

STRUCTURAL INSPECTION
OF
EXISTING OUTBUILDINGS
AT
HOBBS FARMHOUSE
BILSHAM ROAD, YAPTON, BN18 0JY

Project No: 18049

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1.0 INTRODUCTION

Instructions were received from Mr and Mrs Head of Hobbs Farmhouse, Bilsham Road, Yapton, to undertake a structural inspection report of existing outbuildings located in the grounds of the property.

The purpose of this report was to undertake a visual structural inspection of the buildings, to comment on the structural condition and to assess the structural suitability for conversion to residential accommodation.

This report is limited to a visual inspection of the existing outbuilding structures. It does not comment on any general surveying aspects of the buildings, i.e. plumbing, glazing, damp proof membranes, waterproofing, mechanical or electrical services, etc.

The inspection was of a surface visual nature of the exposed areas only; structure obscured from view at the time of inspection, including foundations, could not and has not been inspected and therefore cannot be confirmed as being free from defects.

The extent of our appraisal is as described above and therefore the following commentary does not represent a full structural report on the condition of the property.

This report has been undertaken for the sole use of Mr and Mrs Head. No responsibility will be accepted for its use, in full or part, by any third parties.

The inspection was carried out on 8th August 2018 from ground level only.

A copy of Corinthian Architectural Design drawing indicating the existing and proposed layouts is appended to the rear of this report (Appendix A).

The outbuildings are located approximately north of Hobbs Farmhouse and consist of two distinct structures. Both buildings appear to have been constructed from a brick and flint boundary/garden wall.

2.0 BUILDING A

The larger of the two structures (Building A) is a four bay single storey building, with the western two bays forming an open plan carport and the eastern two bays forming separate store rooms with stable doors. The building measures approximately 12.5m long and 5.0m deep.

The roof is a traditional cut and pitched timber roof with slate tiling. The roof is open to the underside, with purlins breaking the span of the rafters, which in turn are propped from timber ties/beams forming the four bays (three tie beams). These beams look to be housed into the eaves beams/wall plates to control roof spread. Dragon ties are also provided to each corner, also to assist with controlling roof spread.

The roof timbers to this building appeared generally to be in a fair condition and the ridge and hip lines appeared to be consistent. Slight undulations were noted to the northern eaves line, this was considered to be as a result of historic roof spread.

Some slate tiles had slipped and some were broken and will require replacement.

Localised areas of infestation by wood boring insects were evident and will require treatment to ensure it is not ongoing. Areas of decay were also evident to various areas of the roof timbers, including rafter feet, eaves beams and to ceiling tie beams. During the works, localised areas of repair/replacement are likely to be required to the timberwork, the full extent of which would be confirmed as the timber is fully exposed.

Various remedial works have been carried out historically to the tie beams, including the addition of metal straps to connect the eaves beams to the tie beams and partial timber replacement to a decayed tie beam bearing. The position of the decayed bearing ties up with the undulating eaves location, suggesting that historically this connection had failed/decayed, the roof had spread, and has since been strengthened/repared.

The southern/rear wall to this building forms the boundary with the garden to Hobbs Farmhouse. The wall is of flint construction with brickwork piers/quoins and banding. This wall is thought to be the original part of this structure.

The two end walls (eastern and western ends) are constructed of 215mm solid bonded brickwork. Three brickwork piers support the ceiling tie beams to the northern elevation of the building, these brick piers are quite recent in construction and are unlikely to be part of the original building (they have possibly replaced timber posts). The northern walls to the two store rooms are formed with solid blockwork with a render finish externally.

Internally, the walls which separate the stores are formed from a combination of blockwork dwarf walls with studwork infill above.

There is a significant diagonal fracture to the western brick wall, towards the junction with the flint southern wall. The crack measures up to 15mm at it's maximum. Further investigations into the cause of

this crack and whether it is ongoing would be required prior to repairing it. It is currently considered to be a result of either localised foundation movement, roof spread or a combination of both.

At the south eastern corner of the flint wall there is a predominantly vertical crack of approximately 3mm width to the location of the brick quoin and flintwork. Externally additional vertical cracks were observed to the (southern) face of the flint wall. These cracks are considered to be as a result of thermal expansion/contraction of the wall as no movement joints are provided throughout its construction.

