



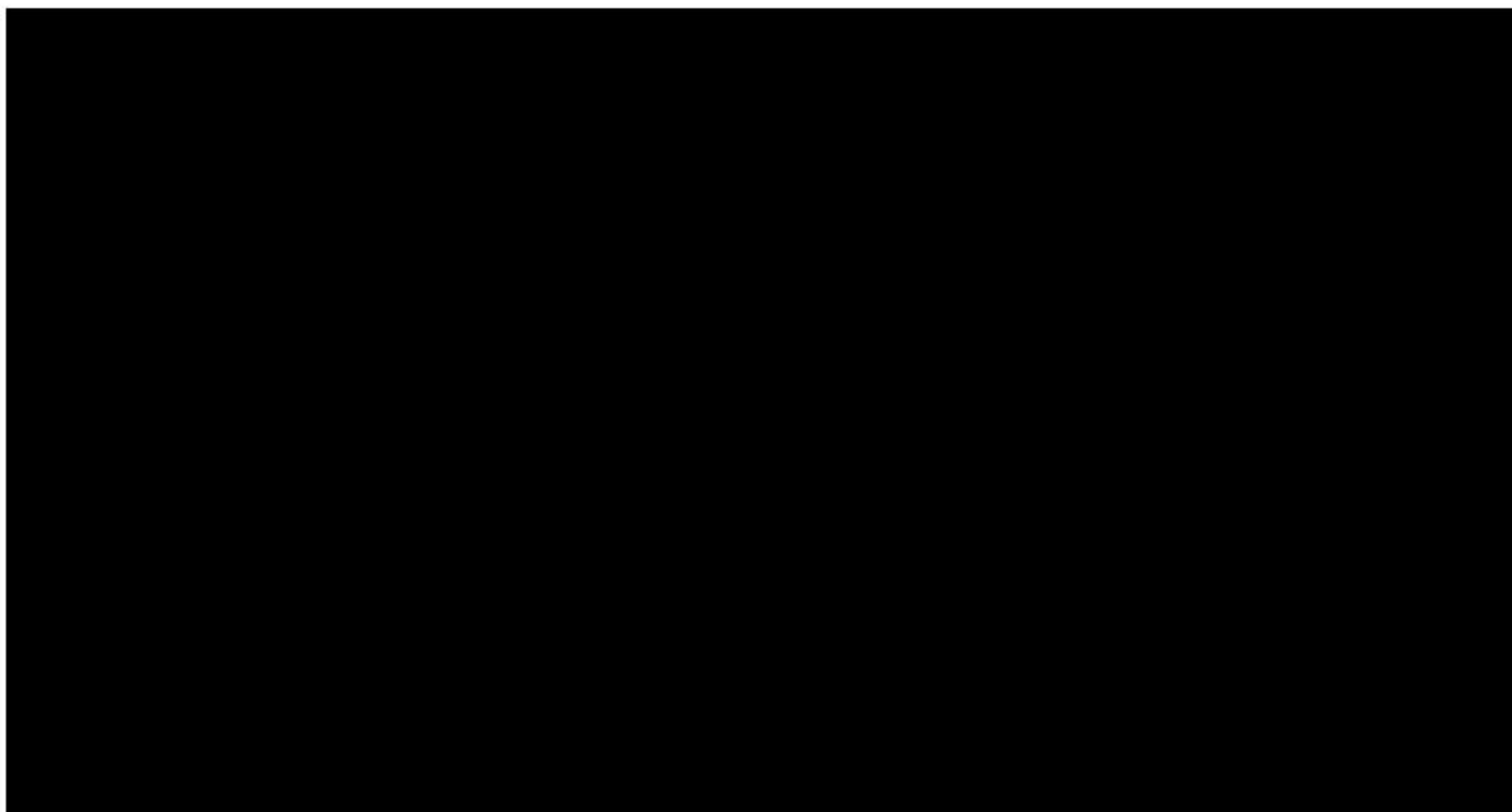
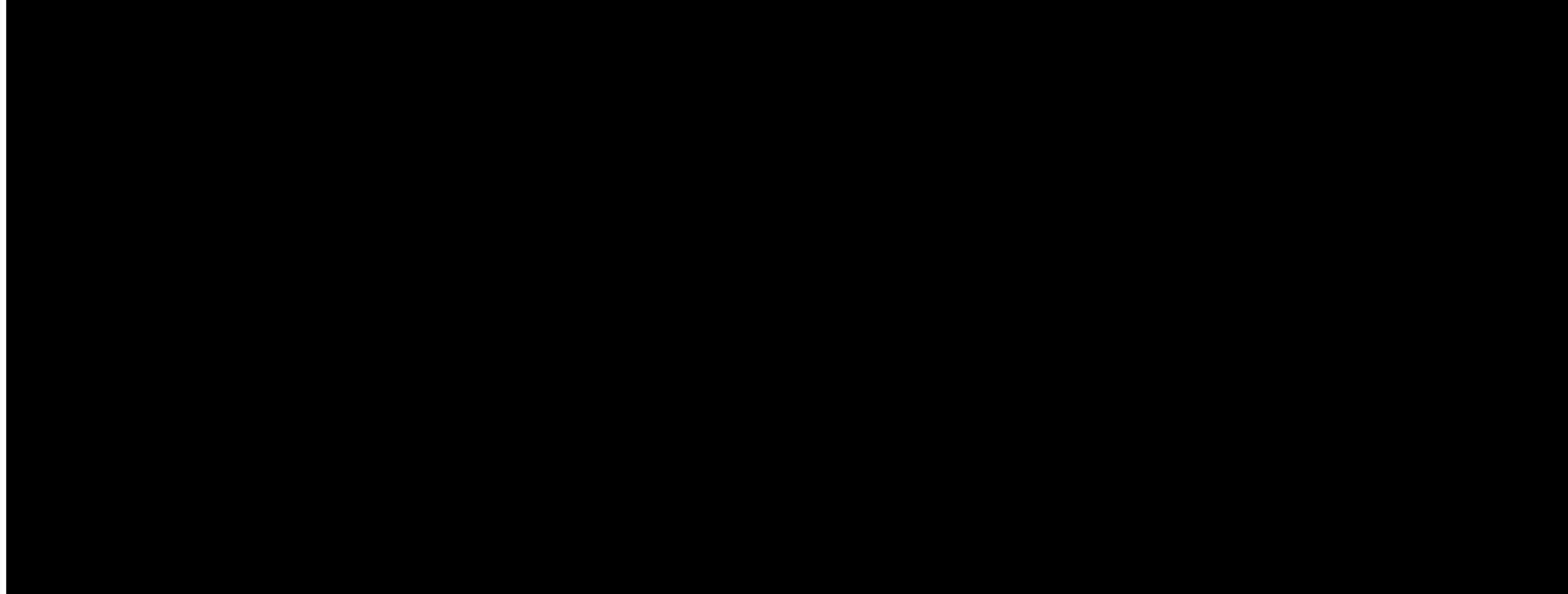
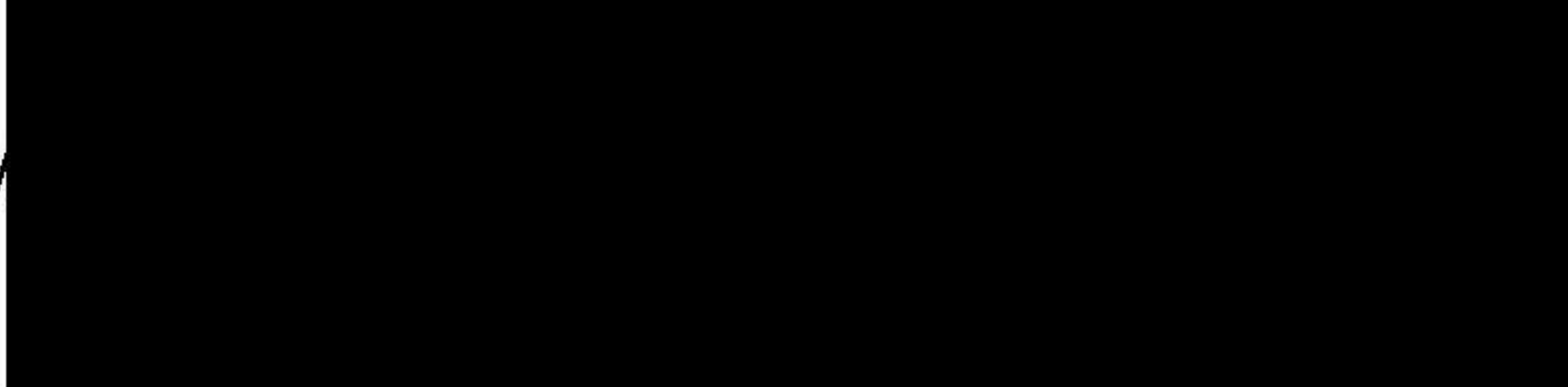
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STRUCTURAL SURVEY ON
ORCHARD BARN, HAYWARDS HEATH
JOB REF: WG1657
DATE: OCTOBER 2024



