



**Bellamy Wallace Partnership**  
Consulting Structural Engineers

**Client:** Mrs N Talbot

**REPORT ON STRUCTURAL VISUAL  
INSPECTION OF THE BARN  
PROPOSED TO BE REPAIRED AND  
SYMPATHETICALLY CONVERTED  
FOR COMMERCIAL USE**

**AT**

Falconhurst  
Markbeece  
Edenbridge  
Kent  
TN8 5NR

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**Issue No:** 03

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Bellamy Wallace Partnership LLP

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## 1.0 INTRODUCTION / BRIEF

BWP were instructed by Mrs N Talbot to undertake an inspection of the Barn and associated attached outbuildings at Falconhurst, Markbeece, Edenbridge, Kent TN8 5NR. The purpose of our inspection was to assess the current condition of the buildings and to consider the likely extent of works required for the repair and the sympathetic commercial conversion of the buildings in respect of Sevenoaks District Council Planning Policy GB7. The inspection was carried out by Mr Chris King on Monday 27<sup>th</sup> April 2015. The weather was dry and bright.

## 2.0 DESCRIPTION OF PROPERTIES

The original Barn structure (front) is thought to date from the mid to late 18<sup>th</sup> century with later extensions to the sides and to the rear including: the rear and side Lean-to structures thought to date to the early to mid 19<sup>th</sup> century, the rear Cow Shed thought to date to the early to mid 20<sup>th</sup> century and four other side extensions (Outhouses, Pig Sty and Shed) thought to date from the late 19<sup>th</sup> century to the early 20<sup>th</sup> century.

2.1 The original barn construction consists of timber framed walls built off stone plinths up to first floor / eaves level with steeply pitched rafters to front and rear with purlins and collar ties. The roof slopes are covered with clay tiles. The first floor is supported by timber beams and posts.

2.2 The lean to structures are of single storey construction with shallow roof pitches spanning between timber framed walls built off stone plinths. The rear lean to is supported by a timber beam with supporting posts and later steel columns from the cow shed extension.

2.3 The rear right hand side outbuilding is constructed of 9" brickwork with steeply pitched rafters and a central tie member to the eaves.

2.4 At the rear of the building, the cow shed is of steel frame construction, with masonry walls at low level and corrugated sheeting above the masonry and to the roof slopes. The ground floor finished surfaces are either concrete or cobbles.

### 3.0 INSPECTION OF THE BARN AND OUTBUILDINGS

Our observations are annotated as if viewing from the front of the property (East face).

#### 3.1 External

One of the posts adjacent to the main front door has a significant split to the bottom. The plinth is damaged, to the right hand lean to. There are missing / broken tiles to the roof slopes. The projecting beams to the left hand flank wall are affected by rot. The walls to the right hand rear outbuilding are affected by significant cracking. Large areas of the clay roof tiles are missing.

#### 3.2 Internal

A number of timber posts are affected by a degree of rot at low level. A number of posts are out of plumb to a degree. The beam supporting the bottom of the rear lean to rafters and supporting timbers deflects significantly. The steelwork to the cow shed is affected by a degree of corrosion. The steelwork is not braced. The walls to the right hand rear outbuilding are affected by extensive and significant cracking.

### 4.0 PROPOSALS

It is proposed to sympathetically repair, extend and convert the building to provide a new wedding venue and to extend the life of the barn. The new extensions will be visually subservient to the original barn structure, to ensure that the original character of the barn is maintained and enhanced as far as possible. The proposed extension works include the demolition of the existing cow shed and the front right hand timber lean to structure. These structures are to be replaced by a new single storey structure to the rear (West) replacing the

cow shed and to the right hand (North) side linking with the existing garage block which is to be converted for food preparation.

The new structure will be framed to ensure that they do not undermine the structural integrity of the existing buildings, but provide additional support and restraint as required and these structures will continue to provide the main basis of the building to be converted. There is no need for any rebuilding of these structures.

#### 5.0 METHOD STATEMENT

To properly frame the new extension, we would anticipate that some of the new columns will occur close to the existing building structure. This is likely to include the need for new foundations supporting both the new and the existing structure. In these locations, it is likely that a form of underpinning will be required and this is to be carried out to the approval of the Local Authority Building Control officer.

The need for more extensive underpinning will depend on the stability of the existing foundations. Any underpinning required is to be undertaken in short lengths, propping the existing structure as necessary to safely carry out the works and to maintain the stability of the existing building structure at all times. The new building works proposed and the repair and strengthening works required to the existing building may, from time to time, reduce the stability of the existing building. Were this is the case, it is essential that temporary bracing is provided in the form of a braced scaffolding system to ensure that the stability of the existing building is properly maintained at all times.



