

Report of Structure

Field House Farm, Coton Road, Rosliston, Swadlincote, DE12 8HN

Client: Mr A Vanes



July 2021 - 130718

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1.0 Executive Summary

1.1 Surveyor's Overall Opinion:

The barns at Field House Farm are built with load bearing masonry construction, and loadbearing steel columns to barn 2, with cut timber pitched roofs that are covered in clay roof tiles. The ground floor consists of concrete slabs with the first floor to barn 1 being a mixture of suspended timber, cast in-situ concrete and assumed original lime ash flooring. Doors to the barns are barn door types with renaming windows being a mixture of timber framed casement and traditional framing.

Following an assessment of both barns, we are generally of the opinion that subject to the repairs and measures identified within the main contents of this report and as stated in section 11.0, both barns can be adapted for their perceived use.

1.2 Recommended Work:

The main areas of recommended work on the buildings are:

- 1) Undertake an arboricultural survey to confirm the species of trees and their maturity and potential impact on the foundations especially to barn 2.
- 2) It is anticipated that the foundations are generally shallow. As such, it is anticipated that with potential new floors being constructed, all elevations to both barns will need to be underpinned to allow for maintaining reasonable access levels and internal floor to ceiling heights.
- 3) The timber roof structure to barn 1 is heavily deteriorated and requires re-alignment and alteration works. Only minor repair/alteration works to barn 2 are required
- 4) Both roof coverings are displaced and slipped and requires full re-roofing on modern roofing felt to include insulation
- 5) Large areas of masonry walls to barns 1 and 2 require localised re-building, re-pointing, and replacing spalled brickwork
- 6) The external concrete blockwork replacement sections are not in keeping with the rest of the barns and should be rebuilt using matching brickwork
- 7) The internal load-bearing masonry walls to barn 1 have been damaged by the movement of the roof timbers and incorrect transmission of loadings. Once the roof loadings have been rectified, all internal walls within the roof space will require partial re-building
- 8) The existing timber staircase to barn 1 is not compliant and will need to be altered

2.0 Instructions and General Matters

2.1 Client

Mr A Vanes, Field House Farm, Coton Road, Rosliston, Swadlincote, DE12 8HN

2.2 Consultant

Fisher German LLP Chartered Surveyors, The Estates Office, Norman Court, Ashby de la Zouch, Leicestershire LE65 2UZ

2.3 Property/Site

Traditional barns at Field House Farm, Coton Road, Rosliston, Swadlincote, DE12 8HN

2.4 Inspection of the Property

The property was inspected by Andrew Prideaux MRICS of Fisher German LLP Chartered Surveyors on Wednesday 21st July 2021.

At the time of inspection, the sky was clear skies, dry and sunny. The external temperature was approximately 28 Degrees Celsius.

We have made such an examination as was practical at the time of inspection with a view of advising upon the structural condition of the barn.

The structural components of the property were inspected which includes the walls, visible roof structure and coverings. These were relatively well exposed externally and internally due to the type of construction.

The survey is not a full building survey and the survey and report is limited to the structural components.

We have assumed the following when preparing the report:

- No deleterious or hazardous materials or techniques have been used.
- No test for contamination within the land has been carried out.
- No high alumina cement, concrete or calcium chloride additive or other potentially damaging material was used in the construction of the property or has since been incorporated.
- There are no unusual or especially onerous restrictions, encumbrances or outgoing which affect the property.
- The property has good title.
- No inspection was made for Japanese Knotweed or similar invasive species as part of this report.

2.5 Third Parties

The report is prepared for the sole use of the Client and the liability of Fisher German LLP Chartered Surveyors does not extend to third parties.

2.6 Instructions

We are acting on instructions received by Mr A Vanes to inspect and prepare a structural survey considering the overall condition of the two traditional barns and make recommendations for repair to convert the barns to residential use.

2.7 Documentation

We have not been provided with any documentation relating to the property.

2.8 Location

Barn 1 is the two storey larger barn to the north of the site and barn 2 is the smaller single storey barn. Barn 1 front elevation is referred to as elevation A1 and faces south with elevations A2 – A4 taken in an anti-clock wise direction. Barn 2 front elevation is referred to as elevation B1 and faces east with elevations B2 – B4 taken in an anti-clock wise direction.

