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**STRUCTURAL INSPECTION  
OF  
THE STABLES  
AT  
PILGRIMS' FARM  
WHITE HILL ROAD  
OVERTON  
RG25 3DS**

**221224 Rev A- JUNE 2023**



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Report prepared by:

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Director

## 1. INTRODUCTION

- 1.1. We were commissioned by ADAM Architecture on behalf of Mr Harry Gill to undertake a walk over structural inspection of the Stables to assess the structural feasibility for residential conversion.
- 1.2. The stables were detached timber framed sheds probably constructed in the late 20<sup>th</sup> Century.
- 1.3. This report was prepared to provide an overall structural appraisal of the building and to identify any structural work that may be required for residential conversion.
- 1.4. For Preliminary drawings of the conversion see Adam Architecture drawings.
- 1.5. The external survey is based on a visual inspection from ground level.
- 1.6. We have not undertaken any intrusive works or trial pits at this stage.
- 1.7. The survey was undertaken on Wednesday 19<sup>th</sup> April 2023. The weather during our inspection was dry, warm and sunny.

## 2. GENERAL CONSTRUCTION DETAILS

- 2.1 The stables comprised single storey, lightweight timber sheds with weather board cladding and shallow pitched roofs covered with profiled roof sheets (see photograph 2).
- 2.2 The timber structure appeared to have been constructed on a 2 brick plinth, on a ground bearing concrete slab; we have not excavated trial pits, but it is unlikely that there are any significant foundations.
- 2.3 The stables are located on the east side of the farm with a number of mature trees on the site boundary at the rear.
- 2.4 The stables are west facing, and the ground level gently falls from north to south.
- 2.5 Further details of the layout and condition can be gleaned from the appended survey photographs and drawings.

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### 3. STRUCTURAL INSPECTION

#### 3.1 The following points were noted externally.

3.2 The walls of the stables were generally relatively plumb and true, with no visual evidence of significant racking.

3.3 The roof was covered with profiled steel roof sheets that were in poor condition. There was extensive moss and lichen growth and the flashings and dressings were poor (see photographs 3 and 4).

3.4 There is a low level brick retaining wall on the west side of the stable. The wall was in poor condition and was leaning towards the stable wall. At the rear the wall was of blockwork construction and clearly bowed along its length (see photographs 9 and 10).

3.5 The timber cladding was stained and damp, particularly at low level. Many areas were rotten and required replacement (see photograph 10).

3.6 The external ground level was high in places causing dampness at low level.

3.7 The timber studwork at the rear was exposed in part and severely damaged by moisture (see photograph 7). There was some visual evidence of fungal and insect infestation.

3.8 The south wall was in particularly poor condition with rotten boarding, poor windows, and was moved by light hand pressure (see photograph 6).

3.9 The ground sloped down towards the south and there was a blockwork retaining wall with blockwork dwarf wall above. The walls were appeared to be in reasonable structural condition but were partially concealed by storage of pallets and other materials.

3.10 There were a number of holes in the ground around the perimeter and some undermining of the concrete ground slab. This may have been caused by rabbits or foxes (see photograph 8).

3.11 The concrete ground slab was cast in small bays and there was differential movement between the slabs. This had affected the brickwork plinth where it bridged the joint in the slabs(see photograph 22).

3.12 There was a drainage channel across the front of the hardstanding. We assume this drains to a soakaway but will need to be investigated(see photographs 4 and 5 ).

### **3.13 The following points were noted internally**

- 3.14 The structure of the stables was lightweight timber framing with simple roof trusses, some with ply gusset plate connections (see photographs 12-19).
- 3.15 The roof had been repaired in the past, and was clad with stirling board sheets. There was extensive evidence of leaking and some of the sheets were rotten (see photograph 1).
- 3.16 The walls were clad internally and again the boarding was damp and in poor condition, particularly at low level(see photograph 14).
- 3.17 Some of the walls were poorly fixed to the plinth at ground level and were easily moved by light force.
- 3.18 Some of the stud walls had been repaired in the recent past (see photograph 18).
- 3.19 The stables had been in use for many years, and had not been well protected from the horses washing down and contamination etc (see photograph 20).
- 3.20 The concrete floor had been covered with rubber matting or vinyl flooring.

