

REPORT ON STRUCTURAL CONDITION OF AGRICULTURAL BUILDINGS AT ODDI-AR-Y-TWMPATH, GARTH, GLEN CEIRIOG, LL20 7LY

Brief

To survey and report on suitability for renovation and conversion the buildings identified as 2 & 3 on Site Plan drawing reference 3971-02

Date of survey.

24th February 2020. Report revised 6th October 2021

BUILDING 2

General Description

This is a large 'L' shaped building approximately 15m long x 10.5m wide over its longest elevations, constructed from stone walls approximately 500mm thick with timber roof trusses supporting timber purlins and some rafters with a covering of corrugated metal sheeting.

The building is the same construction as the house (Building 1 on the plan) and the original roof covering is likely to have been slate on timber rafters.

There is no solid floor construction. Part of the building has a timber first floor.

Findings

There is no evidence of any significant structural movement on the external walls of the building. There are several openings on the walls to all sides in positions associated with the buildings previous agricultural use. All these openings can be reused in the proposal.

Part of the east elevation is covered with ivy and whilst an inspection of this part of the wall was not possible it is not likely to require rebuilding considering the appearance of the internal elevation. It is anticipated some repointing will be necessary.

The large opening on the north elevation can be retained for the entrance / hall / landing position and timber cladding introduced around the window / door frames to maintain an agricultural appearance.

Some of the stonework is displaced close to ground level on the north elevation, however the walls are founded on bedrock and no underpinning will be required, the sections of displaced stone can be rebuilt in the same material following temporary support to the wall.

The internal wall at the 2 storey section of the building is to be removed, the structure will not be affected by its removal. An existing stone buttress on the north elevation at the position of the wall will be retained and provide the necessary support at the position of the large opening. Some repairs to the buttress will be required where stone has become displaced.

It is possible some of the trusses and purlins can be retained in the conversions subject to a closer assessment using access equipment.

A new roof covering will be required to replace the existing metal sheeting.

A new insulated concrete floor can be provided, the external wall will be lined internally with an insulated timber stud frame and the roof structure will be insulated between and under the new rafters. This will provide a thermally efficient structure to comply with current building regulations. Some tanking of walls will be required where walls are below existing ground levels

There is adequate height to provide a first floor though out the building.

A trial hole has exposed the existing foundations which are bed rock

Conclusions

The structure of the building including the foundations can be retained and converted to a dwelling without rebuilding.

BUILDING 3

General Description

This is a rectangular shaped building approximately 8m long x 5.3m wide constructed from stone walls approximately 500mm thick with timber roof trusses supporting timber purlins and some rafters with a covering of corrugated metal sheeting.

The building is the same construction as the house (Building 1 on the plan) and the original roof covering is likely to have been slate on timber rafters.

There is no solid floor construction. The building has a timber first floor which is in an unsafe condition.

It is possible some of the trusses and purlins can be retained in the conversion subject to a closer assessment using access equipment.

A new roof covering will be required to replace the existing metal sheeting

Findings

We did not record any evidence of structural movement on the external walls of the building. The walls are generally in good condition, some repointing work will be required. There are openings on the walls in positions associated with the building's previous agricultural use. All these openings can be reused in the proposal.

A new insulated concrete floor can be provided, the external wall will be lined internally with an insulated timber stud frame and the roof structure will be insulated between and under the new rafters. This will provide a thermally efficient structure to comply with current building regulations. Some tanking of walls will be required where walls are below existing ground levels.

The first-floor structure can be replaced throughout the building.

A trial hole has exposed the existing foundations which are bed rock.

Conclusions

The structure of the building including the foundations can be retained and converted to a dwelling without rebuilding.



Keith Platt
M.S.c., C.Eng., M.I.C.E., M.R.I.C.S

Photograph showing

Photograph showing

Photograph showing