

Mr A & Mrs S Swift

Structural Inspection

Outbuilding at
1 Cash Heath Cottages
Forsbrook
ST11 9DE

MRE/J4020
11 February 2026

1.0 Purpose of Report

- 1.1 Mr & Mrs Swift are applying for Class Q planning permission to convert the above agricultural building into residential accommodation.
- 1.2 As part of the application an assessment of the structural condition of the building is required to enable comment on its suitability for conversion, structurally.
- 1.3 This report is prepared on the instructions of Mr & Mrs Swift, to comment on the findings of a visual inspection of the relevant parts of the buildings and to make appropriate comments with regard to the situation noted above.

2.0 Site Inspection

- 2.1 The building is a two-storey brick built detached outbuilding with a traditional pitched tiled roof. There are no extensions or outriggers.

Handing throughout this report is expressed as viewed facing the front elevation of the building.

2.2 Front Elevation

Bonded brickwork construction. Relatively recently repointed. The left-hand side is slightly proud of the remainder of the elevation. There are two pattress plates indicating tie rods across the building, one above the right-hand door and the second just above the far left personnel door. The mortar joints to the right-hand side in particular undulate slightly. The mortar joints between the left-hand large door opening and the left-hand personnel door slope down toward the left. Above the personnel door the brickwork has been rebuilt to, apparently, allow insertion of the new lintel. The mortar joints and brickwork at low level are in poor condition. The right-hand side of the elevation is slightly uneven in plane. At the left-hand side the brickwork bulges out by approximately 20-30mm with an indentation around the pattress plate.

2.3 Right Elevation

Bonded brickwork construction. The elevation bulges inwards by approximately 20-30mm. The mortar joints are poor at low level.

2.4 Left Elevation

Bonded brickwork construction. The elevation has an inward bulge of approximately 60-70mm which transforms into an outward bulge above eaves level of some 20-30mm. The mortar joints are poor at low level. The mortar joints towards the front of the elevation slope down toward the front.

2.5 Rear Elevation

Bonded brickwork construction. The right-hand side appears to have been relatively recently rebuilt and there is a vertical joint between the two elevation portions. The brickwork to the left-hand side dips significantly towards its centre and the mortar joints around this area and at ground level are in poor condition. There is a 5-10mm vertical crack to the bottom left of the left-hand window travelling down approximately 1m. There is a 1-2mm diagonal crack to the top left of this window travelling up and to the right approximately 1.5m. This crack has been repointed in the past. The pattress plate to the front elevation with the tie rod extends through to a wooden pattress plate in the

centre of this elevation. The other patten plate to the right-hand side of the front elevation extends through also. The vertical gap between the two elevation sections is widest at the top where it is approximately 20-25mm. There is eaves deflection of approximately 30-50mm in three places along the elevation with the left-hand side being the worst.

2.6 Ground Floor (far left)

Brick cobbled floor. The cracking and deformations indicated to the left-hand side of the rear elevation are reflected internally with diagonal cracking above and to the right-hand side of the rear window. There is also diagonal cracking to the rear of the right-hand partition wall which travels down from approximately first floor level to ground level and is 1-5mm width. The upper parts of the right-hand dividing wall do not appear to be bonded to the rear or front elevations. The brickwork is poor and missing in local areas. In particular there is an infilled window to the left wall which is now only single skin as opposed to one brick thick. There is some indication of dampness and mould growth to the ends of the purlins where they enter the left elevation wall.

2.7 Store (centre left)

Solid floor which is part earth with evidence of some bricks and mortar. Again, the deformations and cracking to the left-hand side of the rear elevation are evident to the rear wall in this area. The mortar joints are in poor condition and there are some localised areas of missing brickwork. There are two purlins to each roof slope, and they appear to be in reasonable condition.

2.8 Stables (right hand side ground floor)

Brick cobbled floor. There are three front to rear spanning timber beams supporting the first floor joists which span side to side. All of these appear to be of relatively recent construction and in good condition. The gap between the two parts of the rear elevation can be seen in the rear left corner of this area.

