



Mann Williams
Consulting Civil and
Structural Engineers

Hackthorne Cottage Durrington

Inspection Report

Job Number: 12926

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Suitability Codes as stated within QA data describe documents intended use and are in accordance with BS EN ISO 19650-2-2018.

Code	Description
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S1	For Coordination
S2	For Information
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A4	Stage 4 Authorized (For Construction)
A5	Stage 5 Authorized (Final Design Record)

Quality Assurance

File Name: 12926-MWB-XX-XX-RP-S-0401 Hackthorne

Document Issue Details:

<u>Suitability</u>	<u>Revision</u>	<u>Issue Date</u>	<u>Approved By</u>
S1 - For Coordination	P1	12 December 2025	N Lancaster MICE CEng

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1.0 Introduction

- 1.1.1 Mann Williams (MW) were commissioned by the building owner Alan Shipway to carry out a structural inspection of Hackthorne Cottage which was gutted by a chimney fire in April 2025. The cottage is Grade II listed and the Historic England listing states as follows:

Pair of cottages, now one, built in the mid C19 possibly including earlier work. Rendered brick on tarred flint sills with thatched roof. Single storey and attic, each of one large and one small bay, with boarded doors to lobby in front of central stack. One door replaced by window. Cast iron diamond pattern glazing to two light windows with timber lintels. Two flush dormers and roof extends down at front to provide cover to communal well and well head. Roof half hipped at ends. To rear flat roofed C20 extension for full length. Listing NGR: SU 15393 45017

- 1.1.2 Interestingly the listing refers to rendered brick rather than cob as the wall construction to the original cottages.
- 1.1.3 The inspection has been carried out in line with the guidance note prepared by the Institution of Civil Engineers and Institution of Structural Engineers: Assessing historic assets that are proposed to be demolished or partially demolished.
- 1.1.4 MW carried out a non-intrusive visual inspection of the building in November 2025. No opening up works, trial pitting or other intrusive investigations were carried out as part of the inspection. Scaffolding was in place on the south side and used for access to inspect the upper walls.
- 1.1.5 The site has been cleared of all debris arising from the roof and failed floors and 'heras' type fencing has been erected around the property to prevent access by unauthorised persons.

2.0 Inspection

2.1 Inspection

- 2.1.1 The roof of the cottage and all roof timbers as well as the first floor internal walls and partitions have been completely destroyed by the fire. Around the perimeter there are the remains of the rafters ends in place giving some evidence re roof rafter timber sizes, but no other evidence re the former roof configuration remains. All timber window lintels at first floor level, except those in each gable, have been destroyed. No remains of timber structures are present on site and the debris from the fire was presumably cleared as part of the post fire clean up and site protection works.
- 2.1.2 At the west end of the cottage a modern winding staircase remains giving access to the upper floor. The first floor though has collapsed due to failure in the timber floor beam bearing onto the rear cob wall. The beam has collapsed through the cob suggesting the integrity of the cob in this location has been compromised.



Figure 1 Aerial View Looking South

- 2.1.3 The cob walls have suffered considerably from the fire and the fire brigade dousing of the fire. The head of the walls are badly damaged and likely to be saturated. The walls have also been exposed to the weather since the fire in April and remain unprotected on site. Vegetation is starting to grow in the exposed top section of cob to the walls and no protection is currently in place. The condition of the cob will therefore continue to deteriorate whilst exposed to the weather
- 2.1.4 At the eastern end the main staircase remains in place giving access to the upper floor. The first floor over the dining room has disappeared at the east end presumably destroyed in the fire. Both the staircase and the remaining first floor do not have the appearance of being original structures and have been damaged by the fire.
- 2.1.5 The brick central hearth and chimney structures on first inspection appear in an adequate structural order. However, an internal inspection of the flue is required to check if the brickwork has been damaged by the intensity of the fire.
- 2.1.6 The external render on the cottage as a whole appears to be a cement based render which has been reinforced with galvanised chicken wire (Figure 6). The original render would have been lime (possibly earth) based which would have allowed the wall to breathe. The cement render is impermeable and therefore traps moisture in the core of the wall.



