



Luigi Antonino Rocco BEng (Hons) MEng CEng MICE

Email: luigi.rocco@hhstructures.co.uk

Tel: 07974 226 583

STRUCTURAL APPRAISAL REPORT

BY



Document Ref: HH-2235-C01 (Revision 0)

Project Address

Maulden Pavilion

Inspection by: **L.A.Rocco** BEng (Hons) MEng CEng MICE

Date: 12/04/2026

 HH Structures 1 Hazelwood Cottages Hazelwood Lane MK45 2HE	Project Maulden Pavilion				Job Ref. HH-2235-C01	
	Section Structural Appraisal Report				Sheet no./rev. 2	
	Calc. by L.A.Rocco	Date 10/04/2026	Chk'd by L.A.Rocco	Date 12/04/2026	App'd by L.A.Rocco	Date 12/04/2026

EXECUTIVE SUMMARY

- A structural appraisal of the existing pavilion building has been completed to inform redevelopment proposals.
- The building is a single-storey masonry structure with a timber flat roof, generally in good overall condition.
- Trial pit findings confirm foundations at approximately 1.2 m depth within predominantly sandy soils, which have low volume change potential and are favourable for supporting redevelopment.
- No evidence of significant settlement or structural instability was identified.
- Observed defects are minor and typical of age, including localised mortar deterioration, small areas of brick spalling, and limited cracking. These are not structurally significant.
- Improved rainwater drainage is recommended to prevent water discharge adjacent to foundations and ensure long-term durability.
- The existing structure is suitable for redevelopment, subject to detailed design.
- Both roof options are structurally feasible:
 - Flat roof utilising existing internal loadbearing walls
 - Pitched roof (trussed) spanning between external walls, allowing greater internal layout flexibility
- The proposed perimeter roof overhang is achievable; however:
 - A cantilever-only solution is structurally demanding and less economical
 - Introducing perimeter support posts is the preferred and more efficient approach
- Overall, the building provides a sound structural basis for redevelopment, with no abnormal risks identified.
- Proposals can proceed to detailed design and Building Control approval.

HH Structures 1 Hazelwood Cottages Hazelwood Lane MK45 2HE 	Project Maulden Pavilion				Job Ref. HH-2235-C01	
	Section Structural Appraisal Report				Sheet no./rev. 3	
	Calc. by L.A.Rocco	Date 10/04/2026	Chk'd by L.A.Rocco	Date 12/04/2026	App'd by L.A.Rocco	Date 12/04/2026

Project Address: The Maulden Recreation Ground Pavilion

Inspection by: L.A. Rocco BEng (Hons) MEng CEng MICE

Date of Inspection: 7th April 2026

Weather Conditions: Dry and sunny

Client: Maulden Parish Council

Point of Contact: Tracey Bearton – Clerk to Maulden Parish Council

1. Introduction

HH Structures Ltd were instructed to undertake a structural appraisal of the existing single-storey pavilion building following a previously prepared feasibility study.

The purpose of this report is to assess the suitability of the existing structure to accommodate the proposed redevelopment.

The original feasibility options are no longer being progressed. The client is now considering an alternative scheme, for which a preliminary layout has been provided (Appendix A), although the design has not yet been formally developed by an architect.

The emerging proposal includes a revised internal arrangement, a new roof construction (either flat or pitched), and a significant roof overhang forming a canopy around the perimeter.

2. Description of Structure

The building comprises a single-storey structure of traditional cavity masonry construction supporting a timber flat roof. The roof spans in the front-to-back direction and is supported internally by loadbearing masonry walls running side-to-side. The structure is founded on a concrete ground-bearing slab.

3. Ground Conditions and Foundations

A trial pit was undertaken at the time of inspection. The foundations were found at approximately 1.2 m below ground level and comprise mass concrete strip footings approximately 600 mm wide and 300 mm thick.

The soil profile encountered was predominantly sand with minor clay content. On this basis, the ground is considered to have low volume change potential and is not considered susceptible to significant shrink–swell behaviour. The existing foundations are therefore considered adequate for typical loading associated with low-rise structures of this type.

