

# HORIZON

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## STRUCTURES

DJC/DS/6166

25 August 2023

Elliott Bragg  
The Havebury Housing Partnership  
Havebury House  
Western Way  
Bury St Edmunds  
Suffolk  
IP33 3SP

For the attention of Elliott Bragg

Dear Sirs,

### **JAMES STIFF COTTAGES, ROUGHAM – STRUCTURAL INSPECTION REPORT**

#### **1. BRIEF**

Horizon Structures were appointed by yourself to undertake a visual structural inspection of the above property and report on any significant structural defects found. We have therefore, limiting our inspection and report accordingly.

#### **2. DATE OF INSPECTION**

Wednesday 6 January 2021.

#### **3. DESCRIPTION OF PROPERTY**

The Alms House complex is formed from a terrace of traditional single storey Alms Houses, a two-storey flat apartment complex and a modern terrace of bungalows. This report is only considering the front Alms Houses with the remaining properties falling outside the scope.

The terrace of single storey Alms Houses was constructed in 1876 from solid masonry with a raised collar pitched roof overclad in clay tiles. The eastern property was constructed in the 1970s in a similar style, with cavity masonry and a cut rafter and purlin roof overclad in clay tiles. To the rear of the terrace, a single storey flat roof extension forms the kitchens and bathrooms. See Photograph 1.

The British Geological Survey shows that the property is underlain by Lowestoft formation consisting of clays, sands and gravels.

#### **4. EXTERNAL INSPECTION**

An inspection of the front elevation reveals that the properties have been formed from solid masonry, with lime mortar. The lintels within the historic section appear to be segmented stone flat lintels and in the east modern unit they appear to be concrete.

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An inspection of the front elevation generally reveals no significant damage, with washout of the lime mortar occurring in two locations – probably associating with historic leaking of rainwater goods that has now been repaired. See Photograph 2.

Access to each pair of properties is through an archway structure. Generally, these appear to be in good condition, however there is evidence that there is slight differential movement between the arch and the main property which took the form of vertical tapered cracking up to 1mm wide. See Photograph 3 Within the central arch, delaminating between the brick coursing has occurred leading to a crack up to 1mm wide. See Photograph 4.

An inspection of the right/east gable wall revealed no significant damage.

An inspection of the rear elevation revealed no significant structural defects.

An inspection of the roof revealed no undue distortions or deflections apart from over the party wall between the main terrace of historic Alms houses and the relatively modern east extension. The chimneys appear to be in relatively good condition with no leaning or splitting.

#### **5. INTERNAL INSPECTION**

An inspection of the relatively modern east house reveals that it has been constructed with a solid floor throughout. This floor appears to undulate slightly across its width with slopes of up to 3mm per metre recorded however no overall slope pattern was present.

An inspection within the front room revealed hairline cracking to both the left parting wall and right gable wall with no specific pattern. Cracking was present along the wall ceiling perimeter, along with a crack extending left to right centrally within the ceiling. This crack was approximately 1mm wide.

An inspection within the rear kitchen revealed no significant damage apart from hairline cracking around the lintel bearings. Also of note within the kitchen was that the rear elevation appears to be a single brick thick with studwork internally.

Within the rear bathroom, again no significant damage was noted apart from hairline cracking around the lintels.

An inspection within the historic Alms houses revealed no significant damage within the walls. 1mm cracking was present around the wall ceiling perimeter.

Within the historic section of the building, the floor appeared to be a timber suspended floor which showed no evidence of excessive deflections. Within the rear extension, the floor was again a ground bearing slab which again appeared to suffer from slight undulations.

An inspection within the roof space revealed that the historic structures are a raised collar construction. The inspection revealed no evidence of rot or beetle infestation and no indication of excessive deflections.

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#### 6. LIMITATIONS CLAUSE

This report consists of a visual survey of the building and does not include any intrusive investigative work or testing in inaccessible areas and we are therefore unable to report that any such part of the building is free from defect.

#### 7. CONCLUSIONS AND RECOMMENDATIONS

The evidence on site would indicate that the properties are not suffering from any form of significant foundation movement such as settlement or subsidence.

The historic properties have been constructed using traditional masonry and lime mortar, which generally appears to be in good condition. Small areas of mortar washout have occurred in two locations and this should be repointed with a sympathetic material.

We consider that the crack damage noted to the entrance arches is due to minor differential settlement between the entrance arch and the main building. We would recommend that helibar reinforcement is installed at 450mm centres vertically to prevent further movement and the damage repaired using traditional stitching.

We consider that the undulating ground bearing floor slabs is due to the slab being constructed directly off the underlying clay and small changes in moisture allowing the clay to shrink and heave differentially across the width of the room. We do not consider that this is a significant defect.

We trust the above is self-explanatory, however, should you have any further queries please do not hesitate to contact the undersigned.

Yours faithfully,

David Cook  
Civil and Structural Engineer  
B.Eng C.Eng FICE MCGI  
Horizon Structures Limited

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#### Photograph 1



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#### Photograph 2



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#### Photograph 3



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#### Photograph 4

