

# Philip Renouf Architectural Design

Highfield, Clyst Hydon, Cullompton, Devon, EX15 2NF  
info@pr-architecture.co.uk  
07923 810 363

## Condition Report

Prepared for: Mr Cristian Beadman  
Address: Osmonds, Clyst Hydon, Cullompton, Devon, EX15 2NB.

Description of Proposed Works: Reduction in size of lean-to shelter outbuilding, repositioning of entrance gates, alterations to existing shutters on barn, structural fixes to barn upper floor and jamb walls, and formation of two new openings into barn.

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Barn:

Walls:

- External side walls: ground to first floor level = solid 225mm thick facing brickwork, lime mortar pointed.
- External gable walls (both walls): ground to first floor = solid 225mm thick facing brickwork, lime mortar pointed.
- External gable wall (northern end): First floor to eaves = solid 100mm thick facing brick, lime mortar pointed, with 3 intermediate piers below purlins and ridge.
- Side jamb walls and gable wall (southern end): First floor to eaves = 100x50mm timber frame (head/sole plate/vertical studs at 400c/c), unclad internally, clad with horizontal lap board externally.

CONDITION: Generally plumb/level and stable. Gable with approx. 30mm bulge at first floor level. Minor historical settlement at road side drive corner. No movement cracking at openings. Brickwork impact damaged at outer corner. Some missing bricks/pointing eroded at wall base in 3 main locations. Northern gable wall has no buttressing returns, lateral restraint only being provided by roof and side timber framed walls. Southern gable and western jamb wall are generally sound and substantially plumb. Eastern jamb wall is 100mm out of plumb (leaning out at eave due to lateral thrust of roof).

- Internal cross walls: solid 225mm thick brick, lime mortar pointed.

CONDITION: No evidence of differential movement at abutments with external walls.

#### Roof:

Roof split into 3 bays with 2no raised collar softwood trusses, 1no 150x75mm purlin per side, 100x50mm SW rafters at 400c/c. Roof clad in diagonal asbestos cement slates, no felt underlining.

CONDITION: Trusses sound, with no visible movement in joints. Ridge slightly sagged in mid bay. Structural timbers slightly infected by historical woodworm. No evidence of bat or barn owl habitation.

#### Floors:

- Ground floor = cast concrete and earth.

CONDITION: Broken levels, could do with levelling work, but not crucial for use.

- First floor = Softwood butt-edged boards on softwood joists supported by 300x250mm softwood principal beams running centrally north-south axis.

CONDITION: Board edges heavily eroded. Joists, particularly to northern end, showing varying levels of rot, and slightly deflected. Central beam shows very minor deflection.

#### Lean-To:

#### Walls:

- West side wall = 140mm thick concrete block wall, with 100x50mm timber frame (head/sole plate/vertical studs at 400c/c), unclad internally, clad with horizontal lap board externally.
- East side wall = cob above approx. 800mm from floor level and rubble stone brick wall above, shared with adjacent barn.
- Southern wall = cob above approx. 800mm from floor level and rubble stone brick wall above, shared with adjacent barn.
- Northern partition = 50mm thick timber frame panels against 7no 75x50mm vertical timber posts, clad externally to 1m high with vertical timber panels, and chicken wire above. Single 150x150mm central softwood timber post to carry principal rafter.

CONDITION: Generally sound all round. Northern partition and external chicken run shouldn't be in situ and are to be removed. Central timber post is generally sound, but showing early signs of dry rot at eave.

#### Roof:

Roof split into 2 bays with 1no 190x85mm central rafters carrying 3 rows of 85x85mm softwood purlins. Roof clad in corrugated tin, no felt underlining.

CONDITION: Central rafter showing significant deflection at mid point, and all purlins are wet and showing signs of significant rot.

Floors:

- Ground floor = cast concrete and earth.

CONDITION: Broken levels, could do with levelling work, but not crucial for use.

## CONCLUSIONS:

Barn:

The barn is generally sound, but the first floor joists and boarding, and eastern side jamb wall need significant attention for purpose, and the upper gable requires lateral restraint at eaves and floor level to reduce any future outward movement.

The joists should be replaced where rotten, as with the floor boards. Supplementing joists alongside existing isn't viable, due to the presence of herringbone strut noggins, which are a feature to be retained.

The eastern jamb wall requires correction of lean. This should be undertaken once the roof structure has been temporarily supported/jacked up, and will need to incorporate vertical wall ties and restraint straps onto the top of the first floor joists to a minimum of 1.2m length.

All shutters and doors, barring the more recent double timber doors at the southern end of the western elevation have been out of use for a significant period of time, and all will require repair to be brought back into functional use.

Lean-to:

The unsupported length of the central beam is causing the present deflection, so the proposal to build a new stone pier to reduce the unsupported span will act to reduce any further deflection. This also removes the reliance on a deteriorating timber post, which is proposed for removal.

All purlins should be supplemented with new additional purlins, and it is advisable to reclad the roof with the existing corrugated tin, but with greater overlap in order to reduce potential for water ingress.

Philip Renouf (BA Hons)

Philip Renouf Architectural Design, Highfield, Clyst Hydon, Devon, EX15 2NF

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