4. Observations

The structure is generally in good condition. The external walls are plumb with no evidence of significant movement or distortion. Localised defects were noted, including areas of mortar deterioration, minor brick spalling to isolated locations, and limited, fine cracking above

 HH Structures 1 Hazelwood Cottages Hazelwood Lane MK45 2HE	Project Maulden Pavilion				Job Ref. HH-2235-C01	
	Section Structural Appraisal Report				Sheet no./rev. 4	
	Calc. by L.A.Rocco	Date 10/04/2026	Chk'd by L.A.Rocco	Date 12/04/2026	App'd by L.A.Rocco	Date 12/04/2026

openings. These defects are superficial and consistent with age-related weathering rather than structural distress.

Internally, minor cracking to plasterboard finishes was observed. This does not correlate with external cracking and is considered non-structural.

Existing lintels appear to be performing adequately, with no visible signs of distress or excessive deflection.

Rainwater disposal is currently inadequate, with no clear provision for directing water away from the base of the building. This presents a risk of localised softening of the ground if left unaddressed.

Reference should be made to Appendix B for a photographic record of the observations noted above.

5. Discussion

The building is structurally sound, with observed defects limited to maintenance-related issues. There is no evidence of ongoing movement or foundation instability.

The lack of effective rainwater management should be addressed, as prolonged saturation of the ground adjacent to the foundations could lead to deterioration over time.

Subject to routine maintenance, the existing structure is considered suitable for adaptation.

6. Proposed Works – Structural Considerations

The existing structure is considered capable of supporting the proposed redevelopment, subject to detailed design.

A new flat roof solution would typically comprise timber joists designed in accordance with current standards, with spans optimised to make use of the existing internal loadbearing walls where possible. This approach would generally be the most efficient in terms of material use and structural depth.

Alternatively, a pitched roof could be formed using prefabricated trussed rafters spanning between the external walls. In this arrangement, the internal walls would no longer act as loadbearing elements with loads transferred directly to the external walls. This option may simplify the load path and allow greater flexibility in the internal layout. The use of raised tie trusses could be considered if increased ceiling height is desired.

Any new or altered openings will require suitable support, typically in the form of proprietary lintels or structural steelwork, depending on span and loading.

 HH Structures 1 Hazelwood Cottages Hazelwood Lane MK45 2HE	Project Maulden Pavilion				Job Ref. HH-2235-C01	
	Section Structural Appraisal Report				Sheet no./rev. 5	
	Calc. by L.A.Rocco	Date 10/04/2026	Chk'd by L.A.Rocco	Date 12/04/2026	App'd by L.A.Rocco	Date 12/04/2026

Lateral stability of the structure is currently adequate. However, if the internal layout is significantly altered, particularly through removal of walls, a review of wall panel stability may be required. Where necessary, local stiffening measures such as windposts can be introduced.

The proposed perimeter roof overhang presents the most significant structural consideration. Achieving this without vertical support would require a cantilevered solution, resulting in increased structural demands and larger members. A more efficient approach would be to introduce perimeter posts to support the canopy, reducing bending moments and improving overall economy.

7. Conclusions

The existing building is in good structural condition, with no significant defects identified. The foundations are adequate, and the structure is capable of accommodating the proposed redevelopment.

Both flat and pitched roof options are viable from a structural perspective. The feasibility of the proposed overhang will depend on the chosen support strategy, with supported solutions offering clear advantages.

8. Recommendations

Localised maintenance works should be undertaken, including repointing, replacement of damaged bricks, and sealing of minor cracks. A suitable rainwater drainage system should also be installed to prevent water discharge adjacent to the foundations.

