

Structural Survey

Ashridge Farm

Warren House Road, RG40 5QB

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Project Revision Sheet

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1	06/06/2016	Final	Amended as per client request	R Patel	N Ainsworth
2	26/07/2016	Planning	Building 'L' survey information added. Building 'A', 'F' & 'G' removed	R Patel	N Ainsworth

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1 Introduction

MLM have been appointed by Smart Planning to undertake a structural appraisal of the existing buildings at Ashridge Farm, Wokingham. The purpose of the survey was to ascertain the structural condition of the existing buildings in terms of their structural integrity. The survey works were undertaken by MLM on 14 April 2016 & 2 May 2016.

The buildings generally appear to form a series of farm outbuildings, stables blocks etc. The buildings are currently generally used for storage though some are currently unused.

The survey was non-intrusive and was carried out from ground level. The survey was limited to structural elements and hence non-structural elements as windows and finishes are not commented upon unless they are believed to impact on or provide evidence of underlying structural defects.

It should also be noted that structurally there could be inherent problems with all types of existing buildings associated with their original construction and / or past alterations. These are often not possible to detect without comprehensive intrusive investigations. It is also possible that defects have been made good and concealed by finishes as part of ongoing maintenance of the building.

Our comments relate purely to the buildings in their current state and usage.

For each of the buildings we also have noted the key items of works that we believe would be required in order to make the building habitable from a structural perspective. In some instances we do not believe that it would be economic or suitable for the buildings to be reused for dwellings due to their condition or form of construction, if this is the case we have noted this against those particular outbuildings.

2 Building Description and Observations

The farm buildings surveyed appear to have been constructed at various times over the last 50 -100 years or so, the main barn is believed to be constructed circa 1920.

Refer to sketch in the Appendix of this report for building references.

As noted all of the buildings surveyed have been constructed as farm buildings as such the building that are to be retained as part of a redevelopment of the site may need considerable works to bring them up to what would be expected of modern dwellings. The floor slabs are generally have a rough finish and it is unlikely that the slabs are reinforced or laid on any form of damp proof membrane (DPM). From our observations most of the buildings surveyed appear not to have been constructed with damp proof course (DPC).

2.1 Building 'B'

The building is single storey and appears to be currently unused, it is likely to have been used previously as a stables.

The structure is steel framed with non-load bearing masonry dado / low level walls on three sides.

Foundations: The type of foundation used for the building is not known at this time, though due to the age and type of building we would expect the building to have a splayed brick foundation founded directly onto the ground.

Ground floor: Ground bearing concrete slab. The slab has a rough surface finish typical of a farm outbuilding. The slab is unlikely to be substantially reinforced or have any DPM present or be insulated on its underside. The thickness of the floor slab is not known. The quality, depth and the level of compaction of and substrate is also unknown.

Walls: blockwork dado walls – approximate 1350mm high with timber studs over to the underside of roof level, the walls are covered with bituminous type corrugated sheets. The wall cladding / covering is in very poor condition and requires to be replaced to ensure the building is watertight. Due to either vehicular impact or vegetation around the external perimeter of the building the masonry walls have severely cracked and dislodged from their original position. The walls do not appear to have damp proof course.

Roof: Steel rafters to create mono pitched roof. The roof is covered with a galvanised corrugated metal sheet covering. The steel rafters and posts show signs of weathering as they are exposed to the elements and the steelwork requires a suitable protective coating applied in order to maintain the structural integrity over time. We would normally expect all 'external' steelwork or that exposed to the elements to be hot dip galvanised.

Other: The guttering to the building is in a poor condition, generally leaving the water to drain on the fabric of the building.

In summary the fabric of the building is considered to be in a poor condition.

Due to the form of construction used and the condition of the building we would not recommend that this building is refurbished as part of a redevelopment / conversion to domestic use.



BUILDING 'B'

2.2 Building 'C'

The building is currently being used as tack room. The structure is generally timber framed and has in part brickwork masonry dado walls at low level.

Foundations: The type of foundation used for the building is not known at this time, due to the age and type of building we would expect it to be founded directly onto the ground, ie not on a traditional mass concrete or strip foundation. The depth of the foundation is likely to be less than 600mm.

