

General structural appraisal report on

Stable & Storage Buildings at
Summerleaze Farm
Hobbacott Lane
Bridgerule
EX22 7HB



Ref: 10656_TS_21_A

10.06.21

For:

Mr & Mrs Huggins

Introduction

Property: Summerleaze Farm
Hobbacott Lane
Bridgerule
EX22 7HB

Listings: Unknown.

Brief: To inspect and report on the structural aspects of the buildings

Weather: Bright following a dry period

Inspection: The building was inspected by T M Spence MEng (Hons) GMICE OBO
Foulkes Jackson Fewings Ltd on Tuesday 1st June, 2021.

Memberships: Graduate Member of the Institution of Civil Engineers (ICE)
(Membership No. 68550676)

Foreword

The buildings subject to survey lie approximately 5km southeast of the town of Bude. Two outbuildings are subject to survey that both lie within the curtilage of the main property and other ancillary outbuildings. Both are formed from single skin concrete block and are single storey. The buildings are both rectangular on plan, the longest being approximately 22m by 4m and the shorter some 13m by 4m.

It is understood that the building is not subject to listing. Suggestions for structural repairs provided herein are given with due regard to the age and condition of the building. In doing so, reference where applicable has been made with this firm's general conservation philosophy; refer to Appendix A for further details.

It is understood a proposal exists to convert the building for domestic use. Plans have been provided that indicate how the building might be converted for this purpose. The intention of this report is to identify the current structural condition of the building in order to advise on any likely structural repairs required during such conversion work. It is understood the buildings are to undergo a full change of use planning application and will not be subjected to class Q permitted development restrictions.

The buildings are good examples of typical outbuildings. It is apparent they have suffered from some minor structural and weathering problems, which has caused some deterioration in their fabric. Left unchecked the buildings will inevitably decay further and fall into greater disrepair.

This report concludes that the buildings are structurally worthy of conversion as is proposed such that they may be conserved and continue to be an asset to the context in which they are set.

Location

For the benefit of this report, the buildings are considered to face west toward the main dwelling. The buildings are identified in blue on the below site plan.



Figure 1.0 –Barn is identified bounded in blue [does not define boundary]

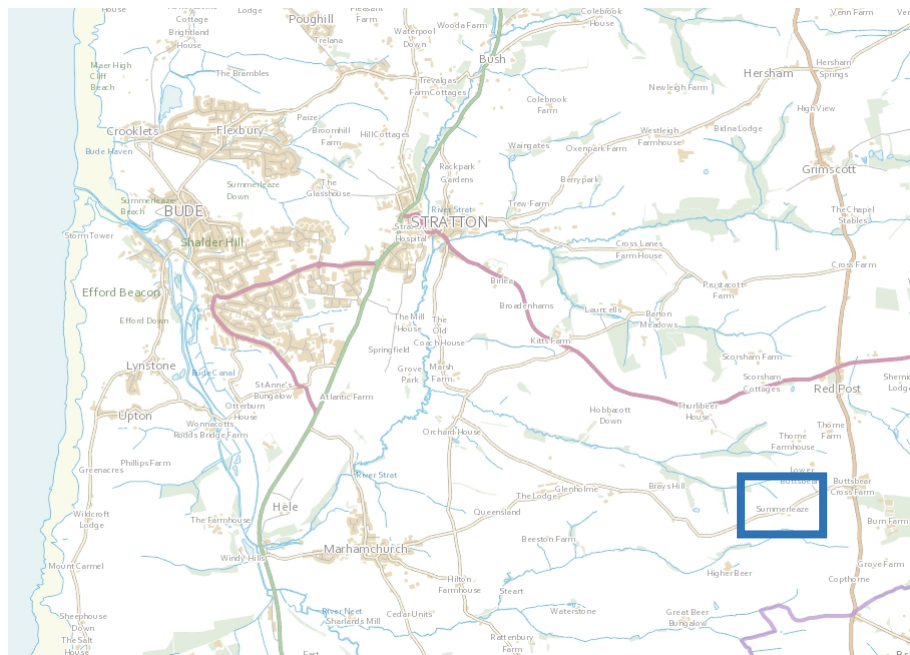


Figure 2.0 –Location of site is identified bounded in blue [does not define boundary]

1.0 Walls

1.1 The external walls of the barn are formed from single skin concrete blockwork with an exposed block finish. In some isolated areas internally and externally the walls are coated with a cement based render.



