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STRUCTURAL REPORT
for
High Bent
The Hollands
Biddulph Moor
ST8 7LE

For and on behalf of
Ms T Hart and Mr D Griffiths

Structural Report rev C
23 October 2017

1 TERMS OF REFERENCE

To carry out a survey to determine the general condition and stability of the property.

2 GENERAL DESCRIPTION

The property comprises a detached stable building accommodating 4 stalls and 1 larger barn/tack building located adjacent to a detached house, set within its garden area.

There is a driveway into the property which leads to a fenced hardstanding in front of the stables which are surrounded by lawns and an ancillary building to the main house used as an office.



The stable building accommodates loose boxes and tack room



The building is used for housing domestic animals

The stable building is set on a gently sloping site falling approximately 0.5m across the footprint. The 'L' shaped layout accommodates the four horse boxes on the long leg of the 'L' and the larger tack room on the short leg.

The hardstanding is bounded by a wooden railed fence with a farm gate giving access to the driveway and lawns of the garden.

The building is approximately 15 years old and is in use for housing chickens. Other stock may be also kept in the building but were not present during the inspection.

There are electrical power and lighting services to the building which has its own switch breaker distribution board.

The building has a concrete ground floor slab with a single course of brick set on the slab to support the structural sole plate. The external walls are formed in timber studwork with tongued and grooved boards fixed vertically to the studs and rails. The studs/rails are 75x50mm. The timber appears to be pressure treated spruce. Each stable has a door in two sections. Kick boards are formed in OSB sheeting.

The roof form is a simple duo-pitch with gables. The roof is clad in corrugated bitumen roof sheets which is un-insulated. There are translucent poly-carbonate panels in the rear pitch to each stable for natural light. Between each stable there are open sections in the loadbearing partition walls with galvanised steel grilles and timber trusses above. Timber purlins carry the roof loads between loadbearing partitions.

There are plastic gutters at roof eaves falling to rainwater pipes which discharge to drainage.

The timber post and rail external fence encloses a stone hardstanding.

3 STABLE 1

Timber walls show some discolouration and weathering. There is some impact damage to kick boards. There is general wear and tear. The slab is relatively level

4 STABLE 2

Timber walls show some discolouration and weathering and some impact damage. The slab is relatively level.

5 STABLE 3

Timber walls show some discolouration and weathering and some impact damage. The floor slab is relatively level.

6 STABLE 4

Timber walls show some discolouration and weathering and some impact damage. There are signs of wear and tear.

7 STORE/TACKROOM

Timber walls show some discolouration and weathering and some impact damage. The floor is slightly uneven.



Stable 4 – the roof is supported by timber trusses



Tack Room – the building sits on a ground bearing slab

8 FRONT ELEVATION TO HARDSTANDING

The elevation is true in the vertical plane. Timber walls show some discolouration and weathering and some impact damage. The gutter is slightly damaged. Walls show minor impact damage. There is a large overhang to the roof on this elevation providing shelter against the weather to stable door openings. The soffit is formed in treated boarding as are the external walls.



Front Elevation



Short Gable facing house

9 LONG SIDE ELEVATION TO TACK ROOM

The boarding shows some impact damage. There is discolouration of timber. The slab becomes exposed as the ground level falls and shows some deterioration.

10 REAR ELEVATION

Inspection of this elevation was limited by an enclosure for birds abutting building. There is an external power lighting distribution board on the left corner of the elevation. The rainwater pipe adjacent to this discharges into a drain roughly encased in concrete.



Side and rear Elevation



Rear Elevation

11 SHORT GABLE ELEVATION TO HOUSE

The concrete floor slab is also exposed on this elevation as ground falls away. This elevation appears to have been re-treated externally.

12 ROOF

The corrugated bitumen roof is out of alignment in places at the eaves. The supporting structure is formed with timber trusses over the internal dividing walls supporting timber purlins.

13 CONCLUSION

Existing Building
The structure is an off- the-peg agricultural building. The construction and structure of the building is common for its type.

The ground floor slab is relatively level and shows no indications of movement. A single course of engineering bricks supports the perimeter wall plate for the structure. The internal dividing partitions offer support for the roof structure.

External walls are timber clad not insulated and are not currently designed to fully exclude the weather under poor conditions. Sections of timber showing onset of wet rot should be treated with a suitable preservative. Some sections of the roof cladding require attention.

Electrical power and lighting runs from a switch breaker board in the tack room. The cabling is located in plastic trunking at high level. Some conduit is damaged.

In conclusion, the existing building is in reasonable condition for its age and type, showing no significant structural distress.

Proposed Conversion
In relation to the proposal to convert to residential use:

a. The external wall structure is sound showing no distortion or distress. It would be technically possible to internally line the walls with vapour barrier and insulation to bring them up to building regulation standards for resistance to moisture thermal insulation structure and fire resistance. An electro-osmosis system could be installed to provide a DPC.

b. The roof structure could similarly be lined internally with lightweight foam insulation. The additional imposed loading on the internal timber trusses and at wall plate level on the external eaves would not cause any structural problems.

c. The floor structure is also structurally sound. Insulation and a water proof membrane could be added on top of the slab as necessary to meet residential standards. This would require no alterations to the existing slab.

d. There are electrical services to the building already in place. For residential use these would require some modification.

e. Surface water drainage is currently to soakaways which is acceptable for a residential use. Foul drainage could be accommodated by the installation of a septic tank

In conclusion, the structure could readily be converted to a building regulation compliant residential building.

Notes:

Our report has been based upon a visual inspection and no trial holes have been excavated.
All other aspects of the property other than those mentioned are specifically excluded from the scope of this report.

This report is based on a visual inspection of the property carried out on 12 September 2017

Gordon Bruce RIBA RICS