VISUAL STRUCTURAL INSPECTION

FOR

PROPOSED CONVERSION OF BARN
TO FORM DWELLING

AT

LAND ADJACENT TO SUNNY BANK
HACKNESS
NORTH YORKSHIRE

FOR

MRS I STUART
SUNNY BANK
HACKNESS
NORTH YORKSHIRE
YO13 0JW

PROJECT REF: 24049 / CMA / SEPT 08

CONSULTING ENGINEERS:

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We have not inspected structural elements not specifically referred to in this report or other parts of the structure which are covered, unexposed or inaccessible and we are therefore unable to report that any such part of the property is free from defect.

* NEW - Asbestos and Toxic mould not covered.

NYM / 2009 / 0887 / FL

1.0 Date of Inspection

16th September 2008

2.0 Brief

GGP Ltd were instructed by Mrs I Stuart to undertake a visual structural inspection on the above property with a view to commenting on its adequacy for conversion to form a dwelling.

3.0 Background

The existing buildings are part single storey and part two storey and are currently used as stables and storage buildings. The walls are solid stone and the roof is tiled.

4.0 Observations

4.1 Single storey section:-

The single storey section has solid stone walls with 3 single doors on the front elevation providing access into the stables and a single door and window on the rear elevation. The roof construction is tiles over felt and timber rafters.
The walls appear in a reasonable condition with some minor repointing required in places.
The roof is also in a reasonable condition and is not showing signs of major sagging or deterioration.
The floors to the stables are concrete, however these are extremely unlikely to have any form of DPM or insulation and will therefore require replacement. In addition, the floors within the stable block are at different levels and would have required levelling in any case.
The lintels over the doors are timber. These appear in a reasonable condition, however they should be inspected for infestation or rot during the refurbishment works and replaced as necessary.

4.2 Two storey section:-

The two storey section is of a similar construction to the single storey section, with stone walls containing 2 access doors and one larger sliding door on the front elevation.
The roof construction is tiles on felt on timber rafters over large timber trusses/ frames.
The walls appear in a reasonable condition with some minor re pointing required in places.
The roof is in a reasonable condition and is showing no signs of major sagging or deterioration, and no internal leaks were observed.
The rafters are supported on timber purlins which are in turn supported on a large timber truss. The bottom chord of this truss is a large timber beam at floor level, which also supports the timber floor joists.
The first floor joists appear in a good condition, however their size is not sufficient to comply with the British Standard loading requirements for domestic floors.
It will therefore be necessary to replace the timber joists. In addition, although the timber beam which supports these floor joists appears substantial, it would be prudent to install two new steel beams (one each side of the timber beam) to support the timber joists.
The ground floor slab is concrete, however the finished floor level is different in each storage unit. In addition, as per the single storey section, this floor is unlikely to have any DPM or insulation and the floor should be replaced to incorporate these elements.
The lintels over the doors are timber. Whilst these appear in a reasonable condition, they should be inspected for infestation and rot during the refurbishment works and replaced as necessary.

5.0 Conclusions/ Recommendations

The barns are generally in a good structural condition, however the following works should be undertaken to enable structural compliance with current building regulations for the proposed conversion to a dwelling.

i) Remove existing concrete floors and replace with new concrete floor incorporating a damp proof membrane and kingspan rigid board insulation or similar approved.
ii) Remove existing first floor joists and replace with new timber floor joists appropriately sized to accommodate domestic floor loading.
iii) Install new steel beams each side of the existing timber beam at 1st floor level to support the new timber floor joists and relieve the load on the existing timber beam.
iv) Inspect existing stonework and repoint any areas of loose/ missing mortar as necessary.
v) Line the internal skin of the stone walls to provide adequate insulation levels to comply with current building regulations.

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vi) Inspect existing timber lintels for rot or infestation and treat or replace as necessary.

Yours
For GABBITAS GILL PARTNERSHIP LIMITED

C M McATEER BEng. (Hons), C.Eng., MIStructE.
Director