REPORT
ON THE
CONDITION OF STRUCTURE
OF

ST DAVIDS CHURCH
BROAD STREET
RHOS
WREXHAM.
LL14 IRB

FOR

MR FOUEZSETTA
100 CRUD Y CASTELL
DENBIGH
DENBIGHSHIRE

GMS375/GPH/FEBRUARY 2024

1.0 BRIEF

1.1 This report was commissioned by Mr Fouezsetta, the property owner, to assist with a Planning Application for redevelopment of the site of St Davids Church, Broad Street, Rhosllanerchrugog.

1.2 The brief for this report was to carry out a visual examination of the building to assess the form and condition of the structure and fabric and to advise our opinion on its suitability for continued usage.

1.3 This report is for the use of Mr Fouezsetta and his advisors in this matter. It can be released to those parties with a direct interest in the vetting of the current planning application, but shall not be released to any other party, for any other use, without the express permission of Hughes Consulting. No other party may rely on this report, which does not confer nor purport to confer any third-party rights.

2.0 SURVEY

2.1 General

A survey of the building was made on Tuesday 13th February 2024, when the weather was inclement. The survey comprised a visual examination, without removing any finishes nor excavating any trial holes for examination of foundations or bearing strata, i.e., no attempt was made to uncover any otherwise hidden or buried elements. It is however, judged that enough information has been gathered for us to report usefully. Record photographs of condition have been taken.

2.2 The proposal is for the removal of the existing building and redevelopment of the site as a car sales area.

3.0 LAYOUT AND SETTING

The church was built in 1892, in Ruabon brick with sandstone dressings. It consists of a nave, the main, tall single storey section, which reduces in height slightly at the eastern end where the chancel is located, and a northern aisle being an extension of the main building at the rear at reduced height - under a continuation of the rear roof slope. The rear wall of the main section opening into the northern aisle is a continuous series of brick piers supporting wide arched openings. The chancel is believed to have been an addition to the original building, constructed in 1935-36. The opening between nave and chancel is also a substantial brick arch. The chancel was built with a cellar, the floor over being concrete supported by steel beam and circular section steel posts.

The roof is covered in red clay tiles over a timber framed roof, comprising rafters and purlins supported by regularly spaced raised tie timber trusses, with an arched bottom chord.

The front wall is buttressed by piers at mid-length and at the eastern end. There is an open entrance porch extension at the eastern end, in matching construction.

We understand that the building is not listed.

The BGS records confirm that, like much of Rhosllanerchrugog, the building is located on the Penning lower and middle coal measures sandstone formation. The records further show the presence of coal mining shafts around and possibly beneath the building.

4.0 CONSTRUCTION

The form of construction is consistent with the vernacular for the construction of churches, with open space enclosed by thick masonry walls buttressed by piers in part and internal openings being arch form masonry, all under a timber framed roof with feature timber trusses at regular spacing supporting large section timber purlins, and timber rafters. The pitched roof is covered with red tiles in this case.

5.0 OBSERVATIONS ON CONDITION

The principal observations on condition, are as follows.

5.1 There is severe cracking through masonry and the floor because of significant foundation settlement at the western end of the building. The crown of the first internal arched opening into the northern aisle is completed broken and that distress is mirrored by severe cracking in the front wall over the entrance from the porch. The porch floor, finished with quarry tiles, is completely split at its mid width.

5.2 The left hand gabled wall is consequentially distorted, with separation (repointed) between the rear corner of the main wall and the northern aisle end wall. The northern aisle walls are also cracked at the western end under influence of foundation settlement.

5.3 There is similar repointed cracking – less severe but still a manifestation of significant foundation settlement at the crown of the easternmost archway between nave and aisle, where the main building abuts the chancel.

5.4 There is a split in masonry (repointed) at the crown of the arch where the nave meets the chancel.

5.5 There is cracking in the end (eastern) wall of the chancel. This, again, due to differential foundation movement.

6.0 DISCUSSION

There are very serious doubts about the feasibility of the existing building being retained.

The building is very evidently affected by severe foundation settlement in all areas, most severely at the western end. The cause of the movement will almost certainly be due to ground instability where there are shallow mine-workings, including mine shafts around or even under the building. Investigation will be required to locate all coal mining features so that treatment needs can be fully appraised, designed and specified.

Mine shafts will need to be stabilised by filling / grouting and capped with reinforced concrete slabs, and coal seam workings stabilised by grouting. The access needs for the stabilisation and shaft capping will mean that large parts of the building would need to be demolished. We believe that it is not feasible, practically, or economically, to retain the building whilst major works including shaft capping are in progress. The building, which must be considered to be in a dangerous condition, will need to be taken down. The proposed redevelopment may then take place safely following investigation and treatment of mine-workings.

7.0 **CONCLUSION**

It is very clearly the case that the building structure is badly compromised by the severe foundation movement and masonry cracking. We don't believe that for safety, practicality, and economy, it will be feasible to retain the building whilst the necessary works to stabilise mine-workings is taking place.

G P Hughes B Eng, C Eng, MI Struct E, MICE
GMS375/GPH/FEBRUARY 2024

G Philip Hughes C.Eng; B.Eng; M.I Struct.E; M.I.C.E.
Member of the Association of Consulting Engineers

Cae Madog, Cilcain Road, Tafarn Y Gelyn,, Mold, Flintshire CH7 5SF

APPENDIX

RECORD PHOTOGRAPHS