Following a review of the Environmental Agencies flood warning information, it was identified that the risk of flooding in relation to rivers and sea was identified as 'low' with the area being identified as being in Flood Zone 1. See summary report in Appendix. B.

3.0 Description/Construction

3.1 Type and Age

Barn 1

A two storey traditional masonry barn with the upper storey being located within the roof space. To the west elevation is a more recent single storey extension which is open fronted to the north elevation.

The date of the construction is unknown, however after reviewing historic maps, the main barn is shown on the on the 1885 OS County Map of south Derbyshire and it is assumed the building was built circa early-mid 19th century. The extension is like a later addition in the early 20th century.

Barn 2

A single storey traditional masonry barn. The east and west elevations are open fronted and currently infilled with a mixture of modern concrete blockwork and steel agricultural gates finished with corrugated metal sheeting.

The date of the construction is unknown, however after reviewing historic maps, the main barn is shown on the on the 1885 OS County Map of south Derbyshire and it is assumed the building was built circa early-mid 19th century, with various alterations noted over the years.

3.2 Accommodation

Barn 1

The main barn comprises of an open plan loft area and 3no separate walled off ground floor areas. The extension is open plan with half height internal blockwork dividing wall.

Barn 2

The barn is open plan.

3.3 Orientation

Barn 1

The barn is orientated on a north-south axis. Elevation A1 faces south.

Barn 2

The barn is orientated on an east-west axis. Elevation B1 faces east.

3.4 Trees, Hedges and Vegetation

Barn 1

No trees were noted within the vicinity of the building. There was a large build up of general vegetation growth to the west elevation generally.

Barn 2

A young beech tree was noted approx. 4m to the south of elevation B4 and a young ash tree located approx. 0.1m at the junction of elevation B3 and B4. Additional larger more mature trees were located approx. 10m to the south west.

The Association of British Insurers does, however, recommend that the safe distance from a building of a mature Ash tree is 21m to avoid subsidence risk. There is potential for these trees to be contributing towards the structural movement seen to the side and rear elevations. It is recommended that an arboricultural survey is undertaken confirming the species of trees and their maturity, and risk to cause potential subsidence to barn 2 as they mature.

4.0 Construction and Condition

4.1 Construction Principles

Barn 1

The external walls are solid masonry one brick thick approx. 230mm with a small area re-built in blockwork to the single storey extension to elevation A1. There are dual pitched roofs surmounted by double lapped handmade red and blue plain clay tiles with blue clay capped angle ridge tiles to the main barn and plain blue clay tiles and angled ridge tiles to the single storey extension. The main roof incorporates 2no raised clay angled ridge tiles to allow additional internal ventilation and there is a fixed glazed roof light to elevation A1.

The roof structure to the main barn is formed of 'cut' timber purlin construction and with King post construction to the extension. Where external doors and windows are present, these are typically ledged and braced doors and simple timber framed window construction. A timber staircase provides access to the roof space accessed via elevation A1.

Internally, the first floor structure is a mixture of suspended timber, a cast in-situ concrete slab and a historic limecrete floor finish. The ground floor areas are cast in-situ concrete floor slabs. The internal walls are all assumed to be load-bearing masonry with the majority of the internal walls finished with a concrete type of render.

Barn 2

The 2no flank walls are solid masonry one brick thick approx. 230mm with elevation B3 partly infilled with concrete blocks. The two open fronted sides to elevations B1 & B3 are supported

via timber wall plates in turn supported by vertical steel columns. There is a dual pitched roof surmounted by double lapped handmade blue plain clay tiles with plain blue clay angled ridge tiles. A non-breathable bitumen type roofing felt was visible internally. The roof structure is formed of 'cut' timber King post construction.

Internally, there are temporary formed timber partitions separating sections of the barn and with a number of central assumed load-bearing masonry columns finished with a concrete render which appear to support the King post trusses. The ground floor slab is cast in-situ concrete.