Structural Report :

Project: Orchard Barn, Nash Lane, Haywards Heath
Client: SDP
Ref: WG1657

Author:		Initials: GW	Date: 17.10.2024
Checked By:		Initials: LG	Date: 17.10.2024
Approved By:		Initials: LG	Date: 17.10.2024

REVISION	DATE	STATUS	ISSUED BY
-	17.10.2024	First Draft	GW
A	28.10.2024	Client Comments	GW
B			
C			
D			

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1.0 INTRODUCTION

- 1.1 Further to the request from James Sweeny of SDP Developers & Building Contractors to visit the site and carry out a Structural Survey of the existing barn, we confirm we visited on the 17th October 2024 and write to confirm our findings and provide recommendations for proposed conversion to a single storey domestic dwelling.
- 1.2 The weather at the time of our visit was overcast & damp.
- 1.3 The report is to be read in conjunction with Appendices A, B, & C showing Survey photographs, existing layout with survey notes & proposed layout with remedial works respectively.
- 1.4 From viewing the BGS Mapping, the site is underlain with Upper Grinstead Clay over Cuckfield Stone Bed Formation. Extract of mapping shown below. A stone outcrop was noted to the South as the field dropped away.



- 1.5 This Report is for your own private and confidential use, and that of your legal advisors, and it should not be reproduced in whole or in part, or relied upon by third parties for any purpose, without our express prior written authority. This report can also be used as part of any planning application submission.
- 1.6 We have not inspected woodwork or other parts of the structure, which are covered, unexposed or inaccessible, and we are, therefore, unable to report that any such part of the property is free from defect.





2.0 STRUCTURAL APPRAISAL

- 2.1 The existing barn was in three main sections, the Open barn, Barn & Stables. All were all single storey but with different roof heights. Please refer to the photographs in Appendix A & the survey drawing WG1657/SK.01 in Appendix B for reference.
- 2.2 The main Open Barn had a timber trussed roof formed with four equally spaced hand-made trusses supported on timber posts. These supported a series of timber beams which in turn supported timber boarding running down the roof pitch. There were no rafters. This section of the barn was covered with corrugated sheet metal. The floor slab comprised a sloping concrete ground bearing slab following the natural profile of the external areas. Externally, the walls were timber clad. No internal finishes or insulation was present in either the roof or walls.
- 2.3 The Stables section of the building, with a single roof pitch much lower than the rest of the building, had timber beams spanning between external & internal walls formed from part masonry & part timber frames. These in turn supported timber boarding running down the roof pitch. There were no rafters. This section of the barn was covered with corrugated sheet metal. The floor slab to this section of the building was similar to the Open Barn. Externally, the walls were timber clad with low level masonry walls. No internal finishes & no insulation was present in either the roof or walls. We assumed these walls may have foundations, however this would need to be checked and confirmed with trial pits.
- 2.4 The Barn was completely timber framed in construction. Very poor truss like frames had been formed from loose timber & were supported on timber posts / timber framed walls. The roof was double boarded with no other finishes. The ground was compacted earth. Externally, the walls were timber clad. No internal finishes & no insulation was present in either the roof or walls.
- 2.5 All of the sections of building had various degrees of damage and were rotten in places due to rainwater ingress through poor roof & wall construction and through the large openings in the elevations. The Barn section of the building appears to have suffered most from this as was quite dilapidated with twisted internal posts that had moved away from the main section of the building. There was an open gap here between the two. Although we would surmise that these sections of building were built at different times. The Stables section roof was in poor condition and its supporting members appeared to be insufficiently sized. The Open Barn appeared to be the best section of the overall building but with obvious issues of watertightness etc.
- 2.6 The proposals to convert the building into a single-storey domestic dwelling will require a lot of work in terms of repairs and replacement of existing damaged elements and under sized structural members, but generally for the timber elements this should be sympathetic to the character of the structure.
- 2.7 Walling will obviously need to be upgraded with the necessary insulation and waterproofing together with providing adequate new foundations to support these, the existing roof / frames and the new floor slab.
- 2.8 We would assume the new floor would be a new precast beam & block floor slab supported on new / existing walls. This will then allow the Open Barn & Stables areas to be leveled and then can be insulated to the required standards.
- 2.9 The sections of the original building with masonry walls and assumed foundations will hopefully be able to be reused once trial pits have been carried out to prove this. If these are not sufficient, some element of underpinning will probably be required.