Ground floor: The floor slab is likely to be a ground bearing concrete slab placed on compacted hardcore. The quality of the slab is poor. The slab has a rough surface finish typical of a farm outbuilding. The slab is unlikely to be substantially reinforced or have any DPM present or be insulated on its underside. The thickness of the floor slab is not known. The quality, depth and the level of compaction of and substrate is also unknown.

Walls: brickwork dado walls –approximate 600mm high with timber panel boarding over the dado walls. The timber cladding on the walls appears to be in very poor condition. The brick masonry dado walls appear to be showing signs of damp and are cracked in various locations. The walls do not appear to have damp proof course.

Roof: Timber rafters to create pitched roof with corrugated clay tiles. The majority of the roof is covered by the over grown vegetation and as such has restricted our observations here. The roof does not appear to have felt layer underneath the tiles in line with what would be expected in modern construction. Numerous tiles are either missing or have been displaced particularly near the ridge level allowing the water to ingress in the structure. Vegetation has encroached into the building due to lack of any ongoing maintenance.

Other: The guttering is missing leaving the water to drain on the fabric of the building. This has damaged the external wall cladding severely and the cladding and could affect the building structure if allowed to continue. The ceiling is timber boarded and has missing or damaged boards in various locations, generally the structure is in need of repair.

In summary the building is considered to be in a generally poor condition.

Due to the form of construction used and the condition of the building we would not recommend that this building is refurbished as part of a redevelopment / conversion to domestic use.



BUILDING 'C'

2.3 Buildings 'D' & 'E'

The buildings are single storey and constructed using load bearing masonry, the buildings are currently being used as stables and fodder store.

Foundations: The type of foundation used for the building is not known at this time, due to the age and type of building we would expect it to be founded directly onto the ground, ie not on a traditional mass concrete or strip foundation. The depth of the foundation is likely to be less than 600mm.

Ground floor: The floor slab is likely to be a ground bearing concrete slab placed on compacted hardcore fill. The quality of the slab is poor. The slab has a rough uneven surface finish this can be typical of a farm outbuilding. The slab is unlikely to be substantially reinforced or have any DPM present or be insulated on its underside. The thickness of the floor slab is not known. The quality, depth and the level of compaction of and substrate is also unknown.

Walls: Load bearing brickwork walls. The walls are weathered and the mortar joints required re-pointing and repairing in some areas. The faces of some bricks in the external walls are eroded and some bricks are missing in several locations due to vehicular impact, building alterations, erosion and weathering effects over the years. There are several pockets formed in the walls due to missing bricks. The walls do not appear to have damp proof course.

The flank wall appears to have two leaves of bricks and one of the leaf is not constructed up to and underside of the roof. The flank wall has been severely cracked and shows signs of bowing. It appears that the one of the flank wall leaf had been repaired but the repair works does not appear to be carried out appropriately while the other leaf has been covered up with 2 ply sheets and that restricted our inspection but the exposed brick work appeared to be in very poor state and was potentially unstable.

The walls around the entrance of the building 'E' appear to have been repaired but these works appear to be of poor standard.

The entrance to the fodder store has steel framed opening. The steelwork is not galvanised and appears to have no significant coating to protect it. The steel frame appears to have been hit by a vehicle at some stage and has been damaged, the vehicular impact has also displaced the bricks over the opening leaving the wall damaged and potentially in an unstable condition.

Roof: The main building structure is formed from timber trusses, the pitched roof is covered with 'rosemary' type clay tiles. Part of the roof is covered by the over grown vegetation, as such we could not survey the full roof. The roof does not appear to have a felt layer under the tiles in line with what would be expected with modern construction. There are a number of tiles that are missing or displaced allowing water to ingress into the building.

Other: The guttering is missing leaving the water to drain on the structure. The ceilings are lath and plaster ceilings. The ceilings are largely missing from various location.

In summary the building is considered to be in a generally poor condition and repairs are necessary to ensure the longevity of the building and prevent continued decay of the building fabric.

Due to the form and construction of the building we believe that it could be refurbished as part of a redevelopment / conversion to domestic use. The structural issues noted above would need to be addressed plus any works to the building fabric necessary for the building to comply with the Building Regulations and other design standards.

If the proposed applied loads to the foundations are increased as part of the redevelopment then investigations to look at the foundations would be recommended and works to the foundations may be required.



BUILDINGS 'D' & 'E'

2.4 Building 'J'

The buildings are single storey and seem to be unused and we believe that the building was used as garages.