2.9 First Floor

Suspended timber floor as described in previous sections. There is a central timber truss with a steel king post supporting 2 No. purlins to each roof slope. The purlins are scarf jointed over the truss and appear to be in reasonable condition as does the truss. There is some cracking to the brickwork around the front bearing area of the truss. The mortar joints to the brickwork are visible and in poor condition in places and there are one or two areas where the brickwork is locally missing.

2.10 Roof (external)

No apparent structural problems.

3.0 Proposals

Drawings by Ian Ankers Architecture indicate conversion of the of the building into a residential unit of two storeys.

4.0 Conclusions and Recommendations

- 4.1 Our inspection of the property has confirmed the presence of cracking and distortions to, in particular the left hand side of the rear elevation. But also , to a lesser magnitude, the left elevation.

It is our opinion that the movement to the left-hand side of the rear elevation has most probably been caused by a degree of foundation movement, possibly subsidence. There is a rainwater downpipe in this area and whilst this appears to have been added to take the water away from the building, we think it has probably been discharging water in this area for some considerable time and is likely to be the cause through softening of the ground below the foundations.

Whilst investigations in the form of trial holes are required to determine the precise cause and enable a remedial scheme to be detailed, we think it probable that this local area will need to be rebuilt off new foundations.

- 4.2 In our opinion, the cracking and distortion elsewhere has been caused by a degree of foundation settlement which in our opinion is small in magnitude and not structurally detrimental. We also think that the lack of evidence of recent movement having occurred suggests that the settlement is probably of long-standing.

Whilst we cannot rule out the possibility of further small amounts of movement due to settlement, we think that such movement, if any, is most unlikely to be of structural significance. Any cracking now present can be made good by raking out the background brickwork to depth, where necessary, and repointing.

- 4.3 Apart from the local area to the left-hand side of the rear elevation, the remaining elevations exhibit varying degrees of bulging. Indeed, there are two tie rods across the building to the left-hand and right-hand sides. Whilst the cause of such bulging is normally a little foundation movement through settlement, it is usually exacerbated in the long term by deterioration in the condition of the wall and by lack of adequate restraint from the first floor and roof constructions. Indeed, in the case of outward movement at eaves level, it is probable that roof spread has contributed.

The degree of movement that has occurred is in our opinion within structurally acceptable limits such that if no further significant movement occurs, it will remain stable. In order to prevent further movement, we would recommend that the conversion scheme incorporates measures to tie the walls to the first floor and roof and to prevent further roof spread.

- 4.4 We also noted that the dividing walls which buttress the front and rear elevations are in some cases not bonded into those elevations. Therefore, as part of the scheme, we would recommend that such bonding is either reinstated or restored as part of the scheme.
- 4.5 Both externally and internally the mortar joints are in relatively poor condition in certain areas. This is particularly so at ground level externally. There are also areas of poor, loose and missing brickwork. We will therefore recommend that the mortar joints, both internally and externally, are raked out to depth and re-pointed where required, and that any damaged, missing or loose brickwork is cut out and replaced.
- 4.6 In general terms the existing roof constructions appear to be in reasonable condition for their age. However, in order to accommodate the proposed new roof buildup, it is likely that the roof covering will need to be removed. This will give the opportunity to

assess the condition of any existing timbers and form a judgement on their reuse. At this stage we think it likely that the primary structure consisting of trusses and purlins can be reused subject to an assessment of their condition and any necessary repair work.

Similarly, if any first-floor existing timbers are proposed for reuse, they will need checking for condition and structural adequacy prior to this.

- 4.7 In some locations there are embedded timbers within the external elevations and timber lintols. We would recommend that such embedded timber is removed and replaced with suitable precast concrete steel or brick arch construction.
- 4.8 Finally, it is quite common for buildings of this type and age to have relatively shallow foundations. It is therefore likely that the new insulated, concrete ground floor construction will undermine the existing foundations. If this does occur, then some underpinning may be required. Therefore, prior to construction we would recommend that the footing depths and underlying ground are investigated, as part of the investigations mentioned above, to determine whether such requirement is necessary.
- 4.9 This report is confined to the matters mentioned in Section 1 and no opinion is expressed or implied on matters not specifically mentioned.

We have not inspected woodwork 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.



Mark R Edwards
BSc MPhil CEng MStructE MICE