Externally some areas of repointing to the southern flint wall have taken place using a cement based mortar. The wall was originally constructed with a lime based mortar and the cement areas should be replaced with lime whilst the other work is carried out.

The ground floor to this building is a traditional ground bearing concrete slab, which appears to be generally in sound condition and suitable for re-use.

3.0 BUILDING B

Building B is a small single storey lean-to building of approximately 4.0m by 6.0m, located at the eastern end of Building A.

The roof of this building is formed with small timber purlins supporting corrugated sheeting with a shallow pitch, all of which is in a poor condition.

There is inadequate headroom within this building, which would be exacerbated following the introduction of insulation which would be required for a habitable dwelling. It is intended that the roof of this building is to be completely replaced as part of the proposed works.

The northern and eastern walls to this building appear to be rendered single leaf blockwork with piers. There is a localised horizontal crack to a slender pier on the eastern wall between the door and window, otherwise these walls appeared in fair condition.

The southern wall is a continuation of the flint boundary wall. This section of wall curves on plan. There is a vertical crack to the flint wall, which is thought to be due to thermal expansion/contraction. A small low level brickwork buttress is present internally to the south-eastern corner of the building, assumed to have been introduced to prevent overturning of the wall, which does not appear to now be ongoing.

The western wall of this building is the eastern wall of Building A and appeared in sound condition.

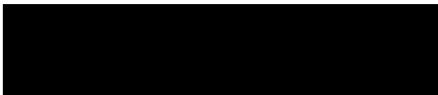
The ground floor construction to this building is a concrete ground bearing slab. It appeared to be in fair condition, however, there were quite a high number of scars in the concrete where areas/patches have been repaired or replaced.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The building as inspected appeared to be in quite good structural condition, and is considered to be suitable for conversion to residential accommodation without the need for extensive alteration or rebuilding, but subject to the following: -