The structure is timber framed with timber cladded walls. Overall the structure appears to be in a very poor condition.

Foundations: The type of foundation used for the building is not known at this time, due to the age and type of building we would expect it to be founded directly onto the ground, ie not on a traditional mass concrete or strip foundation. The depth of the foundation is likely to be less than 600mm.

Ground floor: The floor slab is likely to be a ground bearing concrete slab placed on compacted hardcore fill. The quality of the slab is poor. The slab has a rough uneven surface finish this can be typical of a farm outbuilding. The slab is unlikely to be substantially reinforced or have any DPM present or be insulated on its underside. The thickness of the floor slab is not known. The quality, depth and the level of compaction of and substrate is also unknown.

Walls: Timber studs with timber cladding on the walls. The walls appear to be in very poor state of maintenance and requires to be replaced with new. Part of the building was inaccessible that has restricted our inspection.

Roof: Timber rafters to create pitched roof with corrugated clay tiles. Part of the roof is covered by the over grown vegetation. The roof does not appear to have felt layer in line with the modern construction. Numbers of tiles are missing or displaced near the ridge level allowing the water to ingress in the structure. The vegetation has encroached in the building due to lack of maintenance works. The roof shows significant signs of sagging, this is due to decayed timber rafters and support members, bearing beams/posts.

Other: The guttering is in a poor condition.

In summary the building is considered to be in a very poor condition.

Due to the form of construction used and the condition of the building we would not recommend that this building is refurbished as part of a redevelopment / conversion to domestic use.



BUILDING 'J'

2.5 Building 'K'

The building is single storey load bearing masonry structure and appears to be derelict.

Foundations: The type of foundation used for the building is not known at this time, though due to the age and type of building we would expect it to be founded directly onto the ground. The depth of the foundation is likely to be circa 450mm - 600mm.

Ground floor: The floor slab is likely to be a ground bearing concrete slab. The slab has a fairly rough surface finish typical of a farm outbuilding. The slab depth is unknown and is unlikely to be substantially reinforced or have any DPM or insulation on its underside. The quality, depth and the level of compaction of and substrate is unknown.

Walls: The building is constructed of load bearing brickwork walls. The mortar joints in the front elevation external walls are in need of re-pointing in several locations due to erosion and weathering. One of the brick piers in the front elevation has several bricks missing. The gable wall also appears to have poor mortar joints and has several weathered / eroded bricks.

The walls do not appear to have a damp proof course.

The wall sections supporting the timber trusses at the underside of roof level / eaves generally appear to be bowed and cracked. One of the wall corner supporting the timber truss appears to be severely cracked and on the verge of collapse.

Roof: Timber trussed, pitched roof with rosemary clay tiles as a roof covering. Part of the roof is covered by the over grown vegetation and as such we could not assess the condition of the roof covering in this area. The roof does not appear to have an underfelt layer in line with the modern construction. Roof tiles near to the rear door and at the ridge levels are missing allowing the water to ingress in the structure. There are several other locations the tiles are dislocated for the original position. Timber purlins and cut timber members appear under sized by modern standards and shows signs of excessive deflection and this has lead the roof to sag.

Other: The guttering is missing in part leaving the water to drain on the external walls.

The timber frame creating the entrance to the building appears to be undersized and shows signs of significant deflection. The timber columns forming the part of the frame are decayed and appear to be in a poor condition.

The timber framed mono-pitched extension at rear appears to be in a poor condition.

In summary the building is considered to be in a poor condition for its age and type and is in need of maintenance / repair works.

Due to the form and type of construction used in the building we believe that it could be refurbished as part of a redevelopment / conversion to domestic use. The structural issues noted above would need to be addressed plus any works to the building fabric necessary for the building to comply with the Building Regulations and other design standards.

If the proposed applied loads to the foundations are increased as part of the redevelopment then investigations to look at the foundations would be recommended and works to the foundations may be required.



BUILDING 'K'

2.6 Building 'L'

The building is single storey 'L' shaped building. The building seems to be derelict and was probably used as stables. The most part of the building structure is timber framed with a tiled pitched roof while the small part of the building is load bearing masonry structure.

The timber framed structure is currently propped along its entire length. Due to over grown vegetation and is potentially unstable; as such we have not entered in the building. From our external observations, due to the form and condition of the building we would not recommend that this building is refurbished as part of a redevelopment / conversion to domestic use.

