



Structural assessment and method statement

Demolition of modern farm buildings.

Extension and conversion of existing barn to dwelling house.

Conversion of existing stable building to ancillary accommodation.

Construction of replacement stables, games room outbuilding
and a bin, bike and storage outbuilding.

Westhouse Farm, Henfield Road, Albourne, BN6 9DE

November 2025

Introduction

The proposal seeks planning permission and listed building consent for the demolition of five existing modern farm outbuildings and the conversion and extension of the barn to a dwelling house.

The applications also propose the conversion of the stable building to ancillary accommodation in association with the converted barn.

The applications propose the creation of a replacement stable buildings, games room outbuilding and bike and bin storage building.

The site has not functioned as a working farmstead for many years, and the proposal seeks to undertake the sensitive repair, conversion and extension of the existing Grade II Listed 17th century barn to a single dwelling, and the restoration and conversion of the late 18th century stable building to an annexe.

The application site measures 0.66 ha and is accessed from the western side of Henfield Road (B2116).

The site is located within the rural village of Albourne and in the western extremity of the Mid Sussex District Council's jurisdiction. The boundary with the neighbouring Local Planning Authority, Horsham District Council, is situated 1.13km to the west of the site.

Structural assessment

The proposed development repurposes existing buildings of sound construction and seeks to retain as much fabric as possible for reuse.

Only two buildings on site, both historic, will be retained.

These are the main barn and the flint stable building.

A survey of both buildings was carried out in March 2025 and a further survey in October 2025 by Ben Kirk MSc Timber Building Conservation, a timber frame building specialist.

The Barn

General description

The barn is a 5 bay timber framed structure aligned broadly north to south, set on a low brick plinth and clad externally in horizontal weatherboarding.

The roof is now covered with clay tiles laid on battens; however, a number of rafters display tar markings, demonstrating that the building was originally thatched before being re-roofed in tile.

The principal framing is in oak and comprises queen struts and collars with side purlins.

Internally, the barn is open to the roof over the full height of the central threshing bay, whilst the two end bays on either side contain later mezzanines carried on softwood joists, one of which is supported on cast iron posts.

Two trusses have been converted in to later sling braces pegged to the post and principal rafter but strap bolted to the tie beam. They represent a strengthening measure introduced after the initial construction.

The archaeological interpretive survey section of the accompanying Heritage Statement explains the evolution of the building in greater detail.

Roof

The roof generally appears to be in a reasonable condition. The roof timbers clearly have plenty of free ventilation which has assisted in keeping the structure in good condition. Some rafters have been affected by decay, and it is possible that one or two may need to be replaced with new oak rafters to match existing, this should be established once the building is stripped and access permits.

The purlins, whilst undersized by modern standards do not show significant deflection and in places are strutted with a collar at their mid span.

We would recommend that the rafters are fixed to the wall plates as part of the conversion works and that where some minor deflection has occurred with the purlins that a packer is inserted to ensure a connection between purlins and rafters.

Tie beam ends would benefit from a blacksmith made metal strap to ensure the connection between tie beam, post and wall plate remains sound, the dovetail that performed this function originally typically fails and this will reinstate this function.

Walls

The walls are generally in a reasonable condition but with some signs of decay at lower level. This is fairly typical at sole plate level when the sole plate decays due to moisture from the brick plinth and some sections of sole plate may require replacement.

Some studs have been removed and replaced with softwood timbers as the building has evolved for differing uses. These could be replaced with oak in to original mortices as part of the proposed conversion works.

The full extent of replacement timbers should be established once the building is stripped and access permits.

The plinth walls are generally sound but with some localised areas of damage. Where this is the case these would be repaired or locally rebuilt using matching materials and lime mortar.

Mezzanines

The mezzanines are both later insertions and neither appear to be offering any support to the main barn structure.

Both would be removed as part of the proposal, and this can be done without impacting the primary frame of the barn.

A new self-supporting mezzanine is proposed which will need to be designed as part of the construction detailing for the project.

The stables

General description

The stables is a 3 bay, single storey structure aligned east to west. The building is constructed in a characteristic late 18th century manner using a combination of rubble and knapped flint set within red brick quoins and dressings.

The roof is hipped at both ends and covered in handmade clay tiles. Internally, the roof structure comprises oak rafters and side purlins supported by raking struts.

The external walls retain their late 18th century character but show localised mid-to late 20th century repairs where breeze blocks have been inserted in place of deteriorated flintwork or redundant opening such as the doorway in the west elevation.

Internally, the three standing stalls are separated by 20th century breeze block partitions which rise only to door height and do not engage the roof structure. These likely replace earlier timber divisions that have been entirely lost.

The archaeological interpretive survey section of the accompanying Heritage Statement explains the evolution of the building in greater detail.

Roof

The roof is covered internally so no detailed inspection of the common rafters could take place. However, judging by the exterior of the roof which is generally level and sound the roof generally appears to be in a reasonable condition.

The purlins do not show significant deflection and all appears sound.

