application relates to 'Building B' (Refer to DET/2016/0057). The Western boundary to this is approximately 1.5m West of the face of the barn. The land/buildings to the West of this are not in the applicant's ownership and are subject to separate planning applications. With regards to this development, the applicant proposes constructing a brick wall 900mm high along the boundary between the barn and the adjacent property. The area between the wall and the building will be retained as a hard standing area to permit maintenance of the building. Brick will be reclaimed common brick to match existing building, with reclaimed Staffordshire Blue coping.

The Southern roadside boundary hedge will be retained as existing, with new timber double entrance gates replacing the existing steel agricultural entrance gate.

Once the sheds and concrete floors have been removed, 150mm new topsoil to BS 3882: 2015 will be introduced to these areas and the garden area will be laid to grass. A patio area will be created outside the kitchen/dining area, with stone slab surfacing. The new North & East boundary will be bounded by a stockproof fence, with Midland Hawthorn (Crataegus oxycantha) hedging planted inside the boundary in a staggered double row at 450mm equilateral triangle c/c.

Appearance:
The existing two storey barn and single storey store have been considerably redeveloped, extended and modified over time. The single storey block built annexe and associated metal/timber sheds bear all the hallmarks of agricultural development in response to the exigencies of operational needs and the financial constraints under which farming has developed during the last hundred years. One area of interest can be seen in the photo below, where the flashing line from a previous pitched roof building can be clearly seen where the building has been demolished and replaced with a concrete block building with a flat corrugated steel roof. This is the area where the new pitched roof kitchen/dining area is proposed.

Much consideration has been given to the possibility of retaining and renovating the existing buildings, but there are a number of issues that make this next to impossible:

- The existing building has inadequate foundations – where this has been exposed, the foundations are either non-existent or very shallow and have less than 100mm of concrete. This makes renovating the existing building difficult, much less increasing the building height by a metre to provide additional living space on the first floor.
- The elevation shown in the photo above is substantially bowed, is structurally unsound and would require complete rebuilding.
- There is severe bowing and movement to the roof.
- Brickwork is generally in poor condition
- There is no damp proof course

- The blockwork to the single storey annexe is of 9” cavity blocks – there is nothing to prevent thermal bridging or the transmission of moisture across the blockwork.
- The roof to the main barn was renewed at some point in the last 30 years; it is not structurally sound and existing purlins are grossly undersized.
- It would be extremely difficult to improve the thermal performance of the existing structure to meet modern performance standards.

The photo below shows the West elevation of the existing barn. There are a number of different styles visible; the original barn is constructed from common brick, using an English Garden Wall brickwork pattern, with headers every fifth course. This is interspersed with blocked up doorways in facing brick and the top seven courses in stretcher bond. It is proposed to:

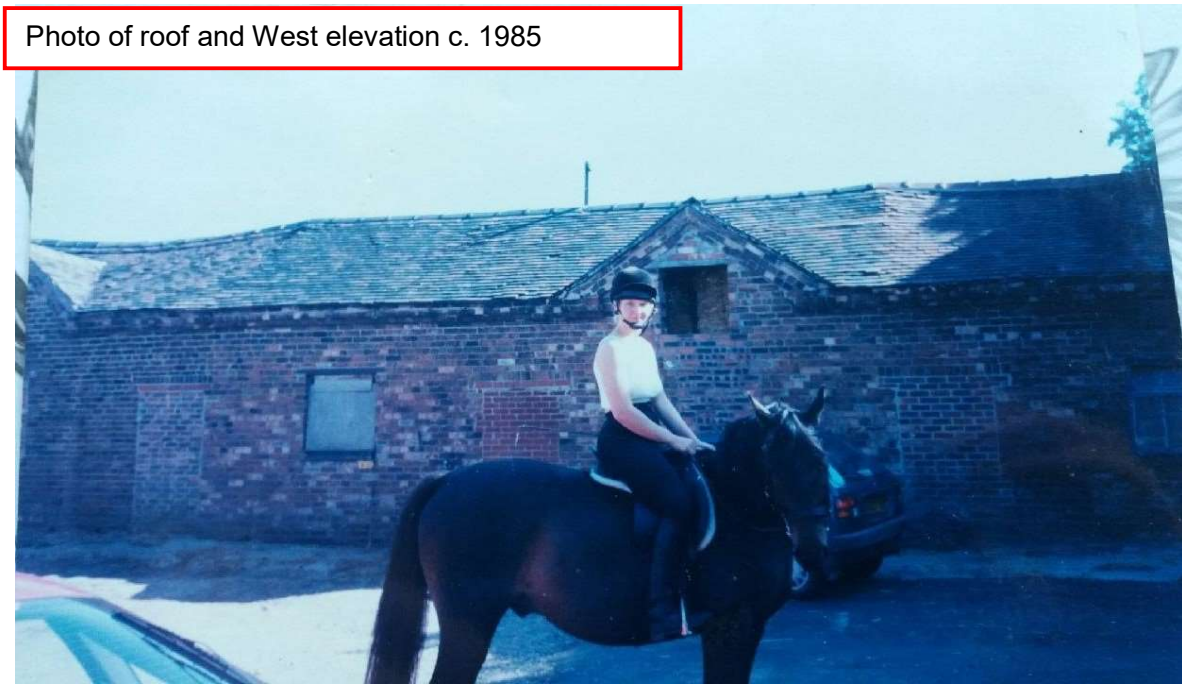
- Carefully demolish the entire structure, (including the blockwork annexe) setting aside and reclaiming all the existing brickwork.
- Rebuild the barn, including the new kitchen/dining area, on new foundations, on the existing footprint (modified as stated earlier) using a cavity wall construction with full fill cavity insulation and with the outer leaf construction using the salvaged bricks in an English Garden Wall pattern, with cropped headers every fifth course, bedded in a lime mortar. This will give the external walls a U-value of 0.18W/m^2/K, which is to current Building Regulations standard and excellent for the environment.
- Reverse the orientation of the existing barn; currently, windows and blocked doorways face the old farmyard to the West. This land is not in the ownership of the applicant and will adversely affect the privacy of the new occupants of the ‘Building A’ barn conversions. Reversing the orientation will permit the applicant to site windows and doors to look out on the new garden area curtilage to the East of the new dwelling, whilst preserving the privacy of the new dwellings being created from ‘Building A’.

Roof and West elevation as existing

The existing roof is not original; it was renewed at some point in the last thirty years, with all rafters and battens being replaced and the shape of the roof altered. The photograph below shows original dormer gables and brickwork corbelling above first floor openings. It is proposed to renew the roof and recreate the original dormer window features and corbel detail using the existing or reclaimed Staffordshire Blue plain tiles on a 'Warm Roof' construction achieving a U-value of 0.13W/m^2/K, which is to current Building Regulations standard and excellent for the environment.

There is an original kingpost roof truss within the existing barn roof; this will be salvaged and reused in a non-structural capacity within the first floor office space, as shown on the plans.

Photo of roof and West elevation c. 1985



Windows & Doors:
It is proposed to use timber casement windows, timber stable doors a timber bi-fold door to the kitchen. Doors and windows will be procured from Timber Windows (www.timberwindows.com) These are sustainably sourced, manufactured to a very high standard and have a factory applied paint finish. All doors and windows will have a minimum U-value of 0.13W/m^2/K.

Access:
The ground floor of the proposed development has been designed to be fully accessible and the main family bathroom can easily be converted to fit a level access shower should the need arise in the future. The overall aim has been to provide accommodation for the applicant's family that will meet their needs now and into the future.