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[redacted]

LISTED BARN REPORT
OF
GRANARY COTTAGE
MULBERRY GREEN
OLD HARLOW
ESSEX

FOR
MR JOHN FOSH

Our ref: HD23010

Date of Issue: 29th June 2023

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Signed: [redacted]

For and on behalf of Derrick Wade Waters

1. DESCRIPTION

1.1. The original building was of rectangular plan form approximately 17m long and 4m wide with an eaves height of about 3.4m and simple pitched roof spanning the width.

1.2. A considerable amount of alteration and adaption has been undertaken throughout the life of the building to meet the changes in use required and vehicle access through the building to reach Granary Cottage. (Photos 1A-1D)

1.3. Most of the adaptations have followed a utilitarian approach with little consideration or respect for the integrity of the original structure.

1.4. The listings describe it as late C18 barn-like building. Timber-framed and black weather boarded with ridged and gabled roof, peg-tiled and fly-hipped. Modern square access opening at west end.

1.5. The remains of a hay rack, tethering rings and a drained paved floor at the west end of the building suggests it has been used as a stables which would seem in keeping with the building size and layout and original division into bays. (Photos 2A & 2B)

1.6. The internal remnants of areas of close boarding with upper levels of the studwork infilled with lath and lime render would indicate a use requiring enhanced protection from the weather consistent with more intensive use than storage. (Photos 3A-3C)

1.7. Originally the road elevation (north) was fully weather boarded externally to provide protection from the severest weather, the south elevation may have had doors or been completely open.

1.8 Irregular spacing of the main frame posts and ties coupled with the remains of weather boarding on two of the internal crosswalls suggests the building was sectioned off or could have been extended each end. (Photo 4)

1.9 Essentially the building is framed in 8 no. bays of varying width typically 2.2m wide, with main posts at these centres tied across at eaves level and coinciding with a collared rafter arrangement supporting purlins at centre span of the common rafters.

1.10 The timber frame is of rough sawn timber, some oak and possibly elm, most crudely jointed with nails and pegs and not of the quality and care of older timber structures of the type. Additions have been undertaken using contemporary methods & materials.

1.11 The early parts of the first floor at each end of the building appear to have been introduced as a loft store constructed with regular sized softwood joists and prepared softwood timber boarding fixed below eaves level to maximise the loft headroom. (Photos 5 & 6A-6H)

1.12. The three roof dormers on the south roof slope were probably added at the same time to provide loft access through the ledged and braced doors. (Photos 7A-7D)

1.13. Access between the bays was clearly restricted by the original eaves ties across the building width so these were cut through and partly removed and replaced by an arrangement of timber struts used to transfer the load to the introduced floor. (Photos 8, 9A-9D & 10A-10D)

1.14 While the arrangement has worked, it is crude and of questionable reliability.

1.15 The central section of the first floor has been constructed more recently and may have been carried out in conjunction with repitching the roof above this area to increase loft space and incorporate a staircase and new first floor. The louvered glazing to the central dormer, the addition of lean to projections on the south side to widen the building in steps of 1.5m and 2.0m, and installation of the double part glazed doors to form garaging for the cars, are clearly contemporary adaptations. (Photo 11A-11D)

1.16 The lean to addition at the east end of the building is probably the most recent alteration extending the building length by approximately 2.0m constructed against the listed boundary wall using reclaimed materials; bricks tiles, steel and timber window frames. (Photo 13)

1.17 The east end of the building was apparently adapted to cultivate plants with heating, also serving the nearby greenhouse. (Photos 14A-14B)

1.18 The resulting mismatch of styles and treatment, coupled with the poor execution of the alteration work, severely detracts from the rustic origins of the building appearance. (Photo 15)

2.0 CONDITION

2.1. The building is in a dilapidated state and has suffered from long term deterioration due to shortcomings in the original construction and poorly executed and ill conceived adaptation works.

2.2 Stripping back to the original timber framing will provide an opportunity to eradicate insect infestation and rot that may affect new materials.