Photograph 1 – Longer building, concrete block visible



Photograph 2 – Shorter building, rendered externally

1.2 The walls are generally straight and plumb where observed. Some areas however were not accessible for internal inspection.

1.3 Vertical staggered cracking was noted to one of the flank walls of the shorter building. This is considered likely due to a lack of lateral buttressing and lack of formal movement joints. The wall will require locally stitching in helical bar up its height to re-bond the blockwork and considerations for the installation of movement joints will be required throughout.



Photograph 3 – Cracking to flank wall of shorter barn

1.3 Some areas of the wall panels have been locally filled with additional blockwork in their history. Most prominent is the rear flank wall of the longer building. The bonding between the blocks at this point should be formalized to ensure continuity, or consideration for movement joints can be given.



Photograph 4 – Masonry infill panel to rear flank wall

1.4 The flank wall of the shorter section of barn has a build up of foliage against its external face, although is not considered to retain ground. Any local foliage should be cut back to minimize water ingress or entrapped moisture against the wall.



Photograph 5 – Foliage build up to flank wall

1.5 A trial pit was inspected to the eastern end of the longer building that revealed its footing. The barn appears to be built off a build up of 100mm thick concrete oversite / slab (or raft) founded on a firm gravel sub base.



Photograph 5 – Trial pit excavated to eastern end of building

1.6 The existing footing appears to remain serviceable under its current use with no obvious signs of structural distress to the external walls. However, it is considered that the existing footings would be unlikely to adhere to current building standards if subject to formal calculation. The existing concrete blockwork must not bear an increase of load. It is considered that a careful scheme of adopting a new internal load bearing skin of structural timber frame, or additional blockwork will be required. This can be founded on a new internal footing independent of the existing. An additional timber frame or cavity skin will provide additional restraint to the existing masonry against lateral wind loading.

2.0 Floors

2.1 The ground floor throughout is formed of cast concrete. It is likely the slab is 100mm thick throughout to reflect the external trial pit. The existing slab may be suitable to retain however further internal investigations may be required to confirm. If the existing slab is found to be inadequate internally it is considered likely a new suitably insulated ground bearing floor slab will be required throughout.



Photograph 6 – Concrete floor visible internally

3.0 Roof

3.1 The roof to both buildings is a modest mono pitched structure formed from principal rafters supporting purlins and corrugated cladding over. The timbers are mechanically fixed at junctions and at their bearings with face fixed proprietary hangers. The roof remains serviceable under its current use with no obvious signs of distress.



Photograph 7 – Existing roof structure

3.1 It is noted the proposed roof on the provided drawings is duo pitched with visible feature trusses and a vaulted ceiling. It is considered to achieve this a new suitably design roof structure would be required throughout.

3.2 It is noted the longer building has an ad-hoc overhang to its roof structure supported by timber posts. This would not adhere to current standards and will need replacing upon conversion. Any overhang that is proposed to remain should be designed alongside the new roof structure.



Photograph 8 – Roof overhang detail to flank wall

4.0 Lintels

4.1 The lintels throughout are formed from concrete where inspected. Each of these will need to be assessed on a case by case basis alongside the replacement roof for suitability to remain. It is considered likely, if a new structural internal lining is adopted, many of the lintels may be viable to be retained.



Photograph 9 – Concrete lintel to stable opening.