Figure 2 – Charred Remains Roof Timbers



Figure 3 – Southeast Corner



Figure 4 – Vegetation Head of Wall



Figure 5 – Gypsum Internal Plaster & Cement Render Externally



Figure 6 – Reinforced Cement Render



Figure 7 – Badly Weathered Cob

- 2.1.7 In effect therefore, the finishes to the cob walls on outside and inside are trapping moisture in the core of the wall. We would therefore have strong concerns re the condition of the cob wall having both been exposed to the deluge from the fire fighting, and subsequently from the weather since the roof was destroyed in April 2025. Water will have permeated the wall from the top and, being trapped by the two impermeable surfaces, this could lead to instability in the walls as a whole.
- 2.1.8 The plaster on the upper internal face of the east gable and part of the north wall has fallen off. The core of the cob is now exposed and vulnerable to degradation from the effects of the weather. This situation also exists in other areas of the upper wall on all sides. The former timber joist post holes at first floor level provide a direct route for moisture to run into the core of the wall at that level.
- 2.1.9 Part way along the upper south wall adjacent the main stair there is a fracture in the cob wall (Figure 9).
- 2.1.10 Similarly there are a couple of fractures in the north upper wall under the east window.
- 2.1.11 On the ground floor the timber supporting beam to the first floor has collapsed through the cob and it appears that the cob wall has failed in this location over the height of the ground floor (Figure 10).
- 2.1.12 Along the base of the wall here there is a damp stain and the plaster has bulged suggesting the plaster, and possibly the cob wall, has failed along a significant length (Figure 10).
- 2.1.13 The collapse of the beam has compromised the first floor, and whilst some timbers may be able to be salvaged the whole floor would need de-constructing first as the timber bearings generally will have been compromised. The lathe and plaster ceiling is beyond salvaging.



Figure 8 – Exposed Cob to inside of East Gable and North upper Wall



Figure 9 – Fracture to Cob Wall (South Side)



Figure 10 – Failed Bearing in Cob Wall



Figure 11 – Window Head South Elevation (West End)

- 2.1.14 The plaster above the western window in the southern elevation has been blown off in the fire exposing the cob wall and timber lintel. The lintel has a bow in it but this is probably a long standing issue.



Figure 12 – Post Holes in Cob



Figure 13 – Blown Render Showing Mesh

- 2.1.15 There appears to be a shallow concrete lintel over the doorway in the west elevation suggesting the building has been altered in this location (Figure 12). A secondary concrete lintel appears to be present on the outside of the wall.
- 2.1.16 Post holes remain in the cob where the first floor presumably collapsed in the fire.



Figure 14 – Rear Appendage (Study)



Figure 15 – North Appendage Roof

- 2.1.17 We understand the modern rear appendage is built of masonry off a pre-existing flint plinth. The roof comprises a flat roof, probably timber joisted finished in a bitumastic felt flat roof system. The rear appendage appears largely untouched by the fire apart from smoke damage.

- 2.1.18 The flint plinth to the cob walls generally appears in good structural order.
- 2.1.19 Internally at ground floor level there appears to be a modern concrete floor throughout.
- 2.1.20 The supporting structure to the extended thatch roof over the well on the south side of the property was completely destroyed in the fire.
- 2.1.21 The timber posts to the former doorway on the east elevation remain but the timbers to the thatched section of roof were consumed in the fire.