2.3. Roof

2.3.1 The roof tiles on the pitched roof are clay peg type, the central section and areas around the dormers have been refixed on sarking felt and modern machine sawn tile battens & rafters (Photo 16)

2.3.2 The remains of straw underlay on the other slopes and eroded state of the mortar pointing to the roof verges indicates tiles in these areas are as laid. The nails and fixings are therefore in a suspect condition. (Photo 17)

2.3.3 Some loft space areas are lined with thin boarding of very little insulation value. (Photo 18)

2.3.4 The roof needs to be fully stripped, the tiles set aside for reuse on new treated battens with sarking felt. This operation would provide an opportunity to deal with defects in the existing rafters by strengthening and supplementing inadequate members and replacing defective construction and flashings along the dormer cheeks. (Photo 19)

2.3.5 Insulation and an internal lining would be introduced to make the first floor space habitable.

2.3.6 There is no gutter along the eaves of the north roof slope, in driving rain conditions this results in wetting of the weather boarding and wall plate which has contributed to the rotten condition. (Photos 20 & 21)

2.3.7 Cast iron gutters will be provided along all roof verges.

2.4 External Cladding and Studwork

2.4.1 The feather edged weather boarding on the north elevation is heavily tarred and largely original. Most of the boarding on the other elevations is more recent and contemporary with the alterations. (Photos 22, 22a, 23 & 24)

2.4.2 The internal bead and butt boarded low level lining and remains of mud and straw lime washed infill above are original . The boarding may be salvageable in places, but the condition of the infill is too deteriorated to save. (Photo 25)

2.4.3 In order to treat the stud framing and supplement weakened members, the boarding will be removed and set aside for reuse. A multi layer insulation will be fixed over the studs before over-boarding with WPB ply vapour barrier and counter battening to receive the salvaged weather boarding.

2.4.4 As far as possible any new replacement weather boarding will be used on the south elevation. New timber material will be the same type and profile as the original.

2.4.5 Where the original studwork can be left exposed as a feature plasterboard lining will be fixed and skimmed between studs.

2.4.6 The alteration proposals do not entail removal of any of the original internal loadbearing studwork. The exposed studwork is principally of recent introduction & non load bearing. (Photo 26 & 26A)

2.5 First Floor

2.5.1 The first floor areas each side of the central section are constructed using machine sawn softwood and are not integrated into the studwork support framing suggesting a later introduction. The condition is poor with evidence of boring insect infestation.

2.5.2 The floors in the central section and staircase are of comparatively recent construction and this area is to be replaced under the proposals with the staircase relocated to improve access. (Photos 11A-11D)

2.5.3 At the west end a supplementary arrangement of timber trimming beams has been introduced to provide support to the floor and roof allowing the creation of a vehicle access way through the building.

2.5.4 The use of metal angle cleats and coach screws to connect the beams and cast iron hinge parts to anchor the support posts typifies the improvised approach toward the building adaptations. (Photos 27 & 28)

2.5.5 Evidently more recent concern over the strength of the floor and support beam has prompted the installation of a steel threaded stud hanger fixed to the roof apex from an angle hanger. (Photo 30)

2.5.6 These ad hoc adaptations are clearly suspect. In order to develop a reliable long term solution, the whole frame needs to be fully exposed and appraised.

2.5.7 New hardwood timber framing traditionally jointed will be incorporated into the alteration work to strengthen the floor, tie the side walls and strut the purlins.

2.6 Ground Floor

2.6.1 The ground floor is generally finished with tiles presumably laid on sand cement bedding over a concrete ground slab. It is very unlikely that the finishes incorporate a damp proof membrane or insulation.

2.6.2 The conversion work will include an overlay of new finishes to provide a dpm and insulation with underfloor heating.

2.7 Foundations

2.7.1 The base plate of the stud walls is raised above floor level by approximately 330mm bedded on a solid 215mm thick brick plinth. Subject to exploration this is likely to have a shallow founded corbel spread base. (Photo 31)

2.7.2 To ensure that the superstructure is not subject to seasonal movement and has the reliability of a current building conversion all loadbearing walls will be underpinned.

2.7.3 The soil level against the external surfaces will be reduced to avoid moisture transfer and a dpm will be introduced.

3.0 DESIGN

3.1. Under the proposals to convert the building to a single dwelling without increase in footprint, the inappropriate alterations would be removed. A fully boarded street elevation (north) would be reinstated and all doors and windows on the other elevations would be of timber and of sympathetic scale and appearance.

3.2 The design provides accommodation at ground and first floor levels via a replacement staircase repositioned to improve the presently restricted headroom.

3.3 The ground floor accommodation provides for a bedroom and ensuite facilities which would provide for occupiers with limited mobility.

3.4 Enclosing fences to amenity space off the shared courtyard area provides privacy.

3.5 The proposed alterations to the structure will provide an opportunity to address the inherent weaknesses of the existing timber frame structure by introducing additional timber strengthening fixed & jointed by traditional methods contemporary with the original construction & include the provision of adequate foundations damp proofing & insulation to comply with current standards.