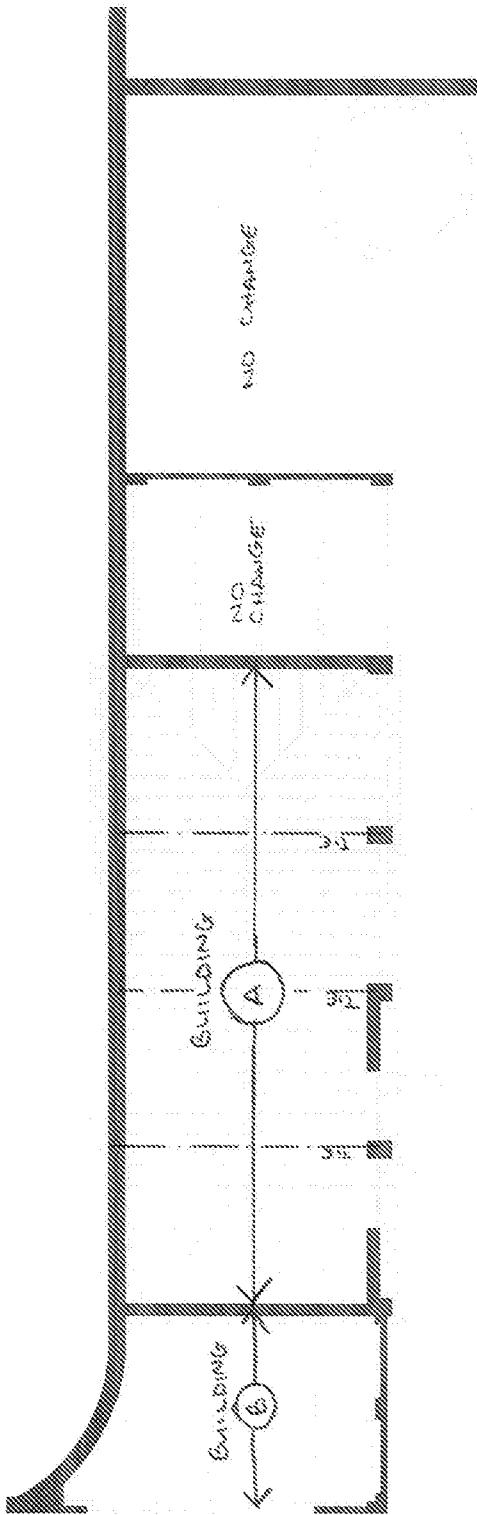
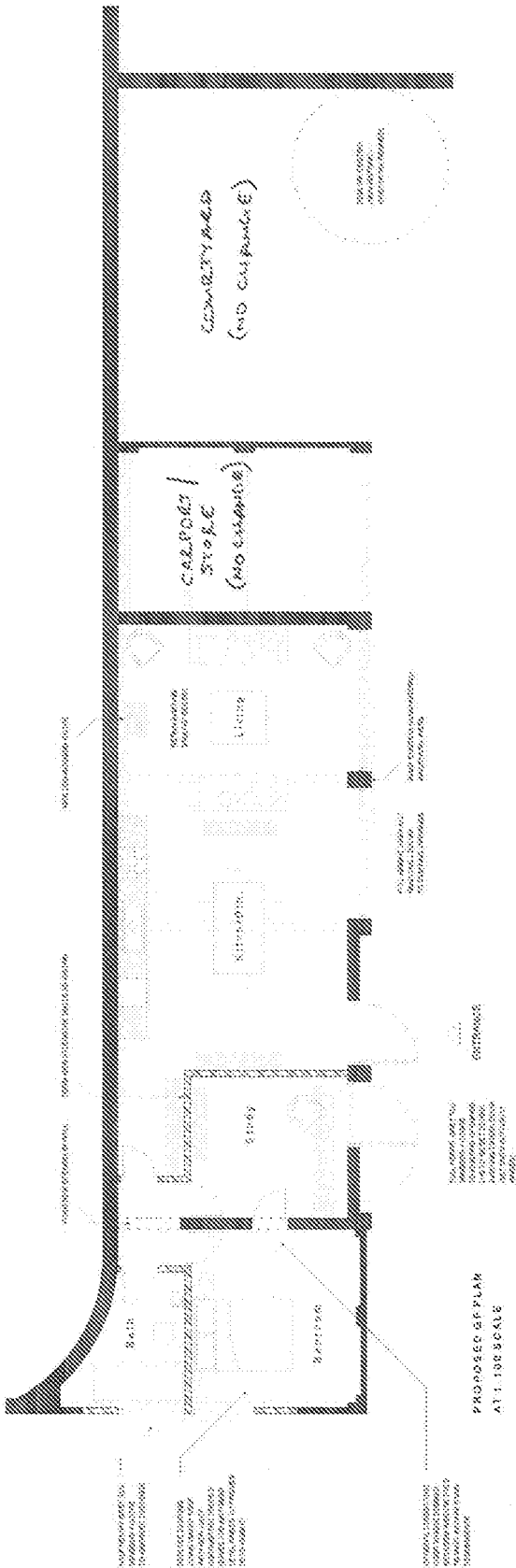
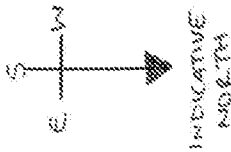
- a) Walls, floor and roof areas are to be upgraded to meet current standards of thermal and sound insulation. The upgrading of external walls should involve materials that do not impose excessive additional loads on the foundations.
- b) The existing roof structure has some localised evidence of roof spread and timber decay repairs. It is expected that localised repairs and/or replacement of existing roof timbers will be required, along with localised strengthening of timber members.
- c) It is recommended that in order to improve the weather tightness of the existing slate roof that the slates are removed and stored for reuse, prior to the installation of a new felt and battened roof structure incorporating insulation as noted in a) above.
- d) The existing flint wall has various vertical cracks, considered to be a result of thermal expansion and contraction and which do not appear to be of recent origin. The brick wall cracking to the south west corner of Building A may be the result of foundation movement and may require local underpinning, all subject to further investigations.

The above works when completed should enhance the structural integrity of the building and provide an much longer life span.



Stephen Murphy CEng MStructE
for **STM Structural Engineers**

Appendix 'A'



EXISTING GROUND FLOOR PLAN
AT 1:100 SCALE

CLIENT	Mr & Mrs R. Head
SITE	Holmes Farmhouse, Bilsland Road, Yagdon
PROJECT	Conversion of Existing Outbuilding
DRAWING	001 Existing & Proposed Floor Plans
DATE	10.07.18
AUTHOR	AH
STATUS	PRIE PL
SCALE	1:100 @ A3
REVISION	
CORINTHIAN ARCHITECTURAL DESIGN	
100, High Street, Bilsland, Yagdon, Wiltshire, SN1 1AA	
01245 255 1111	