5.0 Additions

5.1 To the eastern of the shorter building is an open timber frame addition that has suffered in its history from weathering and rot. It is considered this structure is beyond reasonable repair and requires replacement.



Photograph 10 – Timber frame addition to eastern end

5.0 Conclusion

Both buildings are good examples of typical agricultural outbuildings. It is apparent they have suffered from some minor structural and weathering problems, which has caused deterioration in their fabric. Left unchecked the buildings will inevitably decay further and fall into greater disrepair.

It is suggested the buildings are structurally worthy of conversion as is proposed such that they may be conserved and continue to be an asset to the context in which it is set.

Appendix A

Conservation Philosophy

Before describing and structural repair work it is important to understand the approach taken to arrive at the works proposed. Our conservation philosophy is twofold and is used as a reference against which the building needs are measured. From most to least desirable;

Fabric repairs

- a. If structurally viable, conserve as found;
- b. If structurally viable, conserve and reinstate existing fabric where it survives but has been dislodged from its original location. Reinstatement can only take place where records can verify their original position.
- c. Minimise structural repairs without compromising the longevity of the fabric;
- d. Use like for like structural repairs, again using records where necessary;
- e. Finally use modern material as an honest structural repair or intervention, so long as this does not compromise the character of the listed building.

The character of the listed building.

- f. No change should take place to affect the character;
- g. Where an structural intervention takes place it is to maintain the character (reinstating lost features etc);
- h. If there is to be a structural intervention it is to be fully reversible;
- i. If the structural intervention is irreversible the design must be subservient to the character of the listed building. This could be using modern or traditional materials, depending on the circumstances.

No work should take place until permission has been sought and agreed by all statutory regulatory bodies.

Limitations of investigation

- This report is confidential to the client and without our express consent should not be used for any other purpose. Its contents should not, without our consent, be revealed to any third party other than the clients' professional advisers or published in a form without our express written consent. No responsibility is accepted by us toward unauthorised third parties acting upon information contained within this report.
- This report relates to the condition of the concrete block buildings only highlighted in the location section of this report. The content of this report should be construed as a comment on the overall condition of the buildings and the quality of their construction and not as an inventory of every single defect. It restricts itself solely to the brief. We do not guarantee that all defects present, or that may occur in the future, will be discovered due to the limitations of this inspection.
- During our visit a condition survey was carried out and photographs taken. This report is based on notes taken from this visit without benefit of monitoring or previous knowledge of the buildings or site.
- All external observations were made from ground level unless noted otherwise. Parts of the structure, which were covered, unexposed or inaccessible, could not be visually inspected and therefore cannot be reported upon.
- Due to limited access, this report may not be an exhaustive list of all structural defects in the building.
- This inspection relates to the main structural elements, i.e. roofs, walls and floors.
- Dimensions, where given in the report, are estimated.
- A single pre excavated trial pit was inspected.
- Underground drains were not examined.

- Concrete blockwork construction was recorded during survey in a number of areas at the site. Where such blockwork is to be retained, unless the age of its construction can be confirmed, it is suggested the concrete be formally tested for deleterious content ('mundic').
- There is evidence of damp in the building. Account of the full extent of this damp is beyond the scope of this report. It is recommended further investigation, including disruptive inspection behind wall linings, as required, is undertaken by a specialist contractor in order to establish the full scope of any remedial work needed in this respect.
- Evidence was found in a number of areas of timber rot and potential wood boring beetle infestation. Account of the full extent of this is beyond the scope of this report. It is recommended a specialist contractor, ideally Property Care Association registered, is engaged to carry out further investigations in this respect.
- In a number of areas foliage was recorded as existing on, or in close proximity to, the walls of the building. Such growth can trap moisture against the wall fabric which can lead to degradation of the wall surface. Where it is recommended this foliage is removed, it should be cut off at its base and allowed to die back. Pulling such growth, particularly ivy, from the face of the walls can lead to surface damage.