The masonry building:

Foundations: The type of foundation used for the building is not known at this time, though due to the age and type of building we would expect it to be founded directly onto the ground. The depth of the foundation is likely to be circa 450mm - 600mm.

Ground floor: The floor slab is likely to be a ground bearing concrete slab. The slab has a fairly rough surface finish typical of a farm outbuilding. The slab depth is unknown and is unlikely to be substantially reinforced or have any DPM or insulation on its underside. The quality, depth and the level of compaction of and substrate is unknown.

Walls: The building is constructed of load bearing brickwork walls. The mortar joints in the external walls are in need of re-pointing in several locations due to erosion and weathering. Left hand side of the building is covered with overgrown vegetation and that had limited our survey to inspect the wall externally.

The walls do not appear to have a damp proof course.

Roof: Timber rafters to create pitched roof with corrugated clay tiles as a roof covering. The roof does not appear to have an underfelt layer in line with the modern construction. Several Roof of tiles at the ridge levels are missing allowing the water to ingress in the structure. There are several other locations the tiles are dislocated for the original position. Timber purlins and cut timber members appear under sized by modern standards and shows signs of deflection and this has lead the roof to sag.

Other: The guttering is missing leaving the water to drain on the external walls.

In summary the timber framed building is considered to be structurally unstable. Due to the form and condition of the building we would not recommend that this building is refurbished as part of a redevelopment / conversion to domestic use. On the other hand the load bearing masonry building could be refurbished as part of a redevelopment / conversion to domestic use. The structural issues noted above would need to be addressed plus any works to the building fabric necessary for the building to comply with the Building Regulations and other design standards.

If the proposed applied loads to the foundations are increased as part of the redevelopment then investigations to look at the foundations would be recommended and works to the foundations may be required.



BUILDING 'L'

2.7 Building 'M'

The building is single storey barn building. The structure is timber framed with brick masonry walls in part. As the building was inaccessible and locked, as such our comments are limited to the external views.

Foundations: The type of foundation used for the buildings are not known at this time, though due to the type of building we would expect the building to be founded directly onto the ground at a depth likely to be around 300 – 600mm below the ground level.

Ground floor slab: Unknown.

Walls: Part timber, part brick wall construction. The dado walls appeared to be repaired in the past which appear to be of poor standard. The walls do not appear to have damp proof course.

Gable end of the timber cladded wall appears to be bowed. The timber cladding is in a poor condition and have missing timbers in various locations leaving the timber walls exposed to external elements / weathering.

Roof: Pitched roof with rosemary clay tiles. The hip ends and the ridge of the roof are sagging. From what could be gleaned externally the roof structure appears to be in poor condition.

Other: The guttering is missing in part. The timber members forming the structure appear to be decayed and appears to be in poor condition.

Due to the form and type of construction used in the building we believe that it could be refurbished as part of a redevelopment / conversion to domestic use. We would need to gain access to the building in order to survey the building and comment upon its condition structurally. Any works to the building would need to address the fabric of the building to ensure conformance with the Building Regulations and other design standards.

If the proposed applied loads to the foundations are increased as part of the redevelopment then investigations to look at the foundations would be recommended, works to the foundations may be required.



BUILDING 'M'

3 Summary

The inspections undertaken to compile this report provides a guide to the structural health of the buildings on Ashridge Farm, Wokingham. The buildings were originally constructed as farm outbuildings and as such the quality and standard of workmanship in some areas is questionable in terms of what would be expected from modern domestic properties and compliance with appropriate design and construction standards.

Most of the buildings are in poor condition and they require maintenance and repair works. Given the fact survey was conducted from ground level and lots of vegetation covered some of the buildings we cannot ensure that all of the structural defects have been identified.

MLM have been informed that the farm could potentially be redeveloped and some of the buildings converted or reused as part of a residential scheme.

Any refurbishment of the buildings will need to comply with current legislation, the Building Regulations and design standards. This report is based on our observations at the time of the survey and we believe that works to rectify the issues noted are required in order to prevent further damage to the fabric and structure of the buildings. In several of the buildings surveyed (Buildings A, B, C, F, G, J & L) the building form, quality of construction and condition are poor / very poor, we would not recommend that these buildings are reused.

It may be possible to refurbish and convert Buildings D, E, K & M if the problems observed are rectified.