#### 4. CONCLUSIONS AND RECOMMENDATIONS

- 4.1 The stable structure was a lightweight timber shed on a two brick plinth constructed on a ground bearing concrete slab. It is suitable for the proposed residential conversion subject to repairs and some structural strengthening.
- 4.2 The timber elements were in need of maintenance and repair, with significant areas of moisture ingress, particularly from the roof, and at ground level.
- 4.3 The sub-structure will have to be addressed as part of the proposed residential conversion.
- 4.4 The existing concrete ground slab will have to be replaced with a damp protected slab and suitable insulation.
- 4.5 Borehole data from The British Geological Society suggested the sub-soil is likely to be clay or chalk, with flints. A geotechnical investigation will be required to determine the sub-soil type and design of the new foundations and slab. At this stage traditional shallow concrete trench fill foundations are envisaged.
- 4.6 A drainage survey will be required to assess the existing drains, and to determine if a treatment plant is required.
- 4.7 An outline schedule of work required for the conversion is provided.

# ***APPENDIX 1***

## ***Survey Photographs***



Ref: 221224

Project: Pilgrims Farm Stables

Title: Survey Photographs



1. Stables and Fodder Barn



2. West Elevation



3. North Elevation. Note the profiled roof sheets and block plinth



4. Front concrete hardstanding. Note the joints in the slab and drainage channel



Ref: 221224

Project: Pilgrims Farm Stables

Title: Survey Photographs



5. Front Hardstanding



6. South Elevation. Note the retaining wall, change in levels, and poor condition of the windows and cladding



7. Rotten studwork and cladding on East side.  
Note the undermining of the slab



8. Badger or rabbit warren on East side?



Ref: 221224

Project: Pilgrims Farm Stables

Title: Survey Photographs



9. Retaining wall to north elevation



10. Block retaining wall distorted and bowed



11. Differential movement of concrete slab



12. Internal structure. Note the Stirling board roof sheeting



Ref: 221224

Project: Pilgrims Farm Stables

Title: Survey Photographs



13. Overall wall thickness ~ 100mm



14. Leaking roof damaging the roof boarding and remedial propping



15. Lightweight timber roof structure and wall boarding



16. Small section roof trusses (75mm) and supporting joist

Ref: 221224

Project: Pilgrims Farm Stables

Title: Survey Photographs



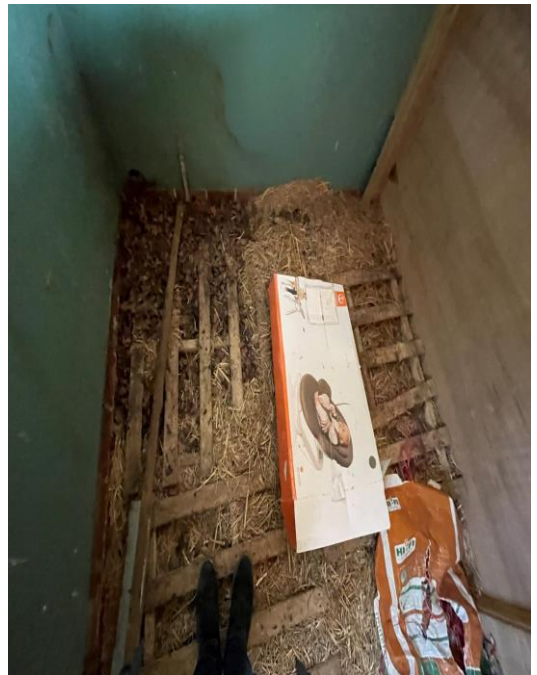
17. Lightweight purlins and damaged roof boarding.