We would recommend that the rafters are fixed to the wall plates as part of the conversion works and that where some minor deflection has occurred with the purlins that a packer is inserted to ensure a connection between purlins and rafters.

Tie beam ends would benefit from a blacksmith made metal strap to ensure the connection between tie beam, post and wall plate remains sound, the dovetail that performed this function originally typically fails and this will reinstate this function.

Walls

The flint walls are in good condition generally but there is some sign of cracking on the west wall. As a result, some localised replacement of the flint work in this area will be necessary to reinstate the bond.

A detailed repair specification and drawings can only really be provided once access fully permits and once the initial stripping of the building has been undertaken.

As such it is requested that a condition is applied on to any consent requiring this to be provided prior to repairs being undertaken.

The following, however, sets out the general approach that should be adopted to the repairs to the timber frame, the brick plinths and the flint walls.

Timber framing

The approach taken should be to retain the maximum amount of original fabric as possible and replace only where strictly necessary.

When replacement is the only suitable option, it must be on a like-for-like basis following the vernacular style of the original framing.

Workmanship and maintenance

1. The quality and level of works carried out will dictate the success of the intervention and the longevity of the repairs. To this end the works should be carried out by a skilled professional with experience of historic buildings.
2. The longevity of the repairs and the future levels of decay of the building depend largely on the ongoing maintenance of the building. Once completed the building should be maintained with any broken or loose tiles replaced, gutters maintained, and any future failures assessed and addressed using the same approach as detailed above.
3. Any future repairs should be carried out using appropriate materials

Repairs

4. New timber should be selected to match the species it is to replace or repair.
5. Timber should be graded THA/TH1 depending on its section. The final piece of timber to be used should meet the relevant strength grade. For example, a patch may be cut from a graded larger piece of timber and the position, type and proportional size of knots may change once the smaller timber is cut.
6. The type of conversion (e.g. boxed heart, halved or quartered) should match the timber which it is to repair or replace.
7. Timber for repairs should be air dried to a moisture content of approximately 15% or for repairs ideally as closer moisture content to the “host” timber as possible. This will avoid differential movement of the timbers resulting in joints opening and gaps appearing. The moisture content can be determined with an oven dry test for large timbers but for small repairs such as patches can be checked with a moisture meter.

8. Grain direction for repairs should match the “host” timber as closely as possible as should ideally checks in the timbers surface.
9. Timbers should be ordered oversize and finished on the workbench with a hand plane to reduce to the correct scantling and provide a suitable finish, visible saw, axe or adze marks should be avoided as should the use of machine finishing. The artificial ageing of the surface should not be attempted.
10. Pegs for mortice and tenon joints should be octagonal and tapering, sized to match the original, shaped on a shaving horse from cleft oak blanks and left to dry before use.
11. Pegs must be driven from the upper face side of the frame.
12. Where mechanical fixings are used to secure face patches or scarf repairs these should be recessed and capped with a cross-grain pellet cut from the same stock as the repair. These should be cut flush with a sharp chisel to minimise their visual impact. Faux pegs should not be used to cover fixings where they do not relate to the original pegging arrangement of the frame.
13. Where the use of epoxy resins is to be used for adhering face patches a WEST 105 system should be used, mixed in accordance with the manufacturer’s instructions.
14. Resin should never be used on the face of a timber or in joints where it has the potential to trap moisture.
15. Glues and resins should be used only to adhere repairs to original timbers along their length to maintain rigidity but should never be used in the original joints of the frames where it is vital that the joints have a degree of movement.

Brick plinths and flint walls

1. Where brick plinths of flint walls require localised repair or rebuilding the following should be adopted.
2. Detailed recording of the existing construction must be undertaken, paying close attention in particular to any unique details. The bond of individual areas that are to be rebuilt should be recorded.
3. Using hand tools only, carefully and systematically remove any damaged bricks or flints
4. Any sound reserved bricks or flints should be used as a priority with any shortfall being made up of new or reclaimed bricks or flints of the same size, colour, texture and quality as the existing
9. The following Mortar Mix should be used for the reconstruction and pointing.
10. To give both consistency in colour and consistency in performance this could be a premixed mortar, mixed and applied in accordance with the manufacturer's instructions or if not premixed should be gauged accurately to ensure consistency of the mix.
11. The mortar used should be selected based on samples of the existing mortar collected during dismantling which should be used to select an appropriate mortar which is a close match in terms of colour and aggregate size / type.
12. The following mortar would be suitable in performance and may be suitable in colour / aggregate, but this should be confirmed with the samples. If this is not appropriate, then a suitable match should be sought from an alternative which has a similar performance to this.

Cornish Lime Hot Mixed Mortar CLH28 - Pre-Mixed
Mix Ratio: 1:1.75 slaked lime: sand
Lime: CL90 Quicklime

13. External mortar joints should be of the same thickness as the original and struck flush. Joints should be well filled and compacted. Following initial set, joints should be tamped firmly with a bristle brush as it starts to firm up, normally after 4 hours. The mortar should be struck flush with the brick and then rubbed with a churn brush to expose the aggregate and clean arises.