

Mr C J Carr
Chris Carr Architects
Orchard Farm
Goathland
Whitby
YO22 5JX

MJY/KB/002/33957

26 July 2011

Dear Chris

Stud Farm, Spring Lane, Carlton, Barnsley

I have pleasure in presenting my report of structural appraisal for this project.

You have asked us to advise on the suitability for retention and conversion to residential use of the house and redundant farm buildings. The report therefore is not a detailed schedule of defects. The property comprises a farmhouse and attached cottage and two single storey barns. The buildings are in use but not currently occupied.

Inspection of the buildings was in places limited to areas of safe access. Examination was made in daylight, from ground level with some internal inspections by torchlight. Defects therefore not reasonably apparent in such conditions may not have been observed.

Detached barn (former stable block)

The former stable block is a single storey stone building some 18m by 6m in plan area. The walls are of solid sandstone construction about 450mm thick with numerous openings. The roof is covered with asbestos cement (or similar) sheeting on timber rafters and purlins spanning between internal cross walls or king post trusses. The floor is stone flagged, or concrete.

Externally the walls appear generally to be fairly straight and plumb with the exception of the central north wall which inclines inwards toward the south at about 1 in 60. Openings in the south wall are bridged by twentieth century pre-cast concrete lintels. Openings in the north wall have original stone lintels. There is a degree of vertical cracking some 5 to 8mm in approximate width adjoining the openings in the north wall. Elsewhere there are occasional minor vertical and diagonal cracks consistent with small movements in the walls which are

Also at:- Pearson Court, 3 Kings Road, Fleet, Hampshire, GU51 3DL Tel: 01252 360580 Fax: 01252 360581

Directors: G M Seaman BSc, CEng, FICE, FStructE S D Preston BEng, CEng, FICE, FStructE N J Baines BSc, CEng, MICE, MCIWEM
P Richardson BSc, CEng, MICE, MStructE J M Wood BSc, CEng, MICE, FStructE M J Yates BSc(Eng), ACGI, CEng, MICE, FStructE
S R Ellis, BEng, CEng, MStructE, AMICE K R Pursall BEng, CEng MStructE
Senior Associates: K Newsome BSc, CEng, MICE, MStructE S J Mitchell BSc, MSc, CEng, MEI, MCIBSE, MASHRAE
Associates: A Jones BEng, CEng, MICE, MStructE M Young MA, CEng, MICE, MStructE A Allison B.Eng
C A Wood BSc, CEng, MStructE, AMICE C A Topliss BSc, CEnv, CSci, CGeol, AMICE, FGS

Eastwood & Partners (Consulting Engineers) Limited Registered No 1835021

entirely to be expected in buildings of this age and nature. Throughout, mortar joints in the stonework are in need of repair and repointing.

Internally the building was formerly subdivided by 300mm thick stone walls into four stables, the dividing walls having subsequently been removed below eaves. Above eaves the walls are supported on pairs of I-beams spanning the full width of the building.

The steel beams have suffered some corrosion but appear to be in reasonably satisfactory condition. Walls above appear sound as do the piers which support the ends of the beams.

Timber roof members appear to be in reasonable condition although there is a risk that the ends of trusses, rafters and purlins may be damp where seated on external walls. Hidden rot or infestation may also be present.

Detached barn (former sheds or store)

This comprises two attached barns forming an L shape of maximum dimensions approximately 10m by 8m. They are single storey, with solid sandstone walls and pitched roofs covered by heavy stone slabs.

Externally walls are reasonably plumb and level with the exception of the western double gable. Here there is evidence of past movement having resulted in a number of vertical cracks up to about 10mm in width but exceptionally up to about 25mm width at the top southern corner. Modifications have been carried out to original openings with evidence of further movement at lintel ends in the east elevation. Mortar joints in the stonework have frequently been eroded by the weather and there is a general need for repointing.

Internally the building was recently used as a butchers shop and wall and floor surfaces are covered by hard finishes. Although this effectively obscured the underlying condition of the walls there was no evidence of major structural defects. No access was available to inspect the roof structure. It is to be expected that there may be areas where roof timbers are damp or have suffered rot or infestation, particularly at bearings on external walls.

Farmhouse

The farmhouse is a large dwelling, on three storeys, with solid sandstone walls and a double pitched roof covered in thick stone slabs. There is a date stone on the north elevation suggesting it was constructed towards the end of the eighteenth century.

Externally walls display evidence of past movement by way of vertical and diagonal cracks between adjoining window openings, particularly on the west elevation. Here the ground floor

window openings appear to have been enlarged or altered with consequent use of reinforced concrete lintels. There is also a local distortion beneath one first floor window where the stonework has pushed out some 20mm.

On the south gable wall there is minor cracking over the arched attic window. The east end of the gable chimney stack is twisted slightly and leans outwards some 50 to 75mm.

The east wall similarly contains vertical and diagonal cracks up to about 3mm in width as evidence of past movement, particularly at the northern end top corner.

Overall there is consistent evidence of slight whole-body movement of the house, dipping down towards the south, probably due to past coal mining settlement. Window and door jambs lean typically at an angle of approximately 1 in 100 to 1 in 150 and there is a corresponding associated dip measurable in opening cills and wall plinth courses. It is known that coal mining at depth has been carried out in the past but it is normally to be expected in such situations that movement will by now have long ceased to occur.

Internally, floors and walls are generally covered throughout in finishes and fittings. No signs of major structural defects were observed. There is a measure of cracking in walls over openings, particularly in an arched opening in the stairwell, and although not rigorously measured, an indication that floors slope down slightly towards the south, consistent with the mining subsidence observed externally.

Internal floors are of timber and the roof is supported on timber trusses and purlins. Again, hidden dampness or rot may be present particularly at bearings on external walls or adjoining gutter locations. There are dips and bows in the lines of the roof and it is envisaged that some replacement of roof timber will as a minimum be necessary to remedy these.

There is a small cellar below the kitchen, inspection of which did not reveal any major structural defects.

Attached Cottage

The cottage attached to the north wall of the farmhouse is a two storey stone building but with smaller storey heights than the farmhouse. Again walls are of solid sandstone and there is a double pitched roof covered by heavy stone slabs.

Externally, front and rear walls were observed to lean slightly outwards, possibly as a consequence of spread of the roof structure. A degree of horizontal and vertical cracking was observed in the walls, likely arising from past differential movement with crack widths up to

approximately 5mm. Some infilling or re-modelling of former openings has been undertaken in the north gable. Generally there is a need for repointing of mortar joints. Roof lines are uneven.

Internally wall and floor surfaces were generally obscured by decorations and fittings. No gross defects were evident in the walls. No formal means of access was available to the upper storey and so inspection was confined to observation through a small hatch. A full assessment of the roof structure could not be made. Again hidden dampness or rot may be present and a measure of replacement of roof timbers might be expected.

Summary

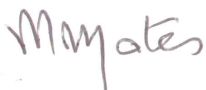
The farmhouse and detached barns appear to date from the end of the eighteenth century. Some foundation movement has occurred likely due to past mining settlement and this has resulted in a slight overall dip of the buildings. Such movement is expected to have ceased by now. There are a number of cracks in the walls associated with this movement or else arising from local disturbance, the majority of which are not severe and which are entirely consistent with the age and nature of the buildings.

Cracks in walls can, as a part of the renovation, be stitched together by inserting small diameter rods into bed joints.

Timber floors and roof structures may require a measure of replacement particularly where hidden rot or dampness is present.

In total the buildings appear entirely capable of renovation or refurbishment without need for major reconstruction.

Yours sincerely



M J Yates