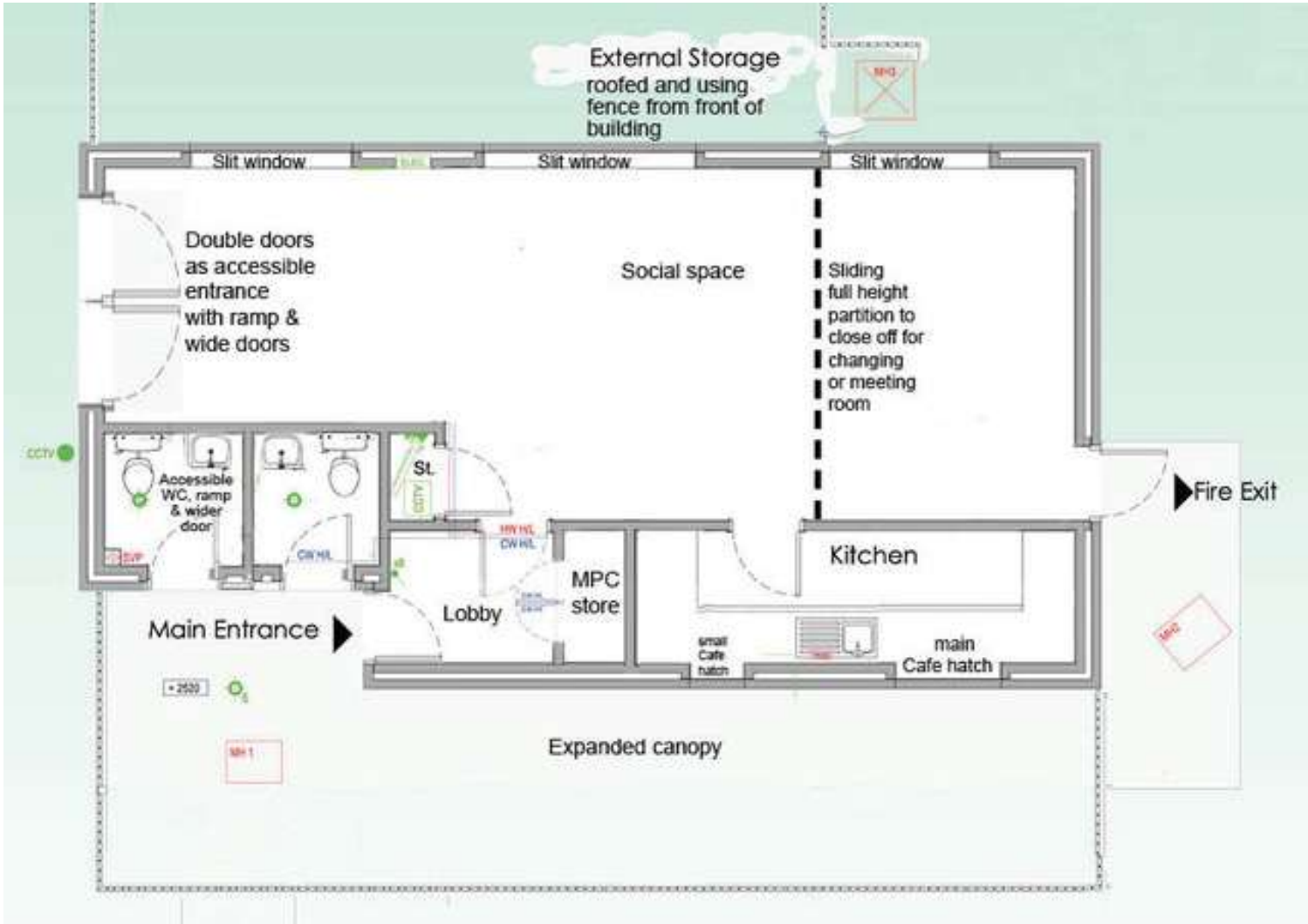
The proposed scheme should now be progressed by the design team to enable detailed structural design to a stage where detailed structural design can be undertaken. At that stage, the roof form, opening sizes, and canopy support strategy can be finalised.

9. Limitations

This report is based on a visual, non-intrusive inspection and limited exposure of foundations. No opening-up works were undertaken to concealed elements. The findings and recommendations are therefore subject to confirmation at detailed design stage and during construction. No allowance has been made for hidden defects.

HH Structures 1 Hazelwood Cottages Hazelwood Lane MK45 2HE	Project				Job Ref.	
	Maulden Pavilion				HH-2235-C01	
	Section				Sheet no./rev.	
	Structural Appraisal Report				6	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
	L.A.Rocco	10/04/2026	L.A.Rocco	12/04/2026	L.A.Rocco	12/04/2026

Appendix A – Preliminary Proposed Layout (Client Concept Plan)



HH Structures 1 Hazelwood Cottages Hazelwood Lane MK45 2HE	Project				Job Ref.	
	Maulden Pavilion				HH-2235-C01	
	Section				Sheet no./rev.	
	Structural Appraisal Report				7	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
	L.A.Rocco	10/04/2026	L.A.Rocco	12/04/2026	L.A.Rocco	12/04/2026

Appendix B – Photographs



Photo 1: Trial pit showing foundation depth and sandy soil strata



Photo 2: External brickwork with minor vertical cracking to mortar joint

HH Structures 1 Hazelwood Cottages Hazelwood Lane MK45 2HE HH STRUCTURES	Project				Job Ref.	
	Maulden Pavilion				HH-2235-C01	
	Section				Sheet no./rev.	
	Structural Appraisal Report				8	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
	L.A.Rocco	10/04/2026	L.A.Rocco	12/04/2026	L.A.Rocco	12/04/2026



Photo 3: Localised brick spalling and weathering to external wall.