5.0 Roof

5.1 Covering

Barn 1

The roof covering is double lapped handmade red and blue plain clay tiles with blue clay capped angled ridge tiles to the main barn and plain blue clay angled ridge tiles to the single storey extension. The tiles to the main barn have been laid onto timber battens and weatherproofed with torching internally. No torching was noted to the extension. All roof verges are pointed with a cement mortar.

There are various slipped and damaged tiles primarily to the main barn. An area of tiles and verge pointing has become displaced/missing to the main gable to the west elevation A4. Internally, it was evident that the timber roof battens have been subject to wet rot, however there were no signs of major failure.

As part of any conversion works, the roof covering will be removed and retained for re-use. It is assumed the majority of the tiles are salvageable. The roof will incorporate new timber battens along with a modern roofing membrane and insulated to current standards. Alterations / repairs to the roof structure are identified in section 5.2. All new bedding mortar to be lime based as would have been used at the time of construction.

No rainwater goods were present, however, metal rise and fall brackets suggest there may have been previous cast iron gutters and downpipes. It is assumed all new rainwater goods will be cast iron to retain the character of the site / property.

Barn 2

The roof covering is double lapped handmade blue plain clay tiles with blue clay angled ridge tiles. The tiles have been laid onto timber battens and all roof verges are pointed with what appears to be a cement mortar. The roof comprises a non-breathable bitumen roofing felt suggesting that the roof has recently been re-roofed assumed to be within the last 40 years.

The roof covering is generally in satisfactory condition with only minor slipped tiles evident. Internally, the timber battens were concealed by the roofing membrane, but no dishing or movement of the roof finish suggests the battens are in satisfactory condition.

As part of any conversion works, the roof covering will be removed and retained for re-use. It is assumed the majority of the tiles are salvageable. The roof will incorporate new timber

battens along with a modern roofing membrane and insulated to current standards. Alterations / repairs to the roof structure are identified in section 5.2. All new bedding mortar to be lime based as would have been used at the time of construction.

Half round grey PVCu rainwater goods were present and appeared to be working as intended with only the rear right section missing. Minor solar degradation was noted. It is assumed the rainwater goods will be replaced as part of any conversion works and match the goods chosen for barn 1.

5.2 Roof Structure

Barn 1

The dual pitched barn roof is supported by a timber purlin rafter roof system with 4no mid-span timber horizontal timber tie beams, with 3no supported on the internal load-bearing masonry walls. These masonry walls are heavily cracked and have become displaced due to the incorrect transfer of loads. The last Queen post type truss arrangement towards the west elevation appears only to be supported off the upper floor structure below. The timber purlins are supported within the external masonry gable walls and bedded on small timber pads. The timber purlins are approx. 190mm X 90mm and the rafters are approx. 70mm X 55mm @ 450mm cc. Along both pitches of the main roof there is evidence of dishing to the roof covering and the whole roof structure is out of alignment, currently leaning towards the east elevation A2. This is assumed to be due to the lack of any lateral restraint.

Flight holes were noted to the majority of the timbers within the roof space and localised wet rot amongst the timbers, although there were little signs of there being any active infestation on the basis very little 'frass' was noted.

The timber wall plates to the roof are not strapped down to the below masonry walls. It is recommended that strapping is introduced as a part of any conversion plans.

The main timber roof structure is defective and if left alone, will eventually collapse. The roof structure will need to be modified as part of any conversion works to ensure all loads are transmitted to the building's foundations correctly. It is assumed the majority of the timbers can be retained following close up inspections, with any timbers to be retained to be treated with a suitable fungicidal and woodworm treatment. Any timbers showing signs of wet rot should also be replaced.

The roof to the extension incorporates a single King post truss with 'cut' timber rafters, purlins, and battens. The timber purlins currently bear into the masonry gables with no pad stones or similar. The roof structure is generally in satisfactory condition with only minor displaced timber battens. The 2no timber wall plates which span the openings are showing signs of significant wet rot and timber beetle infestation to their ends, with very little bearing on the masonry piers. Both these timber wall plates will need to be replaced during any future conversion works.

Barn 2

The dual pitched barn roof is supported by 3no King post trusses, in turn, supported on the timber wall plates. The timber purlins are approx. 160mm x 70mm and the rafters are approx. 70mm X 55mm @ 450mm cc.