## 6.0 CONCLUSIONS

We have not inspected the first floor of the buildings where the proper access was not provided.

### 6.1 General Current Condition

Overall the buildings are of reasonably good quality and are suitable for commercial conversion and extension with only a modest amount of work required to the original timber barn structure and the outbuildings proposed to be retained.

6.2 The timbers including columns in direct contact with the ground floor structure have been affected by rot to a degree. This will require attention.

6.3 The right hand rear brick outbuilding is affected by normal differential foundation settlement or possibly by subsidence?

### 6.4 Summary

In our view “the original timber barn and the outbuildings proposed to be retained are of permanent and substantial construction and are capable of conversion without major or complete reconstruction that would detract from their original character” in accordance with local Planning Policy GB9. This has been clearly demonstrated by the long term stability of the original barn structure and the various outbuildings to be retained.

## 7.0 RECOMMENDATIONS

7.1 Arrange for trial pits as necessary to expose the foundations provided to support the existing building structure.

7.2 Repair / replace the roof tiling as necessary.

- 7.3 Repair / replace the timber weatherboarding as necessary.
- 7.4 The new extension should provide additional support to the outer roof edge of the rear lean to extension directly behind the original 18<sup>th</sup> century barn structure.
- 7.6 The right hand rear brick outbuilding is likely to require underpinning and then repairs using resin repair techniques and incorporating suitable tie bars by 'Helifix' or other similar approved system.

We would strongly recommend that any drains in close proximity should be tested by a specialist company.

8.0 DISCLAIMER

We have not inspected woodwork or other parts of the structure which are covered, unexposed or inaccessible and are therefore unable to report that any such part of the property is free from defects

Signed  
For and on behalf of BWP



C C King  
Principal Engineer  
8<sup>th</sup> June 2015



**Bellamy Wallace Partnership**  
Consulting Structural Engineers

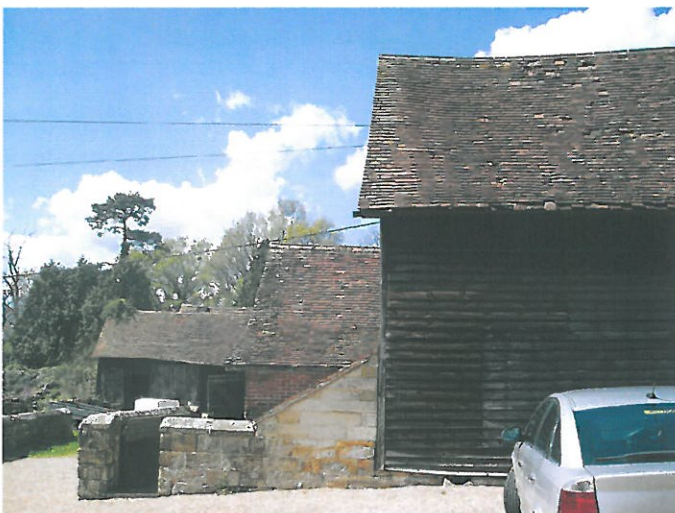
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## APPENDIX A



BARN / BARN  
Part front (East) Elevation



Part Side (South) Elevation



Part Side (South) Elevation





Part Rear (West) Elevation



Original Barn (Left hand side) Bay



Original Barn



Original Barn (Middle Bay)





Lean to behind original Barn



Lean to behind original Barn



Cow Shed steelwork





Cow Shed Steelwork



Plinth support to timber frame walls and cobbled ground floor



ASSOCIATED BUILDING ADJACENT TO BARN

Steeply pitched rafters and central tie to brick outbuilding



Cracking to wall of brick outbuilding (West) wall





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**REPORT ON STRUCTURAL VISUAL  
INSPECTION OF THE GROOMS  
HOUSE AND THE GARAGE BLOCK  
PROPOSED TO BE REPAIRED AND  
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## 1.0 INTRODUCTION / BRIEF

BWP were instructed by Mrs N Talbot to undertake an inspection of the Grooms House and the Garage Block at Falconhurst, Markbeece, Edenbridge, Kent TN8 5NR. The purpose of our inspection was to assess the current condition of the buildings and to consider the likely extent of works required for the repair and the sympathetic commercial conversion of the property in respect of Sevenoaks District Council Planning Policy GB7. The inspection was carried out by Mr Chris King on Monday 27<sup>th</sup> April 2015. The weather was dry and bright.