18. Replacement timber wall studding



19. Typical stabling



20. Damp walls and floor



Ref: 221224

Project: Pilgrims Farm Stables

Title: Survey Photographs



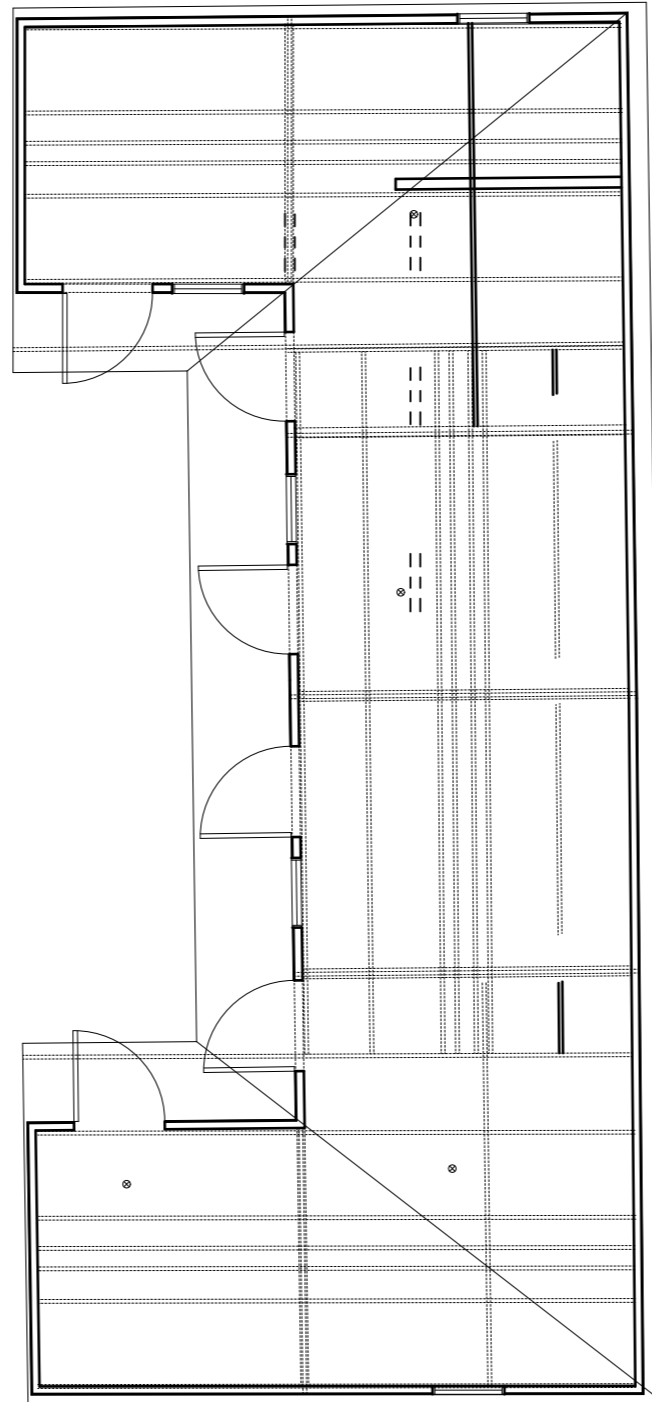
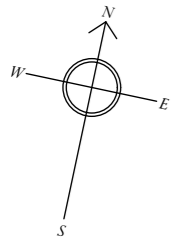
21. Typical strapping of wall to floor.