The timber wall plates which support the King post trusses and rafters, are supported along elevations B1 & B3 on a mixture of steel columns and concrete blockwork. The timber purlins bear into the external gable walls and are not supported on any pad stones or similar. As part of the conversion works, the majority of the roof timbers are in serviceable condition and can be retained following close up inspections. Flight holes were noted to the timber wall plates and the bottom cords to the king post trusses. It is not thought the woodworm is active, however, any timbers to be retained to be treated with a suitable fungicidal and woodworm treatment.

6.0 Walls

Barn 1

The external and internal walls are one brick thick approx. 230mm with a small area of wall re-constructed in concrete blocks to the extension. Diamond pattern brick ventilation was noted to most elevations. The majority of mortar joints have also at some point been re-pointed in a cement based mortar. Where the joints are open/displaced, the original lime bedding joints are visible. There is no information on the depth of the foundations to the building, however due to the age of the building, it is assumed shallow brick footings are present.

At high level to elevations A1 and A3 undulation/movement was noted at eaves level and both brick gables to elevations A2 and A4. All movement is assumed to be from 'roof spread' due to inadequate lateral restraint as previously stated. The upper brickwork and gable ends will need to be partly taken down and re-built following alterations to the roof structure. At the same time, the diamond pattern brick ventilation areas can be sealed to weatherproof the building envelope.

Brick spalling and failed mortar joints were also noted to all elevations, primarily at low level. The spalling brickwork is as a result of splash back from the non-permeable ground finishes and lack of rainwater goods. Large areas of the masonry has also been subject to repointing where cement-based mortars have been used. As part of any conversion works, following brickwork repairs/replacement works, it is recommended that all elevations are re-pointed with a lime-based mortar, with the existing mortar being raked back to a minimum of 25mm before re-pointing. All new brickwork to be reclaimed and match existing.

There are numerous cracks noted above and below window and door openings. This is primarily caused by failure of the timber lintels due to wet rot, resulting in the brickwork above dropping. As part of any conversion works, new replacement lintels will be required and at the same time, the displaced brickwork can be re-set.

1no vertical crack approx. 30mm wide at high level was noted beneath the central high level door to elevation A2. This crack is visible both internally and externally and assumed to be due to possible foundation movement and or point loading from the upper floor. It is anticipated that the foundations along all elevations are generally shallow considering the age of the building. As such, it is anticipated that with potential new floors being constructed, the

walls may need to be underpinned to allow for maintaining reasonable access levels and internal floor to ceiling heights.

To elevation A1 at the junction of the extension, a large area of brickwork has visually dropped and visually unstable. This area of the wall will require re-building as part of any conversion works. Again, it is assumed a mixture of shallow foundations and lack of ground drainage / rainwater goods has contributed to the deterioration of this section of wall.

Depending on the design proposals for the extension, it would be expected as part of any conversion, to replace the blockwork sections with reclaimed brick to match the existing walls. Re-building of the brickwork piers which support the timber wall plates/lintels will be required, along with various brick replacement works and re-pointing to the gable elevation where spalled.

Various openings have been modified over the years. The original arched door opening to elevation A1 has been bricked up and a new door opening formed to the right finished with a reinforced concrete lintel. A secondary entrance has been formed to the right of the bricked up arch door and finished with an exposed steel lintel. The arched door to elevation A3 has also been partially bricked up externally and a modern timber casement window installed within the arch. Again, depending on the design proposals, it would be expected to re-instate these openings which will require localised rebuilding and installation of lintels or similar.

Barn 2

The external gable walls are one brick thick approx. 230mm with both elevations B1 & B3 being open fronted with lintels/wall plates spanning the entire elevations, with the wall plates supported by 3no steel columns to each elevation. Blockwork infill panels were noted to part of elevation B3.

As with barn 1, it is anticipated that the foundations along all elevations are generally shallow considering the age of the building. As such, it is anticipated that with potential new floors being constructed, the walls may need to be underpinned to allow for maintaining reasonable access levels and internal floor to ceiling heights.