## 2.0 DESCRIPTION OF PROPERTY

### 2.1 The Grooms House

The front section (East stable block) is divided into 3 bays at ground floor level, with brick or concrete ground floors, depending on the bay considered. The super structure is of timber framed walls constructed off a brick or stone plinth generally, but with a 9" brick wall to eaves level to the left (South) flank. This is supporting timber beams and floor joists above, providing further accommodation in the roof space. The roof construction is steeply pitched timber rafters to the ridge line with clay tiles to the front and rear roof slopes.

The rear section, which is divided into 2 sections at ground floor (front to back) is of similar construction but with 9" brick external walls and brick piers to the rear (West) elevation, with a 9" brick dividing wall. The gable walls are timber framed above eaves level at first floor.

There is a further single storey structure which appears to be attached to the left hand (South) flank wall (viewing from the front), but this is almost totally covered by vegetation and could not be properly inspected.



We suspect that the front section of the property was constructed in the mid to late 19<sup>th</sup> century with the rear section added later, possibly late 19<sup>th</sup> or early 20<sup>th</sup> century? The rear section also has a dormer on the rear roof slope.

The ground levels slope to a degree generally and in places, the ground floor level of the property is below the adjacent external ground level.

## 2.2 The Garage Block

The block is split into three bays with timber framed external walls constructed off a 9" brick plinth. The walls are clad with timber weather boarding and covered with t&g boarding internally. The roof is hipped and there are two number timber frames internally spanning from front to (South) rear, supporting the timber hip members and the central purlins provided to all of the roof slopes. Timber boarding is provided above the rafters throughout and the roof is covered with clay tiling. The ground floor of the block is of concrete construction.

We suspect that the property was constructed in the early to mid 20<sup>th</sup> century.

## 3.0 INSPECTION OF THE GROOMS HOUSE

Our observations are annotated as if viewing from the front (East wall) of the property.

### 3.1 External Elevations

#### 3.1.1 General

The timber cladding is in need of repair / replacement. There are missing / broken ties to the roof slopes.

#### 3.1.2 Front (East) Elevation

The eaves level has dropped to a significant degree down towards the right hand (North) corner. A number of roof tiles are damaged or missing. There is a significant degree of rot to the bottom of the timber posts.

Where the right hand bay of the front section is filled with masonry, this has imposed a lateral load on the right hand flank wall, which has been significantly distorted by this load.

### 3.1.3 Right Hand (North) Elevation

As above, the front timber framed section is significantly damaged by the masonry stored in the building.

### 3.1.4 Rear (West) Elevation

The ridge line dips significantly to the left hand (South) side. The brickwork has slight cracking and the rear wall appears to lean out to a degree on the left hand side of the building.

### 3.1.5 Left Hand (South) Elevation

No significant observations.

### 3.1.6 Left Hand (South) Section Elevations

The front roof slope appears to sag excessively. Otherwise, we are unable to comment on the condition of this section of the building, which is almost completely covered with vegetation.

## 3.2 Internal

### 3.2.1 Front (East) Section – Ground Floor

The front left hand corner of the ground floor is below the external ground level and the walls and timbers nearby are affected by penetrating damp with some rot to the timbers close to the ground floor level.

The front post between the middle and right hand bays appears to have settled significantly.

### 3.2.2 Rear (West) Section – Ground Floor

The first floor joist next to the rear wall has dropped significantly at the centre beam support. A temporary repair has been undertaken at this location, which appears to provide support to the dormer support rafters above.

### 3.2.3 Left Side (South) Section

We were unable to gain access to this section.

### 3.2.4 First Floor

We were unable to gain access.

## 4.0 INSPECTION OF THE GARAGE BLOCK

### 4.1 External

There are some broken or missing tiles to the roof slopes.

The timber weatherboarding appears to be in reasonable condition.

The front posts are affected by rot, where they are seated at ground level and not on the plinth.

### 4.2 Internal

Except for the rot in the front posts we have no significant observations internally.

## 5.0 METHOD STATEMENT

Subject to the suitability of the existing foundations, underpinning may be required. Any underpinning required is to be undertaken in short lengths, propping the existing structure as necessary to safely carry out the works and to maintain the stability of the existing building structure at all times, all to the approval of the Local Authority Building Control Officer.

The proposed repair and strengthening works required to the existing building may, from time to time, reduce the stability of the existing building. Were this is the case, it is essential that temporary bracing is provided in the form of a braced scaffolding system to ensure that the stability of the existing building is properly maintained at all times.

## 6.0 PROPOSALS

It is proposed to undertake general repairs and to restore the buildings sympathetically in order to increase and to improve the space available for the various commercial activities of the estate. This may also include the provision of thermal insulation in some areas, which can be provided by attaching it to the existing structure. Also, it may include replacement of the ground floor in some areas to improve the general usability of the space available.