APPENDIX A

PHOTOGRAPHS

Granary Cottage, Mulberry Green, Old Harlow

Photo 1A

Photo 1B

Photo 1C

Photo 1D

Derrick Wade Waters

Photo 2A

Photo 2B

Photo 3A

Photo 3B

Photo 3C

Photo 3D

Photo 4

Photo 5

Photo 6A

Photo 6B

Photo 6C

Photo 6D

Photo 6E

Photo 6F

Photo 6G

Photo 6H

Photo 7A

Photo 7B

Photo 7C

Photo 7D

Photo 8A

Photo 9B

Photo 9A

Photo 9C

Photo 9D

Photo 10B

Photo 10A

Photo 10C

Photo 10D

Photo 11B

Photo 11A

Photo 11C

Photo 11D

Photo 12B

Photo 12A

Photo 12C

Photo 13

Photo 14B

Photo 14A

Photo 15

Photo 16

Photo 17

Photo 18

Photo 19

Photo 20

Photo 21

Photo 22

Photo 22A

Photo 23

Photo 24

Photo 25

Photo 26

Photo 26A

Photo 27

Photo 28

Photo 30

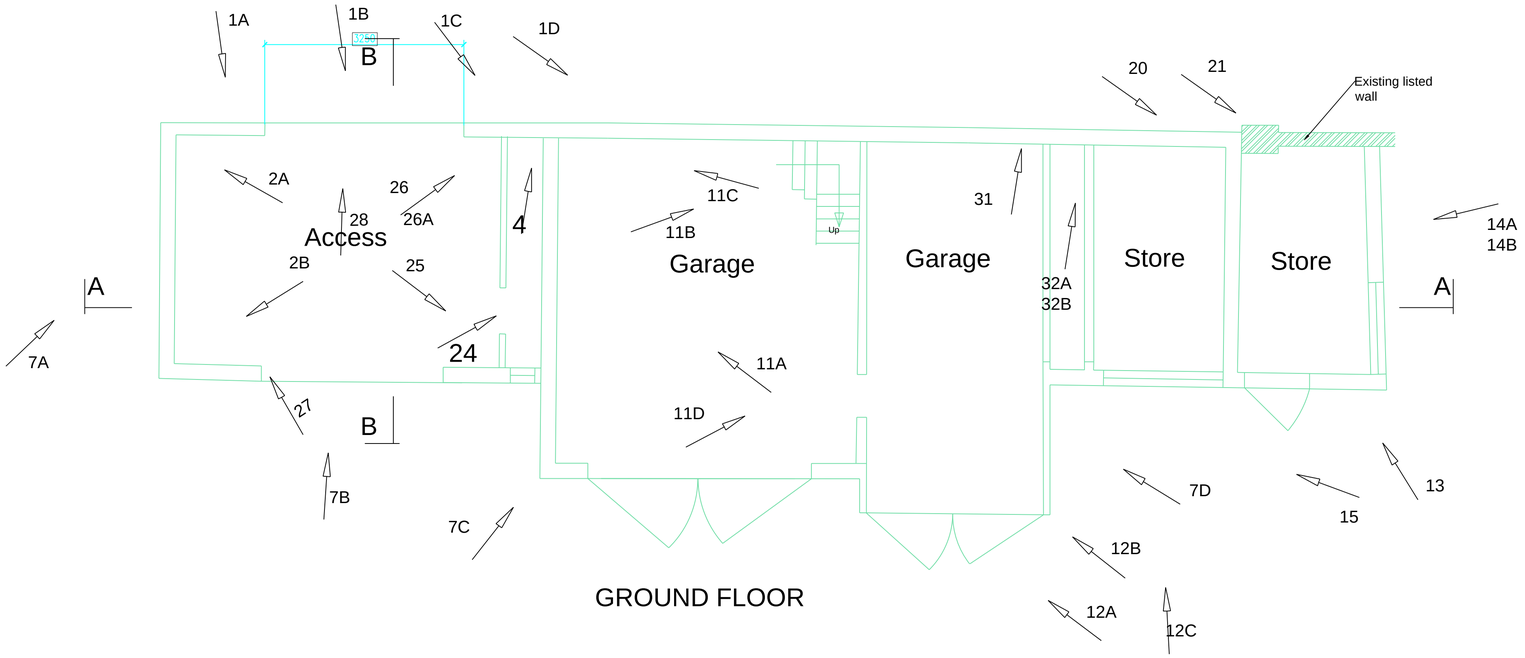
Photo 31

Photo 32B

Photo 32A

