

ALAN W. MARTIN M.I. Struct. E.,
Structural Engineer
Moorfield Barn
Derbyshire Level
Glossop
SK13 7PR
Tel: 01457 866670

Mrs. Penelope Coxon
18 Charlestown Rd.
Glossop,
Derbyshire
SK13 8LD.

28th June, 2011

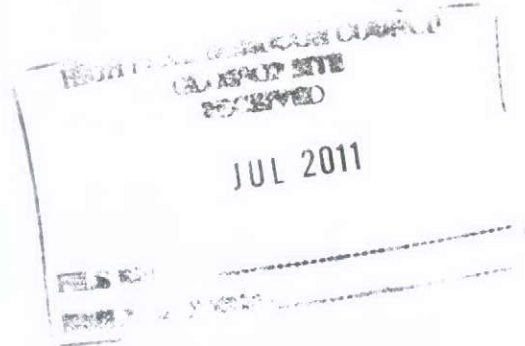
Dear Mrs. Coxon

Existing Barn - 18 Charlestown, Glossop

This report has been prepared at your request in response to the requirement under "Local Requirements" in a letter from HPBC dated 11th May 2011 reference HPK/2011/0246 for a Structural Survey of the existing structural condition of the building and the reasons for the proposed development.

The property consists of a small (8.5 m long x 4.5 m wide) two-storey stone built barn probably in the order of 150 years old. The north-west larger part having been constructed first. The latter south-east addition contains a timber first floor. The stone walls to both parts are approximately 500 mm thick and of typical local construction, comprising two leaves of stonework with probably a rubble filled core between them. Various openings exist, the largest being the barn door on the front (south-west) elevation. Some openings have been infilled with various types of masonry construction over the years.

The property is in effect on a sloping site, the pavement to the front elevation being closely related to ground floor level of the building.



whilst at the rear north corner the existing ground level is at its lowest, some 1.8 m below the building ground floor level. External steps against the north west gable give access to this area of lowest external ground level.

The right hand (south-east) gable wall of the original part of the building has, at some time in the past, been substantially removed to provide a clear internal space, stone piers have been left internally against the front and rear walls on the line of the existing gable and currently carry timbers supporting the original roof purlins to both parts of the structure.

The roof structure is of traditional design, the substantial timber purlins carry rafters, battens and sarking felt, the roof is finished in blue slate. The roof appears to have been re-laid in the relatively recent past.

Front Elevation (south-west)

This elevation contains three openings including the large barn doorway, the masonry to the wall is in reasonable condition and acceptably plumb and in line but with a limited area of out of alignment at high level at the straight vertical joint between the original and extension. No bonding of the masonry exists on this elevation between the two parts of the building, hence the localised out of alignment. There are no indications in the masonry of any foundation movement.

Rear Elevation (north-east)

This wall is in very sound condition and some bonding of the stone work exists across the vertical joint between the original and extension. The wall is plumb and in line and as with the front elevation does not exhibit any signs attributable to foundation movement.

The difference in external ground level between the front and rear of the building means that much of the rear elevation is a retaining wall supporting the ground floor slab and fill, the maximum retained height being 1.6 m. The wall has performed this function satisfactorily – there being no signs of movement or displacement.

The wall contains two ground floor door openings in the newer section infilled with brickwork on the inside together with two first floor window openings.

Left hand Gable (north-west)

This wall has against it externally a flight of stone steps leading from pavement level down to the lower external ground level at the rear of the building, a level change of some 1.8 m.

The wall exhibits some outward movement in its centre section primarily at ground floor level of in the order of 80 mm, similar movement is visible internally. There are no signs of cracking or distress in the mortar joints internally or externally which would point towards the movement being historic and non-progressive. The substantial nature of the wall (500 mm thick), the absence of any openings in it and the fact that the corners, verge line and lower section of the wall are true and plumb indicates that the longstanding now inactive movement has not left the wall with a structural stability problem.

Right hand gable (south-east)

This wall which contains at first floor level an infilled former window or pitch hole does not exhibit any signs of structural movement and is in good condition with true corners and free from any movement in the masonry. The external ground level against this wall falls gently from pavement level towards the rear elevation.

Internal Inspection

The left hand (original) section contains a concrete ground floor slab some 80 mm below pavement level whilst in the right hand section whatever paving or slab which may have existed has been removed, the level of the present earth floor being some 250 mm below pavement level.

Masonry piers have been left internally against the front and rear elevations following the removal of the gable wall to the original part of the barn. These project approximately 450 mm from the wall faces and currently offer support to the timber beam arrangement that carries the roof purlins. The system is

performing its function satisfactorily. Similarly the rafters, battens and roof slates are in good condition and are performing satisfactorily.

Summary & Conclusions

The building is in good structural condition and has survived well. Some local rebuilding is required as mentioned previously to the small zone of out of alignment at the junction of the original and extension front walls at high level. Bonding of the masonry as part of any rebuilding will prevent any future movement. The longstanding bulging to the left-hand gable is clearly not progressive and has not left the wall with a structural stability problem.

From the foregoing it can be seen that this building is sound and suitable for re-use. It has formed part of a group of buildings in this part of Charlestown for some 150 years and it would be appropriate to put it to good use. the front elevation is somewhat untidy and sympathetic conversion of the property to residential use would address this issue and preserve it in a functional state. It has been suggested that at some time in the past the part first floor was used as living accommodation. The presence of a replacement timber first floor and the partitioning at the edge of the floor appear to support this. The latter would have been an encumbrance to the storage and handling of hay and other animal foodstuff. The conversion of the building to domestic use would seem to be appriate as this corner of Charlestown is essentially a residential area.

As you are aware this report is based upon a visual inspection of the structure and represents my considered opinion as to the way the structure has responded to the conditions/use it has been subject to. No breaking out or excavation or inspection of hidden areas has been undertaken nor has any investigation been made into the presence/condition of drains or services.

I trust the foregoing is sufficient for your and HPBC's purposes. Please let me know if you require anything further.

Yours sincerely,


Alan W. Martin, M.I.Struct.E.,