## 7.0 CONCLUSIONS

### 7.1 General Current Condition of the Grooms House and the Garage Block

Overall, both of the buildings are of good quality and are suitable for commercial conversion, with only a modest amount of work required.

### 7.2 The Grooms House

7.2.1 We have not inspected the first floor of the building where no proper access was provided. It would appear that a degree of penetrating dampness is present at the front left hand corner of the building where the external ground level is higher than the existing ground floor level and that tiles have caused a degree of rot to the bottom of the front column on this corner.

Other columns are also in direct contact with the ground floor surface and slight rot was also noted to the bottom of these columns.



7.2.2 It would appear that the front centre right column has settled causing the eaves to drop at this location. We suspect that this column was positioned over a soft spot in the ground.

7.2.3 The front right hand corner column and the adjacent timber frame panel to the flank wall have been damaged by the masonry stored in the front right hand bay, which leans against the column and the flank wall.

7.2.4 The support provided to the rear roof dormer would appear to be inadequate, causing the ridge line to drop and the rear wall to be pushed outwards. It would also appear that some remedial repairs attempted to improve this support have damaged the first floor joists locally.

7.2.5 We are unable to comment on the condition of the left hand section of the building which was completely covered by vegetation; we were not able to access.

### 7.3 The Garage Block

The bottom parts of columns in contact with and near to ground level are slightly affected by rot, due to exposure to dampness.

### 7.4 Summary

In our view, both of the “buildings are of permanent and substantial construction and are capable of conversion without major or complete re-construction that would detract from their original character” as stated in accordance with local Planning Policy GB9. This has been clearly demonstrated by the long term stability of the building with the exception of the over-grown left hand section which has been allowed to deteriorate due to the vegetation covering and preventing access to the section.



## 8.0 RECOMMENDATIONS

### 8.1 The Grooms House

Undertake strengthening to the rear roof and the first floor to properly support the rear dormer and to stabilise the rear wall.

8.1.2 Provide propping to support the front eaves beam and to allow repair to the columns and to the right hand flank timber framing panel, removing stored masonry as required.

8.1.3 Arrange for trial pits as necessary to expose the foundations provided to support the building structure, including to the front column affected by settlement.

8.1.4 Repair / replace the roof tiling as necessary.

8.1.5 Repair / replace the timber weatherboarding as necessary.

### 8.2 Garage Block

8.2.1 Provide propping to the front eaves beam to allow repair to the columns.

8.2.2 Repair / replace the roof tiling as necessary.

8.2.3 Repair / replace the timber weatherboarding as necessary.

We would strongly recommend that any drains in close proximity should be tested by a specialist company.

## 9.0 DISCLAIMER

We have not inspected woodwork or other parts of the structure which are covered, unexposed or inaccessible and are therefore unable to report that any such part of the property is free from defects

Signed

For and on behalf of BWP



C C King  
Principal Engineer  
8<sup>th</sup> June 2015



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## APPENDIX A

## THE GROOMS HOUSE

Part front (East) elevation



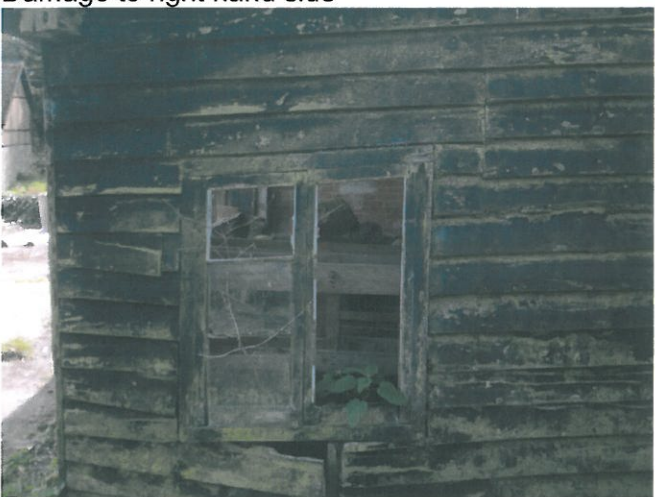
Front (right hand) bay



Damage to (right hand) flank / front corner



Damage to right hand side





Internal



Attempted repairs to floor



Rear (West) elevation



Rear Wall



Overgrown vegetation side (South) section



Right hand (South) section





Left hand (South) elevation



Overgrown side (South) section



**GARAGE BLOCK**

Front (South) elevation



Left hand (West) elevation



Right hand (East) elevation





Rear (right hand) (North West) corner



Internal (hipped end)



Internal middle bay





Rot to bottom of post

