

# Structural Appraisal

Barn at Hen Fache Fach  
Llanrhaeadr Ym Mochnant  
POWYS  
SY10 0DD



25 Jul. 23

Clients	M & B Edwards Hen Fache Fach Llanrhaeadr YM Powys SY10 0DD
Property	Barn at Hen Fache Fach Llanrhaeadr YM Powys SY10 0DD
Survey Type	Structural assessment to ascertain suitability of building for conversion to residential dwelling house.
Date of inspection	21 July 2023 and 15 January 2024
Date of Report	25 July 2023, updated 17 January 2024  Delays occurred due to ecology inspections, and for that reason a second inspection was carried out to update this report.
Circumstances of Inspection	Dry, overcast weather conditions.  All parts of building vacant.  Stored equipment present.  Limited access to first floor due to weak floor structures.
Surveyor	M G Tomley FRICS Chartered Surveyor RICS Membership Number 1126451
Liability	This report has been prepared for the named clients and must not be relied upon by any third parties without written consent. In this regard, express consent is made to disclose the report in full to Powys County Council in connection with a planning application for conversion of the building.

## Background

The owners of the property referred to have commissioned plans to convert the building into a dwelling house.

The application process requires that the owners demonstrate that the building is capable of conversion without substantial alteration or reconstruction.

The inspection made considers the condition of the building structure and its suitability for conversion.

## Description

The building is part single-storey and part 2-storey and set into a sloping site. It is predominantly of stone construction with brick detailing around door and window openings. The pitched timber frame roof slopes are covered mainly with slate and partly with corrugated metal sheet roofs.

The exact age of the building is not known, but it is estimated to have been built in the latter part of the 19C. It is shown on the 6-inch OS map series from 1888.



There is a range of more modern pole barns attached to the rear of the building. These have no architectural merit and will be removed as a part of the conversion scheme.

The building is not listed and is not contained within a Conservation Area.

### Location

The buildings are located within OS Tile No: SJ114267 and are more particularly 1.5 miles north of Llanrhaeadr YM.

The buildings are adjacent to a red brick farmhouse, of later origin and separated from each other by a wide yard and enclosed garden.

The property is relatively isolated. There are neighbouring properties close by, but all more than 100m away and identifiable on the location plan attached.

## Condition

### Roof Structure and Coverings

The roof slopes are mainly covered with quarried slates. Some parts have in more recent years been covered with corrugated metal sheets.

The roof coverings are mainly watertight, with localised areas of failure due to slate detachment.

All roof coverings will need to be stripped and re-slated as a part of the conversion process.

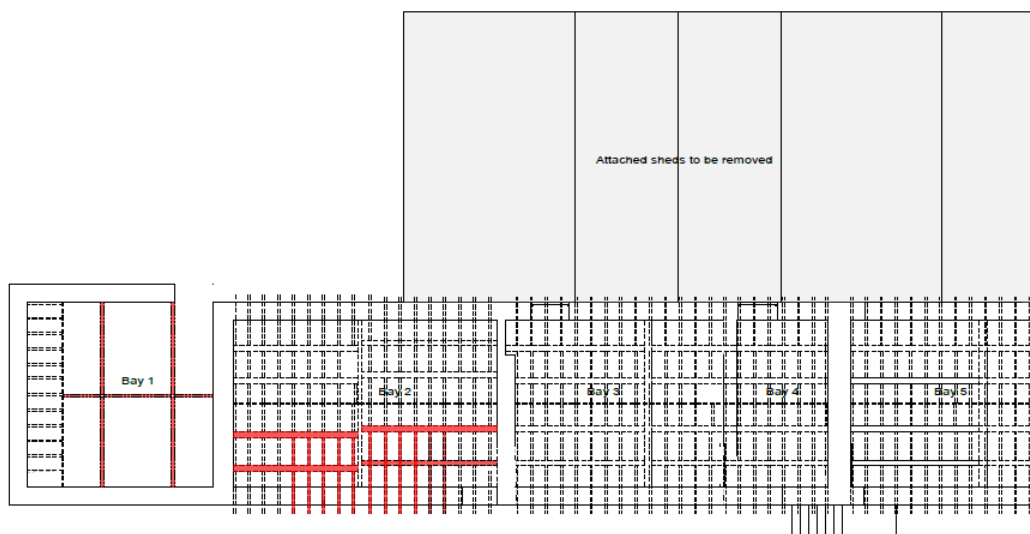
Slates should be carefully removed and set-aside for re-use.

The roof structures are formed by timber frames comprising common rafters supported over purlins and wall plates and separated by ridge boards. The purlins are supported by timber trusses and end and cross walls of solid stone construction.

The frames are largely intact and capable of retention for ongoing use.

Localised damage has been caused by water ingress over Bay 2. A number of common rafters and two purlins to this area will need to be replaced.

Timbers shaded red on the plan below will need to be replaced. Remaining timbers will be retained.





Bay 1



Bay 2



Bay 3



Bay 4



Bay 5



Bay 5

By reference to contemporary standards, the roof timbers are over-spanned and/or undersized. During conversion, strengthening repairs will need to be carried out. Strengthening can be achieved by introducing structural studwork to provide interim support and also by introducing steelwork to run alongside principal timbers to increase loading capacity. A structural engineer will need to design upgrading measures and specify fire protection.

## Walls

The walls are of rubble stone construction with brick detailing to most door and window openings.

The walls stand plumb and exhibit virtually no signs of downward or outward movement.

Cracks are present in line with the spine wall between Bays 4 and 5 and may indicate construction at different times. If any movement has occurred, it is clearly of long-standing and not progressive in nature.

There is limited cracking to spine walls directly beneath purlin ends. These cracks relate to imposition of point loads and the absence of bearing pads. The cracks are minor and of long standing.

Existing openings make adequate provision for the proposed accommodation.

Two openings to the rear elevation are “modern” and lack the brick detailing otherwise present.



## Foundations

The foundations have not been exposed. As noted above, there is no evidence of significant downward movement to any parts of the building.

Site inspection exposes bedrock close to the surface and it is clear that the walls are borne off this layer of rock.

## Floors

The first-floor decks over bays 4 and 5 are formed by timber joists supported by the spine walls and large timber cross beams.

The floor-boards and joists have been extensively damaged by wood boring beetle attack. Full replacement will be needed.

The cross beams remain in fair condition and should be retained.

The ground level floors are mainly formed in concrete. Although, perfectly serviceable for agricultural purposes, these floor structures are not suitable for use within a converted building. Full replacement will be required.

## Summary

The building envelope has been well maintained and is perfectly capable of adaptation to accommodate conversion to residential use.

The bays have been utilised to inform the proposed layout of the internal accommodation. In consequence, almost no structural changes will be needed.

Existing door and window openings have been utilised in full to service the proposed internal layout.

M G Tomley FRICS

Bowen Chartered Surveyors

35 Bailey Street

Oswestry

SY11 1PX

07779 880063

michaelt@bowen.uk.com



Appendix 1  
Location Plan

Hen Fache Fach, Llanrhaeadr YM, Powys, SY10 0DD



**Promap**  
LANDMARK INFORMATION

Ordnance Survey © Crown Copyright 2023. All Rights Reserved.  
Licence number 100022423  
Projected Scale = 1:25000, Paper Size = A4

Plan shown not to scale

## Appendix 2

### Block Plan



**Promap**  
LANDMARK INFORMATION

Ordnance Survey © Crown Copyright 2023. All Rights Reserved.  
Licence number 100024323  
Planned Scale - 1:1250. Paper Size - A4

Plan shown not to scale