Obviously our views on whether buildings can be re-developed and refurbished are based on our observations of the buildings from a structural perspective. Obviously we are not contractors or cost consultants and our views are only to assist in understanding the condition of each of the buildings, other professional advice is recommended in order to fully understand the scope of works required and the associated costs and programme for the works.

We would recommend that a more detailed investigation is undertaken when the proposed scheme is developed and the use and layout of the buildings is determined. If the loads in any of the retained buildings are to increase as part of the development investigation works to the foundations would be required in order to establish type and depth of the foundations, soil characteristics and engineering properties etc.

If a more extensive housing development was to be proposed we would recommend a suitably scoped geotechnical Site Investigation is carried out.

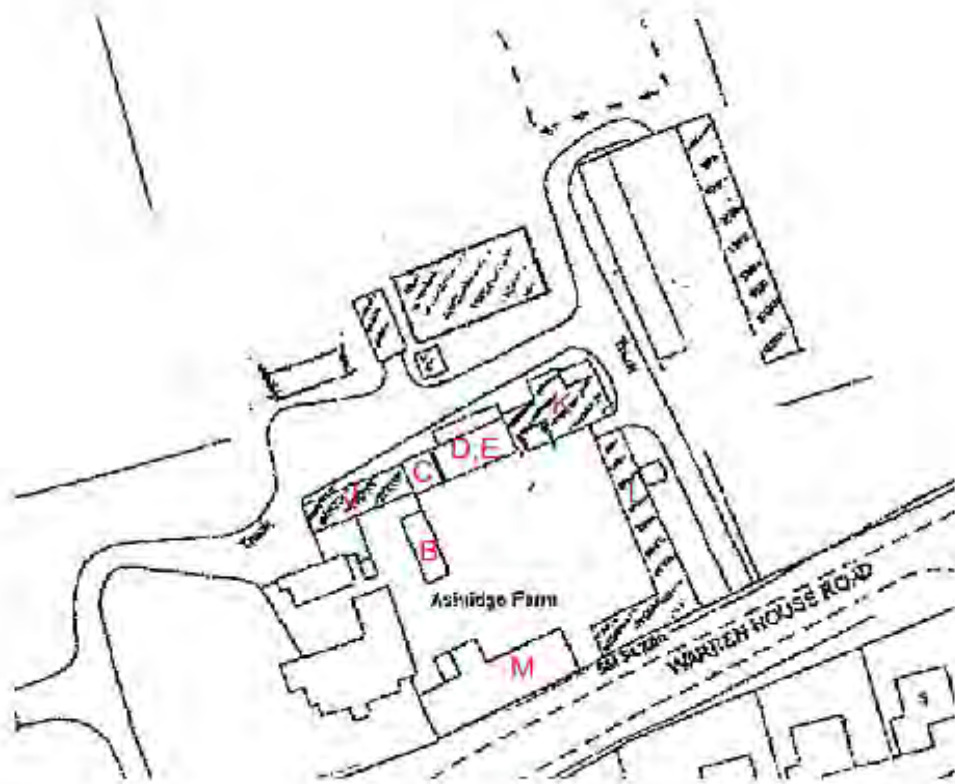
A CCTV survey would also be recommended to establish the condition and extent of any on-site underground drainage should any exist.

Appendices

Appendix A: Site Plan and Photographs

Appendix A

Site Plan and Photographs



SITE PLAN SHOWING BUILDING LOCATION



DEFECTS OBSERVED IN BUILDING 'B'



DEFECTS OBSERVED IN BUILDING 'C'



DEFECTS OBSERVED IN BUILDING 'D' & 'E'