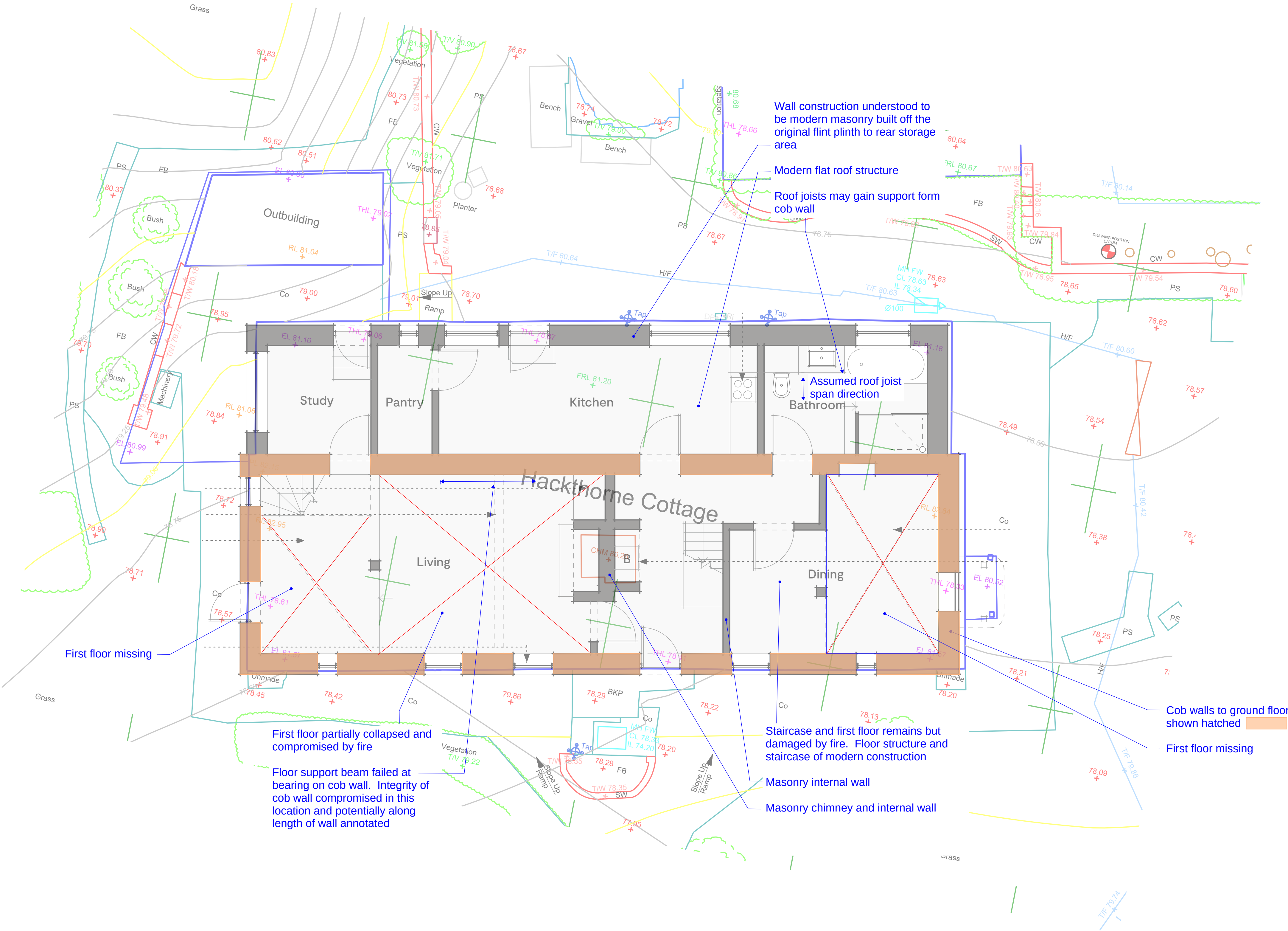
3.0 Conclusions & Recommendations

3.1 Conclusions & Recommendations

- 3.1.1 The cottage has been badly damaged by the fire with the roof to the main house and in effect the whole of the first floor destroyed beyond repair.
- 3.1.2 The fire has revealed the cob walls to the property and the fact that externally the property is rendered in a cement based render with chicken wire reinforcement. Internally a large proportion of the property has been rendered in a gypsum based plaster reinforced with an expanded metal sheet over the original plaster. This plaster has come off in many areas revealing the cob wall construction beneath.
- 3.1.3 The deluging of the property by the fire brigade in order to extinguish the fire has caused a lot of visible damage to the head of the main cob walls, and to plaster finishes.
- 3.1.4 The fire brigade deluging and the fact that the structure of the property has been exposed to the weather since April 2025, will inevitably mean the core of the walls is likely to be holding a lot of moisture. This moisture is trapped by the impermeable finishes that remain, particularly at ground floor level, as the walls can no longer 'breathe' and moderate the moisture content of the cob.
- 3.1.5 In the former living room, on the north wall, it can be seen that the cob has locally failed as the floor beam to the first floor has collapsed into the cob. It appears, by the staining on the plaster, that the base of this wall is very damp and the associated bulge in the plaster may suggest the cob has been compromised over a larger length in this area.
- 3.1.6 Looking at the building from a conservation perspective it would appear that the lower cob walls have a good line and largely remain intact (excluding the section on the north wall). We would be concerned though that the internal gypsum plaster and external cement render would have trapped moisture in the walls for a long period of time, and that the dousing of the fire, coupled with the likely long period of time the cottage will remain exposed to the weather, may have compromised the strength of the cob walling.
- 3.1.7 The main area of immediate concern is the exposed wall heads and areas where the cob is failing. Protection whilst the building future is being discussed should be put in place.
- 3.1.8 The fractures present in the cob walls could be indicative of structural problems manifesting themselves.