22. Cracking of brick plinth constructed over a joint in the concrete slab.

## ***APPENDIX 2***

### ***Survey Drawings***



STABLES GROUND FLOOR PLAN

EXISTING STABLES PLAN

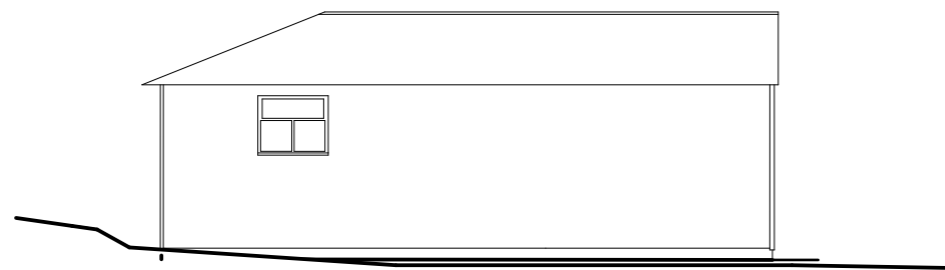
**PILGRIMS FARM**  
STABLES

Scale: 1:100 @ A3  
Drawing Number: 6252-PL02 Rev 01 | May 2023 | Drawn By: AM

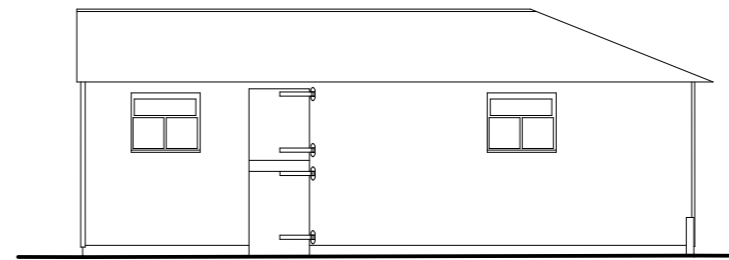


Scale 1:100





STABLES NORTH ELEVATION

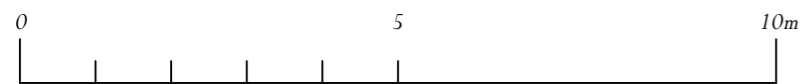


STABLES SOUTH ELEVATION

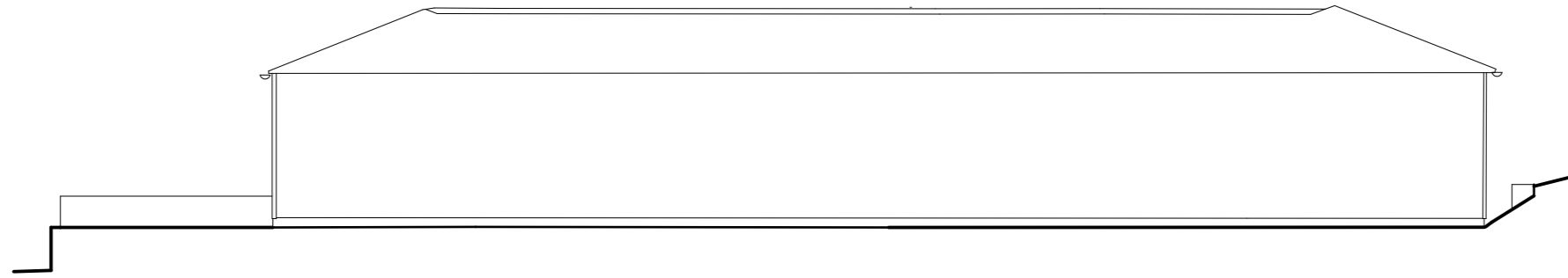
EXISTING STABLES NORTH & SOUTH ELEVATIONS

**PILGRIMS FARM**  
STABLES

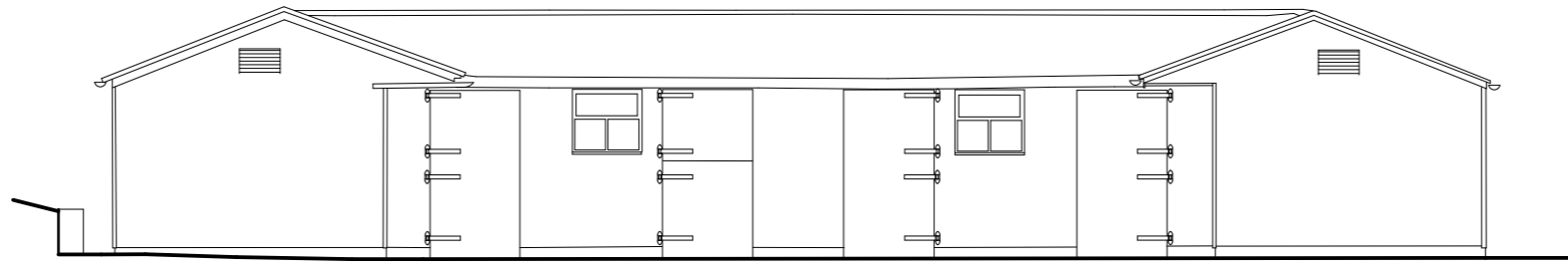
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Drawing Number: 6252-PL03 Rev 01 | May 2023 | Drawn By: AM



Scale 1:100

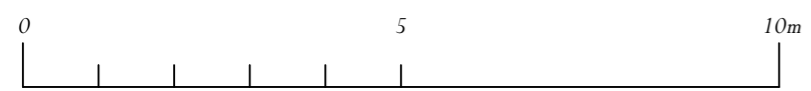


STABLES EAST ELEVATION



STABLES WEST ELEVATION

EXISTING STABLES EAST & WEST ELEVATION



Scale 1:100

**PILGRIMS FARM**  
STABLES

Scale: 1:100 @ A3  
Drawing Number: 6252-PL04 Rev 01 | May 2023 | Drawn By: AM

## ***APPENDIX 3***

### ***British Geological Survey local Borehole Logs***



**NGRC  
BOREHOLE RECORDS  
ADJUSTMENT FORM**

**QUARTER SHEET**           SU54NW          

**BH REGISTRATION NUMBER**           36-47          

**RECORDS ENTERED AND HELD BY WALLINGFORD**

**BH REGISTRATION NUMBER(S)**



E  
1

283 SU54

120

HANTS.  
25 NE/W

SU5169 4631

G.S.M. 6290

No. 63.