The high level brickwork to both gables appears to have been re-built at some point with a distinct colour and style difference. Both gable walls showed signs of bowing and minor distortion. The right hand brick pier to elevation B1 and B2 is severely cracked and brickwork displaced and if works are not undertaken, could lead to localised collapse. It is assumed the cracking is due to a number of reasons, pointing loading from the timber wall plate, insufficient bonding to the main structure and failure of the foundations. Metal gate hinges were visible partly bedded within the masonry and it may be that the brickwork could not support the load of a previous gate.

Brick spalling and failed mortar joints were also noted to both gables primarily at low level. A white band approx. up to 1metre high was visible to both gables which is assumed to be salts. This suggests there is a large amount of moisture being 'wicked' up the wall which may be accelerating the damage to the brickwork. Internally, the internal face of the gable walls have been finished with a cement render. The non-porous cement render is trapping moisture behind resulting in the salts and on-going brickwork damage. As part of any conversion works, following brickwork repairs/replacement works, it is recommended that all elevations are re-pointed with a lime-based mortar, with the existing mortar being raked back to a minimum of 25mm before re-pointing. All new brickwork to be reclaimed and match existing.

Stepped cracking and bowing brickwork was noted to the rear corner of elevation B4, due to the close proximity of the young ash tree located behind the adjacent boundary wall. This tree should be removed, and localised brickwork repairs undertaken.

The barn is open fronted to elevations B1 and B3. Depending on the design proposals, the openings will need to be enclosed and insulated and this will require installing a cladding type of finish or infilling the openings with masonry. Depending on the proposals, remedial works will be required to the end of life steel columns. As part of any works, it is assumed the external blockwork infill walls will be removed and finished to match the rest of the barn.

7.0 Doors and Windows

Barn 1

The majority of the windows have been lost over time with only timber frames and lintels remaining. There is 1no replacement modern casement type window to elevation A3. The external doors are typically ledge and braced barn doors with a stable type of door leading to the staircase. All windows and doors are end of life and will have to be replaced as part of any conversion scheme to ensure compliance from an energy efficiency, weather tight and security perspective.

Barn 2

The majority of the windows have been lost over time with only timber frames and lintels remaining. There is 1no replacement modern casement type window to elevation A4. There are no traditional doors to the barn, only steel agricultural type gates which have been used to close off the open fronted walls. All windows are end of life and require replacement. New doors will be required, however, the types and locations will depend on the design proposals.

8.0 Floors

Barn 1

The ground floor to the barn is formed out of an assumed non-insulated cast-in-situ concrete slab. The upper floors are finished with a mixture of cast concrete slab, suspended timber and assumed original lime ash floor. The first floor is supported by timber joists (where visible) approx. 170mm X 65mm below the lime ash floor and 200mm X 80mm below the concrete floor. The joists below the lime ash floor span right to left and the joists below the concrete floor span front to back. Where the joists are visible below the lime ash floor, the same bear directly onto the brickwork walls. The joists to the other 2no remaining areas were concealed by asbestos sheeting and so the same could not be inspected. The upper floors were firm to walk upon and so it is assumed the floor joists are currently working as intended and the same can be re-used as part of any conversion works. The joists and joist ends were visible below the lime ash floor and were visually satisfactory with very little woodworm or wet rot noted.

It is not known if part of the floor structure was designed to take the weight of a concrete floor finish. It is expected all the upper floor finishes will need to be renewed as part of any conversion works.

The concrete ground floor was partly concealed by material and machinery, although there were no extensive signs of cracking, ponding, or uplifting across the floor surface. To the far left room towards elevation A4, what appears to be an old maintenance inspection pit which had mostly been infilled with rubble / hardcore. It is envisaged that as part of the conversion works, all the ground floors will need to be broken up and levels reduced to gain additional floor to ceiling heights which is currently limited to areas. At the same time, all ground floors will need to be damp proofed and insulated to meet current building regulation requirements.

Barn 2

The ground floor to the barn is formed out of an assumed non-insulated cast-in-situ concrete slab. The majority of the slab was in satisfactory condition, however a large area of cracked and displaced concrete was seen to the end bay adjacent to gable B2. It is not known what has caused this and may be due to the weight of previously parked vehicles/machines.