2.10 The roof to the Stables will need to be removed and replaced, and we would assume the same will be required to the Barn. The Open Barn should be able to retain its trusses as these are the main feature elements in this space. New rafters & purlins will be required. Any new roof finishes should be kept to an absolute minimum in terms of weight to minimise the effect on the existing structure. Insulated panels would be a good alternative to rafters & finishes and would retain the agricultural look externally while keeping loadings low.

2.11 Please refer to Appendix C with our initial structural proposals shown on drawing WG1657/SK.02

3.0 CONCLUSION

3.1 The level of repairs and work required to bring this building to a suitable standard of use as a domestic dwelling will be expensive but will result in a high quality home being produced. Careful planning and temporary work will be required to support and maintain the existing structures while new supporting and stabilizing structures are built up and around the old. Once completed, it should be fit for purpose while still maintaining the character of the original building.





APPENDIX A

Photo Sheets – Photos #1 to #7 :





PHOTO #1 – External view to the front elevation of Orchard Barn.



PHOTO #2 – Internal view of main section of Open Barn



PHOTO #3 – External side view of Orchard barn.



PHOTO #4 – External rear view of Orchard Barn.



PHOTO #5– Internal view of main section of Open Barn



PHOTO #6– Internal view of Stables.



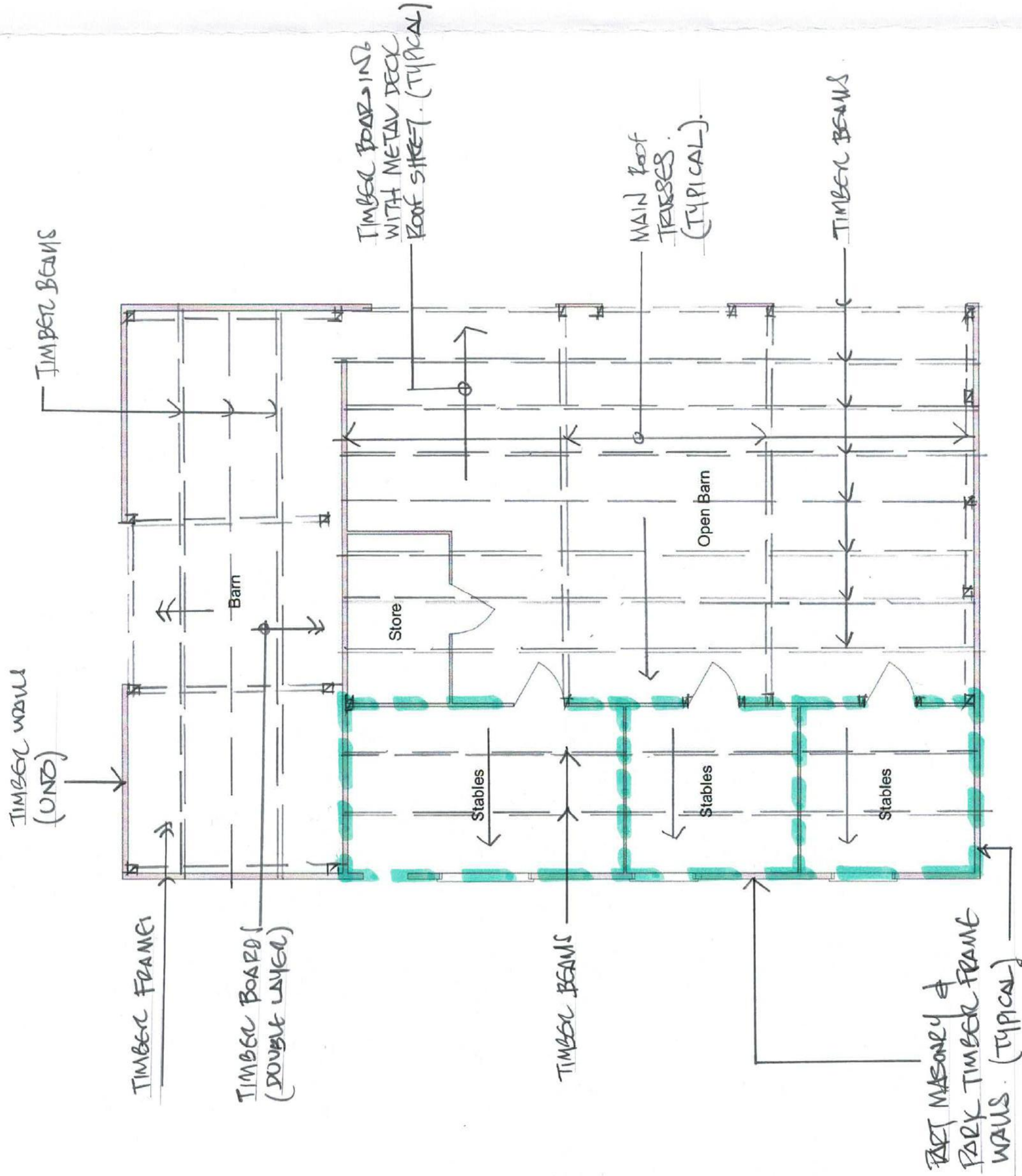
PHOTO #7– Internal view of Barn.