DATE: Oct. 1933.

WORK FOR: Mr. E. Ullens, Upper  
White House Farm, Overton, Hants.  
O.D. approximately 431'.

STRATA DETAILS:

Drift [ 0ft - 12ft..... Clay and flints.  
Upper Chalk [ 12ft- 18ft..... " " "  
18ft- 250ft..... Chalk and flints.

19'6" of 6" lining tubes in borehole. Water Level 156ft below G.L.

-----000-----

*John 12/11/35*

Received 8.11.35. Y. Smith. Basingstoke.

1" Sheet 283 N.S.  
6" Hants 25 N.E.

Woodlands Farm  
Upper White Hill.

in use 200 gph.

Piled on 6" Hants 25 N.E. W

Visited S. Buchan  
8.4.41.

In use, abstracts about 400 galls per day, i.e. pumps 2 h.p.d.  
Pump seals hole: unable to measure a level, owner states  
that when the pump was recently taken up the level was  
160 ft. down. O.D. of surface +435.

Visited Lamb. 27-5-59.

Data Bank



283/120 Woodlands Farm, Overton

SU54/22

Surface +435. Lining tubes: 1 9/16 x 6 in. R.W.L. +279. Smith, Oct. 1933.  
 Yield 200 g.p.h. Apr. 1941. R.W.L. +275. c. 1959. Yield 200 g.p.h., 2 h.p.d.  
 May 1959.

Drift	...	...	18	18
Uck	...	...	232	250

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS	DEPTH
DRIFT 18'	CLAY WITH FLINTS	12'	12'
	" " "	6'	18'
UCK 232'	CHALK & FLINTS	232'	250'

BAR. 12.12.35.



283 / SU 54 NW 1

120

HANTS.  
25 NE 1W

G.S.M. 6296

5170 4631

No. 63.

DATE: Oct. 1933.

WORK FOR: Mr. E. Ullens, Upper  
White House Farm, Overton, Hants.  
O.D. approximately 431'.

STRATA DETAILS:

Drift [ 0ft - 12ft..... Clay and flints.  
Upper White Hill [ 12ft - 18ft..... " " "  
18ft - 250ft..... Chalk and flints.

19'6" of 6" lining tubes in borehole. Water Level 156ft below G.L.

11/11/35

-----000-----

Received 5.11.35 J. Smith. Basingstoke.

1" Sheet 283 N.S.

6" Hants 25 N.E.

Woodlands Farm  
Upper White Hill.

in use yields 250 gph.

Placed on 6" Hants 25 N.E. W

Visited P. Buchan  
8.4.31.

In use, yields about 400 galls. per day, is pumped 2 h.p.  
Pump seals well; unable to measure a level, owner relates  
that when the pump was recently taken up the level was  
160 ft. down as of surface +435.

Visited Nov. 27.5.39

Date Bank



283/120 Woodlands Farm, Overton

SU 54 NW/1

Surface +435. Lining tubes: 194 x 8 in. R.W.L. +279. Smith, Oct. 1939.  
 Yield 200 g.p.h. Apr. 1942. R.W.L. +278. c. 1959. Yield 200 g.p.h. 2 h.p.d.  
 May 1959.

S170 4631

Drift	...	...	18	18
Uck	...	...	232	250

GEOLOGICAL CLASSIFICATION	NATURE OF STRATA	THICKNESS	DEPTH
DRIFT 18'	CLAY WITH FLINTS	12'	12'
	" " "	6'	18'
UCK 232'	CHALK & FLINTS	232'	250'

BAR. 12.12.35.



## ***APPENDIX 4***

# ***Outline Schedule of Structural Work Required***

## Outline Schedule of Proposed Structural Works

1. Undertake geotechnical investigation to determine depths of foundation.
2. Undertake local authority drainage search and CCTV drainage investigation
3. Grade the external levels to expose the brick plinth.
4. Remove all roof and wall cladding
5. Temporary works to hold the base 'frame' in place
6. Temporarily lift the frame, remove the existing ground slab and construct a new substructure including foundations, and insulated ground slab.
7. Repair the existing frame members
8. Lower the existing frame on to a new raised plinth
9. Construct new brick and flint external leaf
10. Amend timber walls to accommodate insulation and line as required.
11. Strengthen timber roof structure
12. Replace the retaining wall on the west side of the stable