As part of any conversion works, the ground floor slab will need to be broken up and new ground bearing slab formed with damp proof membrane and insulated to meet current building regulation requirements.

9.0 Internal Partition Walls

Barn 1

All internal partition walls are brick and assumed to be load bearing with the same visible within the roof space. The majority of the internal walls have been finished with a cement based type render with the same defective in multiple areas. As part of any conversion works, the render will need to be hacked off back to brick. The exposed walls beneath the lime ash floor are mostly still limewashed.

The masonry walls visible within the roof space are showing severe cracking and leaning due to the improper loads transmitted from the roof structure. These walls will need to be partly re-built. Numerous historic horizontal timber roof ties were seen within the internal walls within the roof space. This will need to be removed and either replaced with concrete lintels or brickwork.

As previously reported, vertical cracking was noted to the inside face of elevation A2, with concrete blocks positioned either side of the crack to help support the upper floor joists. It is assumed foundation failure / point loading has occurred at this point and remedial works will be required to stabilise the wall.

Barn 2

Towards elevation B2 there is an internal half height blockwork wall. The blockwork wall is in satisfactory condition however it is assumed the same will be removed during any conversion works. 3no concrete rendered narrow piers were noted to support the underside of each King

post truss. The pier towards elevation B2 was damaged revealing brickwork below. Due to the large span of the King post trusses, the piers were introduced at some point to stop potential deflection of the roof. This will need to be investigated during any future conversion works and it may be that if the piers are removed the roof trusses will need to be reinforced.

10.0 Opportunity for Alteration

Following an inspection of both barns, we are of the opinion that subject to the repairs identified within the main contents of this report and as stated in section 11.0, both barns can be adapted for its perceived use.

11.0 Suggested Repairs

Barn 1

- 1) Roof
 - a. Structural alterations to the roof structure to the main barn will be required to eliminate future movement and ensure the loads are evenly distributed through the structure to stop further cracking of the internal walls. It is assumed the majority of the existing roof timbers can be retained and any timbers where wet rot and beetle infestation is too far gone to be replaced. All retained timbers to be treated with a suitable fungicidal and woodworm treatment
 - b. The timber wall plates to the roof are not strapped down to the below masonry walls. It is recommended that strapping is introduced as a part of any conversion plans
 - c. Pad stones or similar to be introduced where purlins bear directly onto the masonry walls
 - d. Strip and retain the existing roof covering. The majority of the existing tiles are in satisfactory condition and can be re-used. Additional tiles to be sourced from a reclaims yard. Include for installing a roof membrane, insulation to current standards and new timber battens
- 2) External Walls
 - a. Due to roof spread and gradual movement of the roof structure towards elevation A2, the majority of the upper masonry courses and both main gables will need to be taken down and re-built. At the same time, the diamond pattern brick ventilation can be bricked up to provide a weathertight envelope
 - b. A programme of brick replacement works, and re-pointing will be required to all elevations where bricks have spalled. All cement pointing/brick replacement works to be pointed and bedded with a lime mortar
 - c. The brickwork below the door to elevation A2 will need to be re-built following any repairs / alterations to the foundations
 - d. Bricked up openings should be restored to their former use and any replacement blockwork walls taken down and replaced with matching reclaimed brickwork

- e. All the existing assumed reinforced concrete lintels are failing and will need to be replaced as part of any conversion works
- 3) Foundations
- a. It is anticipated that the foundations along all elevations are generally shallow brick considering the age of the building. As such, it is anticipated that with potential new floors being constructed, the walls may need to be underpinned to allow for maintaining reasonable access levels and internal floor to ceiling heights
- 4) Joinery
- a. The current staircase is not compliant and will need to be re-designed and or moved to meet current building standards
 - b. All external windows and doors will need to be replaced including all existing timber lintels
- 5) Internal Floors
- a. All internal first floor finishes and part of the timber floor structures will need to be replaced during any future works
 - b. The concrete ground floor slabs will need to be replaced during any future works to achieve sufficient floor to ceiling heights and to damp proof and insulate the slabs to current standards

