Our Ref: TEW/SM/J101133
Your Ref:

October 2011

Mr & Mrs Moloney
Bankfield Farm
Boggard Lane
Charlesworth
SK13 5HL

Dear Mr & Mrs Moloney

STRUCTURAL REPORT
Property Address: Agricultural Building, Bankfield Farm, Charlesworth. SK13 5HL

1.0 BRIEF

1.1 Following submission of a planning application (ref HPK/2011/0273) to High Peak Borough Council for the conversion of the above into a detached 3 bedroom dwelling, the Authority have requested further supporting information to confirm the structural condition of the existing building

2.0 DATE OF INSPECTION

2.1 16th June 2011

3.0 PERSON INSPECTING

3.1 Property inspected by T E Wing BSc MRICS

4.0 LOCATION

4.1 The application site lies within a green belt area and covers approximately 375sq mtrs.

4.2 The site is situated to the south Charlesworth village Centre.

4.3 The village is served by existing highways; Marple Road to the South West and Glossop Road to the North .

4.4 The site is served by Boggard Lane which continues to Back Lane and Town Lane to the north.

4.5 The front elevation to the building faces approximately East.

5.0 ORIENTATION

5.1 With regard to orientation, where reference is made to the front elevation, it is taken as that which faces the road. Where reference is made to left and right it is as if standing in the road looking at the front of the property unless otherwise specified.

6.0 DESCRIPTION

6.1 Traditionally built detached split level agricultural building originally constructed around 175 years ago.

Construction

6.2 The building is of traditional construction:

External walls:	Solid natural stone
Roof:	Pitched timber frame clad with stone flags and protected metal sheeting
Lower floor:	Solid
Upper floor:	Part suspended reinforced concrete, part suspended timber
Internal walls:	Solid masonry

6.3 The building has piked gable elevations to the front and rear. Levels reduce towards the rear creating an open lower level aspect onto grazing land.

6.4 A single storey lean-to has been constructed to the left hand side parts; three walls currently remain constructed in natural stone faced cavity construction with inner leaf of concrete block work. The floor is of solid concrete stepping down in level to the rear. The roof has been removed.

Accommodation

6.5 **Lower Floor**

Shippon
store

Upper Level

Store
Open hay loft

7.0 CONDITION - EXTERNAL PARTS

Walls

7.1 The external walls to the original parts are of solid natural stone face construction with an overall thickness of around 475 mm. Window and door apertures are in the main supported externally with dressed natural stone sill and head members with timber lintels in the main to the internal leaf.

7.2 To the rear gable facade facing onto the adjacent field, the wall has horizontally settled causing levels to reduce to the east. This movement has aggravated failure of the aperture supporting members and is considered to be ongoing.

7.3 The wall thickness to this elevation has also deflected vertically.

7.4 To the left hand side elevation a diagonal raking crack can be seen running through the full thickness of the wall, running from around lower ground floor sill height to eaves level. Similar, although more minor, hairline cracking can be seen to the opposite flank elevation.

7.5 The rear section of the building has rotated away from the remaining parts. It is likely to have been caused by inadequate foundation support and failure of supporting internal and external lintels.

7.6 Movement recorded to the rear gable elevation has reached a point where economic restraint/repair is not considered viable and reconstruction of the elevation is recommended off suitable foundation support.

7.7 To the adjacent flank parts, the reconstruction of the gable elevation should prevent further significant movement/rotation. The remaining timber internal lintels should be cut out and replaced with reinforced concrete members. The masonry should then be stitch repaired with stainless steel rods resin bonded in place and cracks packed with slate prior to re-pointing.

7.8 The upper parts of the flank stone work spreads slightly caused by deterioration of the roof frame latter described.

7.9 The front section has been re-constructed/significantly repaired since original construction and in part acts as a retaining structure to the adjacent drive. From our inspection the walls were found to be level and upright with no undue bulging, dishing or deflection with the door and window openings being squarely incorporated.

7.10 A stone faced structure was recorded to the left hand side parts; the roof of which has now been removed. The walls are of cavity construction and have an inner leaf of concrete block work. From our inspection the walls were found to be level and upright with no undue bulging, dishing or deflection with the door and window openings being squarely incorporated.

7.11 The stone work jointing varies in type and condition. The front section where locally re-constructed and repaired, it was found to be adequate; to the remaining parts it has eroded aggravating penetrating dampness into the property. Erosion has been aggravated by structural movement previously referred to. The walls to the building require re-pointing.

7.12 Stone work is beginning to spall and laminate, more evident to the dressed members. Localised re-dressing will be required when walls are re-pointed.

Roof

7.13 The original main rear roof is of pitched timber framed construction incorporating 'tree trunk' style purlins, rafters and central truss members. The ridge runs from front to rear.

7.14 There is evidence of timber infestation and rot attack; this appears to be ongoing and treatment is required. Localised timber replacement is necessary.

7.15 The roof frame has spread slightly aggravating misalignment of the external walls. This has been caused by the lack of triangulation and deterioration of the timbers allowing the rafter feet to spread outwards.

7.16 The stone flagged cladding is in poor condition and requires stripping and re-covering.

7.17 To the front section, the roof has latterly been stripped and re-covered, presumably during repair/replacement of the external walls. The roof is of timber framed construction and is clad with protected metal sheeting. It was found to be adequate for this areas present use.

7.18 The roof to the extended left hand side parts has been removed. Flashing debris remains to the original external walls adjacent.

8.0 CONDITION - INTERNAL PARTS

Floors

8.1 The main lower ground floor is of stone flag, rubble and earth construction. It generally undulates with significant rising and penetrating dampness evident. The floor to the front store has been replaced with mass concrete.

8.2 An open timber framed hay loft floor was recorded to the rear parts with ladder access. There is evidence of significant timber infestation and rot attack. It deflected under loading and requires replacement.

8.3 To the front reconstructed section a reinforced suspended concrete floor deck has been introduced. The original timber shuttering below has detached with significant timber infestation evident. The floor relies for support upon the perimeter external walls; there was no evidence of any significant structural distress.

8.4 The floor to the left hand side extension parts is of concrete construction and steps down towards the rear. A vehicle inspection pit with sleepers over was recorded. We were unable to inspect the pit.

Internal Walls

8.5 There is evidence of significant penetrating and rising dampness to the property, particularly where walls are in part below ground level. The dampness present has aggravated timber infestation and rot attack to internal supporting members.

8.6 The internal face of the main external walls is of randomly laid natural masonry. We have previously referred to structural movement to the rear and flank elevations which requires localised re-construction and stitch repair/restraint. Stone work jointing internally has eroded and detached aggravated by the movement evident. General re-pointing of the internal face is considered necessary.

9.0 CONCLUSION

9.1 This is a traditionally built agricultural building typical of this type of unit built at the time of construction.

9.2 There is evidence of structural movement particularly to the rear gable elevation and immediate flank elevations and localised re-construction and restraints/repair is considered necessary.

9.3 The roof frame is considered to be beyond economical repair and replacement of the timber work is considered necessary prior to re-roofing. It should however be noted that re-roofing will be required in any event to meet current building regulation standards.

9.4 There is evidence of significant timber infestation and rot attack; timber treatment/localised replacement/repair will be required during refurbishment works.

9.5 Significant rising and penetrating dampness was recorded, particularly where walls are in part below ground. A tanking detail combined with land drainage is recommended during refurbishment.

We trust that in the above we have covered all relevant matters but should any areas require further clarification or should you have any queries please do not hesitate to contact this office.

Yours sincerely

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Encls Photos

CC High Peak Borough Council