- 3.1.9 The inappropriate plaster and render should also be removed in areas so that the cob can be inspected by a specialist to test if it remains competent or not. The results of testing would provide a guide as to whether the cob needs to be; a) fully demolished and removed as proven to be an incompetent material, b) carefully removed and reworked for use in a reconstructed cottage, or c) retained in position as part of the building re-construction.
- 3.1.10 At this stage it is too early to conclude how much original fabric is salvageable and the likely extent of repair and reconstruction that may be required in order to retain the building.
- 3.1.11 The flint plinth to the base of the walls appears to be intact and retains a good line.
- 3.1.12 The masonry and timber flat roof to the modern rear appendage appears largely unaffected by the fire but has suffered from smoke damage. It was not possible to inspect the bearing of the roof timbers onto the north cob wall. It is possible this detail has been compromised in the fire; opening up is required to establish the detail and condition of the bearing.
- 3.1.13 No remains of the timber roof have been left on site. Therefore it was not possible to piece together the detail of the roof structure apart from the size and centres of the timber rafters.

Appendix 1 – Drawings

Drawings showing survey notes



STATUS CODES FOR INFORMATION CONTAINERS WITHIN A COMMON DATA ENVIRONMENT IN ACCORDANCE WITH BS EN ISO 19650-2:2018	
CODE	DESCRIPTION
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S1	SUITABLE FOR COORDINATION
S2	SUITABLE FOR INFORMATION
S3	SUITABLE FOR REVIEW AND COMMENT
S4	SUITABLE FOR STAGE REVIEW AND AUTHORIZATION
S5	SUITABLE FOR STAGE REVIEW AND ACCEPTANCE
PUBLISHED (CONTRACTUAL)	
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A2	STAGE 2 AUTHORIZED (NOT FOR CONSTRUCTION)
A3	STAGE 3 AUTHORIZED (NOT FOR CONSTRUCTION)
A4	STAGE 4 AUTHORIZED (FOR CONSTRUCTION)
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REV	DESCRIPTION	BY	DATE
P1	PRELIMINARY ISSUE	PEB	08.12.25

PROJECT
**HACKTHORNE COTTAGE
HACKTHORNE
DURRINGTON**

TITLE
**EXISTING GROUND
FLOOR PLAN**



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DRAWN	CHECKED	SIZE	SCALE	DATE	MW JOB NO.
PEB	XX	A1	1:100	DEC 2025	12926

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ZONE/SYSTEM	LEVEL	TYPE	ROLE	ORIGINATOR
MH	00	DR	S	MWB
PROJECT CODE		NUMBER	REVISION	
HAC		9000	P1	