APPENDIX B

Existing Plan / Survey Layout – WG1657/SK.01

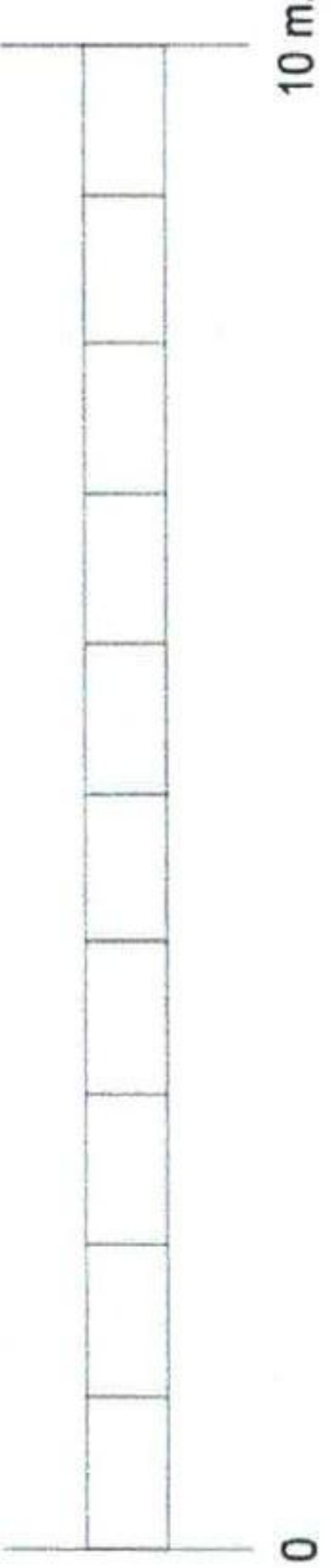




Existing Floor Plan

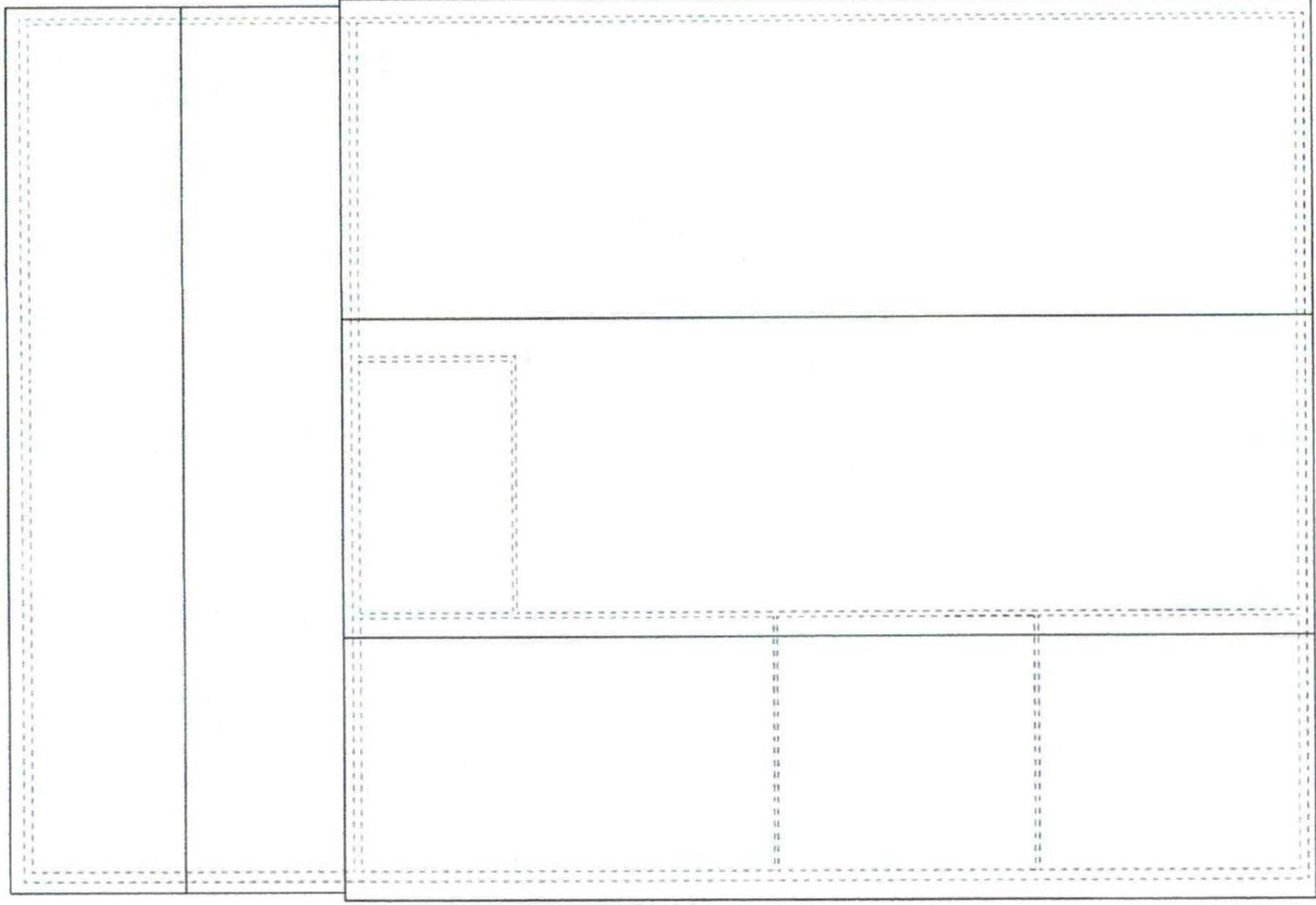
(SHOWING STRUCTURE OVER)

SCALE BAR - 1:50



WG1657 / SK.01

SURVEY NOTES:
(17/10/2024)



Existing Roof Plan

Ms Lisa Holman

Scale: 1:50 @ A1 Dm By: PH Date: Aug '24
Dwg No: 2416/SK.04

Conversion of existing barn at:
ORCHARD FARM
NASH LANE, SCAYNES HILL,
HAYWARDS HEATH

Drawing Title:
EXISTING FLOOR & ROOF PLANS

Copyright: Paul J Hewett R.I.B.A. Chartered Architect





APPENDIX C

Proposed Plan / Remedial Works – WG1657/SK.02



Proposed Roof Plan

NEW INTERNAL WALL/
SUB-STRUCTURE WALLS/
FOUNDATIONS TO SUPPORT
PC BEAM & BRICK SLAB
ABOVE EXIST. SLOPING GROUND.

Ms Lisa Holman

Cottage (1 room) 1000 ft.
 Orchard Farm
 NASH LAKE, SCANNES HILL,
 HAYWARDS BEACH
 Drawing Title

STRUCTURAL SCHEME.

WG1657/SK.01