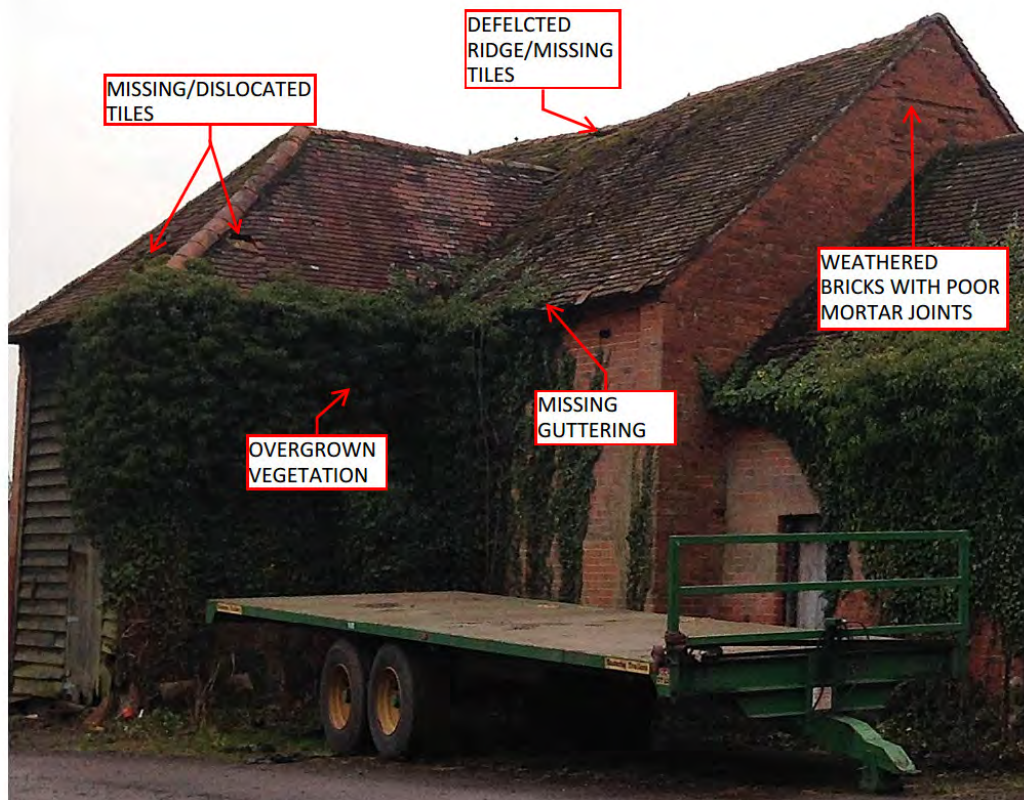
DEFECTS OBSERVED IN BUILDING 'D' & 'E'