Barn 2

- 1) Roof
- a. The main structural timbers are re-usable and any retained timbers to be treated with a suitable fungicidal and woodworm treatment
 - b. Potential requirement for reinforcing King trusses should the internal brick supporting piers are removed
 - c. The timber wall plates to the roof are not strapped down to the below masonry walls. It is recommended that strapping is introduced as a part of any conversion plans
 - d. Pad stones or similar to be introduced where purlins bear directly onto the masonry walls
 - e. Strip and retain the existing roof covering. The majority of the existing tiles are in satisfactory condition and can be re-used. Additional tiles to be sourced from a reclaims yard. Include for installing a roof membrane, insulation to current standards and new timber battens
- 2) External Walls
- a. Remove adjacent ash tree and undertake isolated repairs
 - b. Part re-build and reinforced bed joints to both masonry gables at high level
 - c. Part re-build of 2no brick piers either side of elevation B1
 - d. A programme of brick replacement works, and re-pointing will be required to all elevations where bricks have spalled. All cement pointing/brick replacement works to be pointed and bedded with a lime mortar

- 3) Foundations
 - a. It is anticipated that the foundations along all elevations are generally shallow brick considering the age of the building. As such, it is anticipated that with potential new floors being constructed, the walls may need to be underpinned to allow for maintaining reasonable access levels and internal floor to ceiling heights
- 4) Joinery
 - a. All external windows and doors will need to be replaced including all existing timber lintels
- 5) Internal Floors
 - a. The concrete ground floor slabs will need to be replaced during any future works to achieve sufficient floor to ceiling heights and to damp proof and insulate the slabs to current standards

12.0 Signature of Surveyor

Date: 29th July 2021



Andrew Prideaux MRICS
Associate Building Surveyor
For and on Behalf of Fisher German LLP

13.0 Appendix A – Photographs



Photo 1 - General view of Barn 1 - Elevation A1



Photo 2 - General view of Barn 2 - Elevation B1



Photo 3 - Barn 1 – Undulation to roof / eaves brickwork course due to 'roof spread'



Photo 4 – Barn 1 – Failed Masonry Wall



Photo 5 - Barn 1 – Failure of gable end / roof junction



Photo 6 – Barn 1 – Deflection of main roof / failure of internal load-bearing masonry walls



Photo 7 – Barn 1 – Beetle infestation to timbers



Photo 8 – Barn 1 – Typical ground floor internal finish



Photo 9 – Barn 2 – Failure of brick pier



Photo 10 – Barn 2 – Failure of brickwork due adjacent ash tree and brick spalling / salts



Photo 11 – Barn 2 – Blockwork infill sections



Photo 12 – Barn 2 – Failure of concrete floor slab and internal render causing external damp issues



Photo 13 – Barn 2 – Failing brickwork pier supporting King post trusses



Photo 14 – Barn 2 – 'Flight' holes noted to King post truss bottom cord and timber wall plates

14.0 Appendix B – Flood Report Summary

Flood map for planning

Your reference
1

Location (easting/northing)
424594/315901

Created
28 Jul 2021 14:37

Your selected location is in flood zone 1, an area with a low probability of flooding.

This means:

- you don't need to do a flood risk assessment if your development is smaller than 1 hectare and not affected by other sources of flooding
- you may need to do a flood risk assessment if your development is larger than 1 hectare or affected by other sources of flooding or in an area with critical drainage problems

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Flood risk data is covered by the Open Government Licence which sets out the terms and conditions for using government data. <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2021 OS 100024198. <https://flood-map-for-planning.service.gov.uk/os-terms>

Flood map for planning

Your reference
1

Location (easting/northing)
424594/315901

Scale
1:2500

Created
28 Jul 2021 14:37

- 
-  Selected point
 -  Flood zone 3
 -  Flood zone 3: areas benefitting from flood defences
 -  Flood zone 2
 -  Flood zone 1
 -  Flood defence
 -  Main river
 -  Flood storage area

0 20 40 60m

Fisher German's Building Consultancy Team has in depth knowledge and experience across all market sectors. Our expertise ranges from full design and build management to specific advice on construction and property related matters.

By understanding technical advances, new legislation and importantly, our Clients' requirements, we seek to provide innovative and bespoke solutions to add value.

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