



ASHENDEN-BAX

CHARTERED ARCHITECT

07.1439

19th February 2007

ARUN DISTRICT COUNCIL				
No.	LY	6	07	L
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CALCETTO COTTAGE
CROSSBUSH LANE
ARUNDEL
WEST SUSSEX BN18 9PQ
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Proposed Replacement First Floor to a Single Room

at

Calcetto Cottage, Crossbush Lane, Crossbush

Arundel, West Sussex BN18 9PQ

Listed Building Consent is requested for replacing a defective timber first floor structure at the above property.

A copy of the floor plans of the property, 07.1439.02, are attached to show the location of the defective floor within the property.

Calcetto Cottage is a grade 2 listed dwelling. The building is currently a 2 storey, white painted, flint cottage under a thatched roof. The white paint covers numerous alterations that have been made to the external elevations. A number of window and door openings have been created over time with concrete lintels spanning over the openings and some openings have been filled in again either in flintwork or brickwork. Much of this work has not been sympathetic to the original building and is indicative of how some of the internal changes have been carried out.

From investigation it appears that Calcetto Cottage was originally an agricultural building and the southern end of the building was converted to a cottage in 1821 and then the northern end was taken up to 2 storeys in height and converted into a second cottage at a later date. In 1960 there was a Demolition Order served on the property. The property was purchased from the Norfolk Estate in 1960 by a builder who applied for, and was granted approval for, various alterations to the northern cottage which included removing a straight flight stair with winders at the bottom and replacing with 2 flights of stairs with a quarter landing. This work was carried out and there are no signs of the position of the previous stair.

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The outer walls are constructed of chalk blocks with an external facing of flint with brick detailing at corners and to reveals of windows and door openings. This construction represents the oldest parts of the building.

I attach a copy of a drawing 07.1439.03 which shows the plan of the existing defective floor above the Dining Room..

From careful investigation it can be seen that the floor has been altered significantly over time and this is evidenced by :

- The primary beam is of machine sawn softwood of minimal dimensions being 155mm wide x 115mm deep. This beam has permanently deflected by 20mm and when the load of an average person is placed above the beam it deflects by a further 3 – 5mm.
- The chestnut floor joists on one side of the primary beam are of a similar dimensions, varying between 80 – 110mm wide x 90 – 100mm deep, and they are relatively square cut on all four sides with waney sapwood arrises. These joists are morticed into the beam and approximately 75% of the joist end is supported by the beam.
- The floor joists on the opposite side of the primary beam vary greatly. There are five chestnut joists of similar dimensions, varying between 80 – 90mm wide and 75 – 90mm deep, and these joists are generally circular in section with a minor flattening to the top and bottom edges. These joists are morticed into the beam and generally 100% of the joists are supported within the beam.
- By reference to the drawing 07.1439.03 it can be seen that there is a hatched area which is an area of modern sawn softwood joists which have been used to infill the space of the last staircase, installed around 1960. The edges of the joists have been distressed and stained in a poor and unsuccessful attempt to match the adjoining chestnut joists.
- By reference to drawing 07.1439.03 it can be seen that the joists on either side of the primary beam have not be paired nor have they been placed at regular intervals. It was usual practice for carpenters to install boxed joists into a primary beam by pairing them so that they were installed on opposite sides of the beam (see photo 01).

The existing primary beam and joists are of insufficient strength to act as a floor due to :

- The inadequate depth of the joists for the span.
- The inadequate depth and width of the primary beam for the span (see photo 02).
- The extent of beetle infestation to the joists.
- The proportion of joists cut away to receive services (see photo 03).

- The proportion of the primary beam cut away to accommodate the bearing of the joists.

The combined effect of the structural defects and the deflection in the floor is that the joist ends have become loose within the external walls and lateral loading is being exerted on to the external walls.

From the above it can be seen that the majority of the beam and joisted floor structure is not of original construction and having regards to the inadequate size and quality of the timber used and the defects now evident (see photos 03, 04 & 05) it is now proposed to replace the floor structure in green oak.

A copy of drawing 07.1439.04 is attached showing the proposed floor layout and sizes of the joists and beam proposed. A similar primary beam and joist layout to the existing is proposed but to a specification that is capable of taking the live and dead loads with out excessive deflection. Oak has been chosen as a replacement timber in order to achieve a greater strength with minimum depth of timber than would be necessary with chestnut or softwood.

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