APPENDIX B

DRAWING NO. HD23010/ 200



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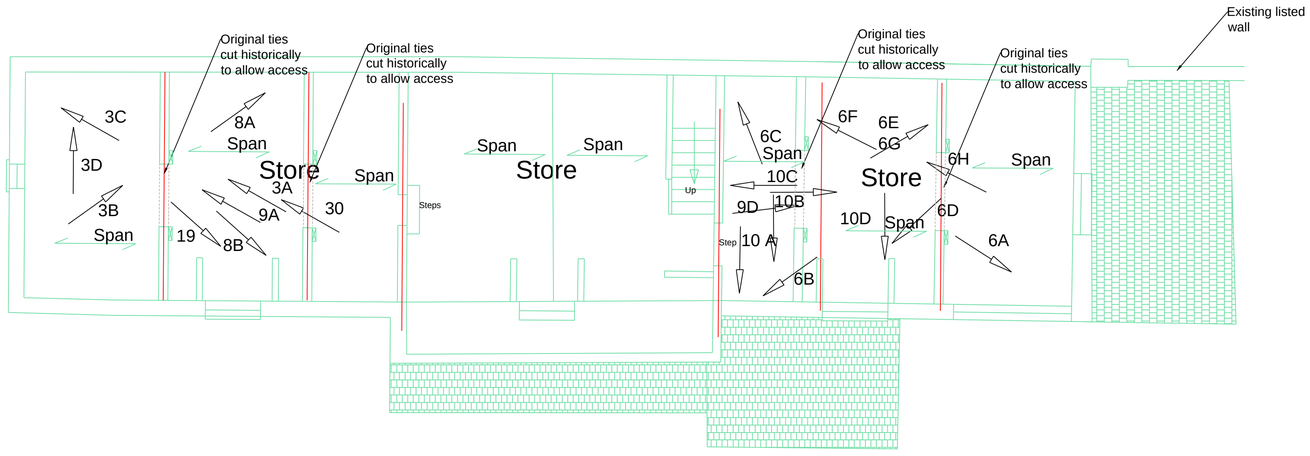

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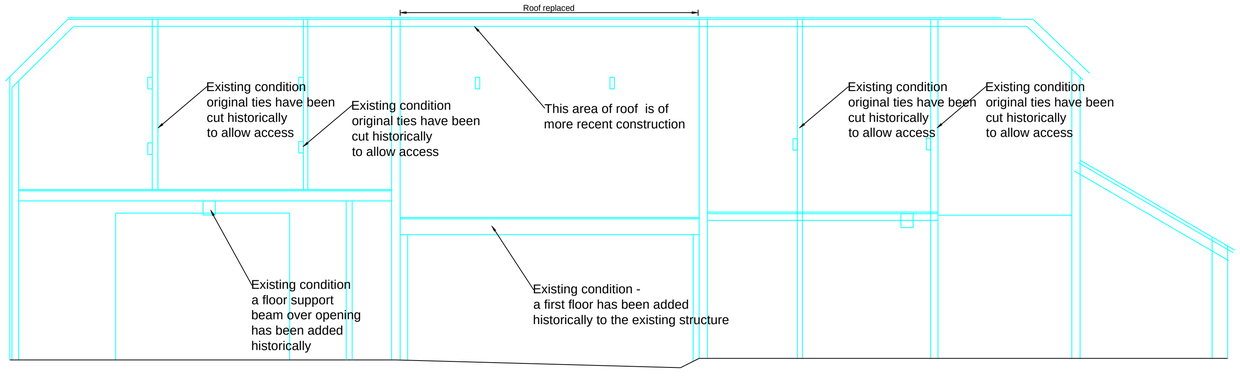
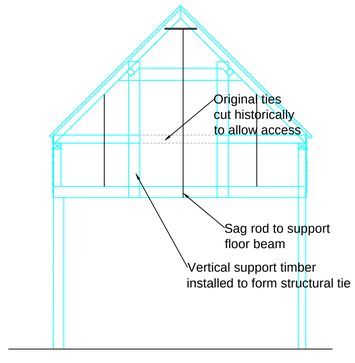


EXISTING SECTION A-A



EXISTING SECTION B-B

Rev	Date	Issued by	Checked by	Description

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ARCHITECTURE | PROJECT MANAGEMENT | STRUCTURAL ENGINEERING
QUANTITY SURVEYING | BUILDING SURVEYING | CDM PRINCIPAL DESIGNER

CLIENT: Mr J Fosh

JOB TITLE: The Barn, 30 Mulberry Green, Old Harlow

Drawing Title: Existing Barn Details

Job / Dwg No / Rev: HD23010 200

Drawn: CJ | Checked: | Approved: | Date: Jun 23

Drawing status: Planning | Scale: 1:50 | @ A1

RICS