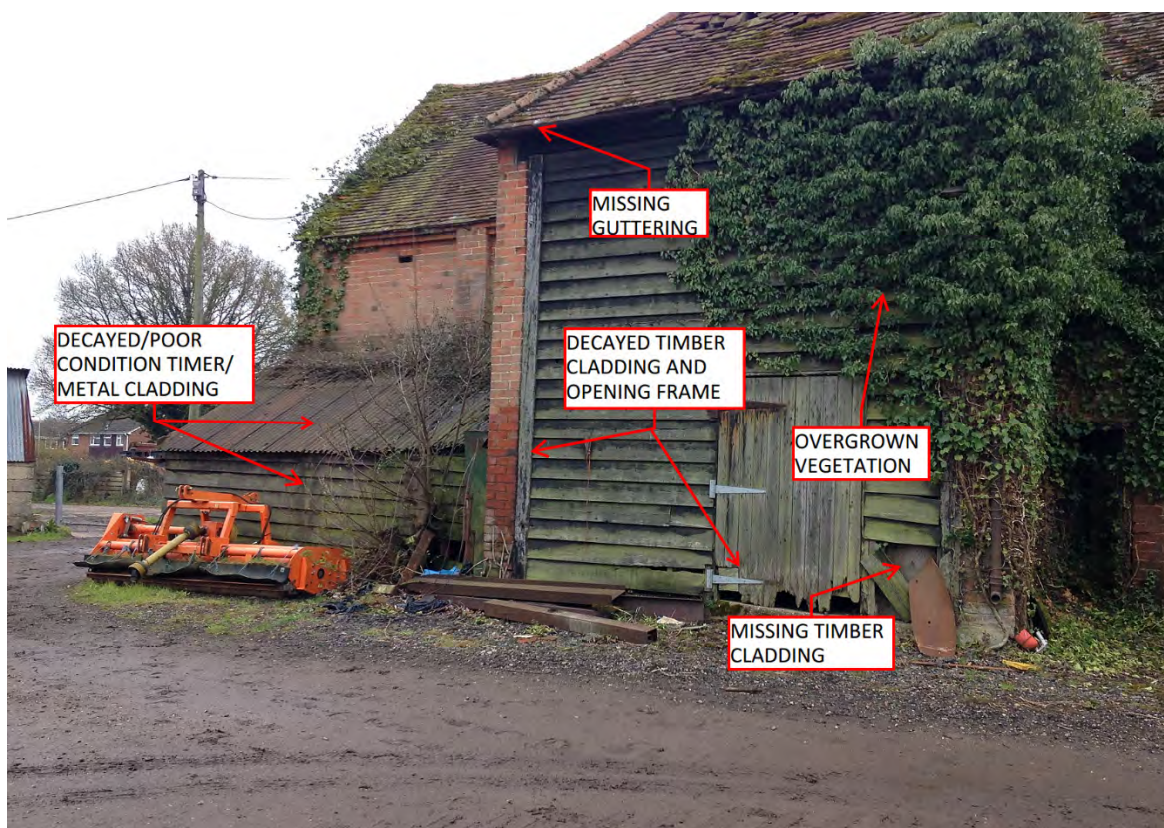
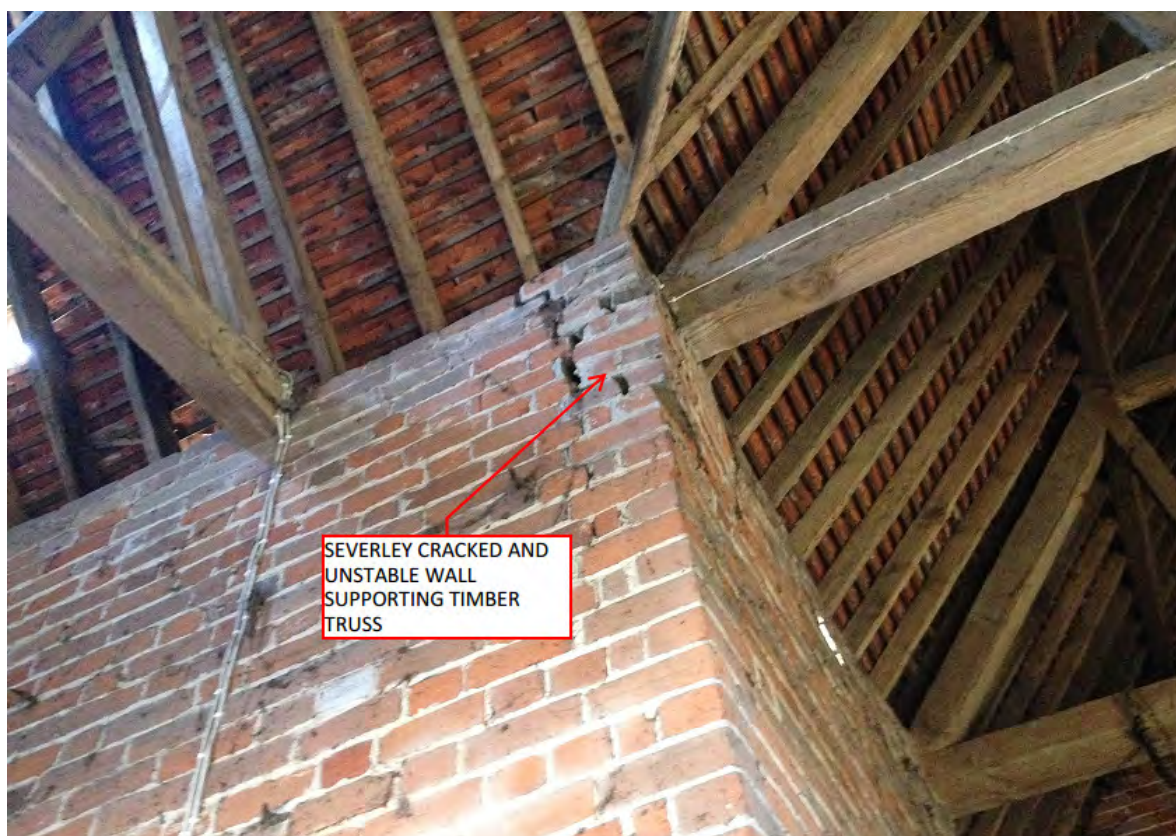
DEFECTS OBSERVED IN BUILDING 'D' & 'E'



DEFECTS OBSERVED IN BUILDING 'K'



DEFECTS OBSERVED IN BUILDING 'K'



DEFECTS OBSERVED IN BUILDING 'K'



DEFECTS OBSERVED IN BUILDING 'K'



DEFECTS OBSERVED IN BUILDING 'K'