Photo 4: Localised missing brick at low level to external wall

HH Structures 1 Hazelwood Cottages Hazelwood Lane MK45 2HE HH	Project				Job Ref.	
	Maulden Pavilion				HH-2235-C01	
	Section				Sheet no./rev.	
	Structural Appraisal Report				9	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
	L.A.Rocco	10/04/2026	L.A.Rocco	12/04/2026	L.A.Rocco	12/04/2026



Photo 5: External wall above opening showing localised cracking



Photo 6: Downpipe discharge adjacent to wall with potential for water saturation

HH Structures 1 Hazelwood Cottages Hazelwood Lane MK45 2HE HH	Project				Job Ref.	
	Maulden Pavilion				HH-2235-C01	
	Section				Sheet no./rev.	
	Structural Appraisal Report				10	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
	L.A.Rocco	10/04/2026	L.A.Rocco	12/04/2026	L.A.Rocco	12/04/2026



Photo 7: Horizontal cracking and mortar deterioration to external brickwork

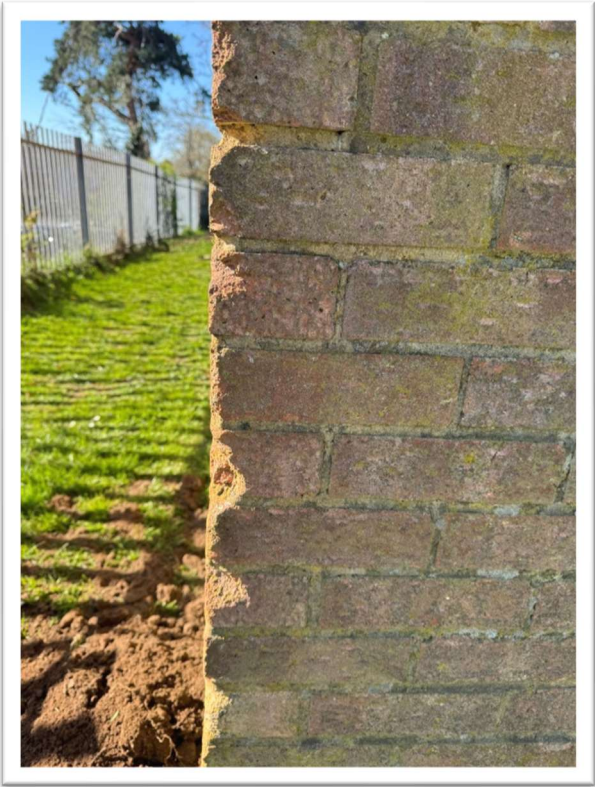


Photo 8: Localised brick spalling and weathering to external corner detail

HH Structures 1 Hazelwood Cottages Hazelwood Lane MK45 2HE HH	Project				Job Ref.	
	Maulden Pavilion				HH-2235-C01	
	Section				Sheet no./rev.	
	Structural Appraisal Report				11	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
	L.A.Rocco	10/04/2026	L.A.Rocco	12/04/2026	L.A.Rocco	12/04/2026



Photo 9: Internal wall with vertical hairline cracking to plaster finish



Photo 10: Internal wall with previous repair and uneven plaster finish

HH Structures 1 Hazelwood Cottages Hazelwood Lane MK45 2HE	Project				Job Ref.	
	Maulden Pavilion				HH-2235-C01	
	Section				Sheet no./rev.	
	Structural Appraisal Report				12	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
	L.A.Rocco	10/04/2026	L.A.Rocco	12/04/2026	L.A.Rocco	12/04/2026



Photo 11: Internal cracking at wall/ceiling junction



Photo 12: Internal corner cracking and localised surface deterioration