

RECEIVED
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SUPPORT SERVICES

Mr & Mrs Davies
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Hockley
Essex
SS5 4TB

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HERITAGE
SURVEYING

07 April 2011

Dear Mr & Mrs Davies,

BAY TREE COTTAGE

Please find enclosed herewith my report in respect of structural movement at the above property.

I also enclose my invoice for works to date.

I trust the above is satisfactory, however should you have any queries please do not hesitate to contact me.

Yours Sincerely,



Gary Barlow BSc (Hons) MRICS
For and on behalf of Heritage Surveying

CC Paul Eldon (report only)

SUPPORT SERVICES
08 OCT 2015
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REPORT ON STRUCTURAL MOVEMENT

PROPERTY ADDRESS:

BAY TREE COTTAGE

50 MAIN ROAD

HOCKLEY

ESSEX

SS5 4QS

DATE:

04 APRIL 2011

INTRODUCTION

1.0 Brief & Scope

- 1.1 We were instructed by Mr Davies to undertake an inspection of Bay Tree Cottage in respect of structural movement at the property.
- 1.2 The purpose of this report is to establish the extent of the movement and the likely cause.
- 1.3 We carried out a visual inspection of the property on December 2010, and our initial report was submitted to Mr Davies early in 2011 recommending further investigation and trial pits to establish the extent of foundations and the soil type which the building is constructed.

2.0 Date of inspection & those present

- 2.1 We carried out a visual inspection of the property on December 2010, and our initial report was submitted to Mr Davies early in 2011 recommending further investigation and trial pits to establish the extent of foundations and the soil type which the building is constructed.
- 2.2 On 2nd of April 2011 Neil Ruffy of Kontor Construction excavated 2no. trial holes under the direction of Gary Barlow BSc (Hons) MRICS of Heritage Surveying.

3.0 Brief Description of the premises

- 3.1 Bay Tree Cottage is a Grade II Listed Building. The House is timber framed & render and was built in the late Eighteenth Century. To both side elevations there are red brick chimney stacks (RH rebuilt within the last 15 years, LH original to 1st floor level the remainder has been re built within the last 5 years).

4.0 Investigation

- 4.1 Cracking within the property is prominent to areas adjacent to the right-hand chimney stack. The builder confirmed that the chimney stack was reduced to first floor level and rebuilt, during the recent refurbishment as the stack was unstable and leaning considerable. The builder had recommended completely rebuilding the stack due to it's unstable nature, however Rochford Council, Essex Heritage Trust and English Heritage insisted that the lower section of the chimney was preserved.
- 4.2 Trial pits were excavated either side of the RH chimney stack.

5.0 Findings

5.1 Trial Hole 1

5.1.1 TH1 was excavated to the front elevation of the stack.

5.1.2 TH1 revealed that this section of the stack had been partially underpinned with a 150mm deep mass concrete foundation at a depth of 600mm.

5.1.3 The sub soil at this depth was shrinkable clay and there were evidence of roots up to 10mm in diameter. The roots are likely to be from the mature Yew tree within the front garden.

5.2 Trial Hole 2

5.2.1 TH2 was excavated to the rear elevation of the stack.

5.2.2 TH2 revealed that the rear of the stack was built directly off of the clay soil, to a depth to a depth not greater than 250mm

5.2.3 TH2 also revealed that the left hand elevation of the property was built on a timber foundation to a depth not greater than 250mm.

5.2.4 There was no evidence of roots within TH2, although excavation did not exceed 300mm.

5.3 Other factors

5.3.1 Further investigation and evidence provided by the builder indicated that the entire front elevation of the property had been under pinned on a 450mm concrete foundation. The rear wall of the property was constructed from brick as apposed to timber frame as originally thought. The right hand chimney stack had been completely rebuilt prior to the renovation. The builder also advised that a concrete slab was cast over the entire ground floor.

6.0 **Services**

6.1 It should be noted that the mains gas for the property ground below ground in the vicinity of the chimney to the west elevation of the property.

7.0 **SUMMARY AND RECOMMENDATIONS**

7.1 Various sections of the building have been underpinned at different stages throughout the life of the building. Amazingly it would appear that the left hand elevation is still being supported on its original timber foundation.

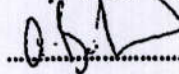
7.2 The left hand chimney stack is clearly affected by subsidence; the direction of that movement will be affected by the partial underpinning to the front elevation of the stack (TH1). It is my opinion that the movement of the stack is putting additional loading on the timber framed structure which is in turn distorting. Evidence of this is the localised internal cracking to this side of the building.

7.3 It is recommended that the chimney is fully underpinned to prevent further movement. Before the work is carried out a structural assessment should be made to establish if the stack should be partially or completely reduced in order to carry out the works, as there is a risk of collapse if when the stack is disturbed.

- 7 The rear section of the left hand elevation is supported off of the original timber foundation. The lack of foundation to this section of the building leaves it susceptible to differential movement causing cracks such as that evident to the threshold of the side kitchen door. It is therefore recommended that this section of the wall is underpinned.
- 7.5 Trees on the site including the mature Yew tree to the front garden of the property will be influencing the movement of the property and a management strategy should be adopted in order to prevent uncontrolled growth and further damage to the building.
- 7.6 It is recommended that the remedial works are carried out as soon as possible and highly recommended that the works are carried out before the onset of winter 2011.
- 8.0 Statutory Consents
- 8.1 Due to the grade II listing attached to the building, Listed Building Consent will be required before any of the above works can be carried out.

END

Can: Pauline DSC (Mans) MRICS



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04 April 2011

PHOTOGRAPHS

PROPERTY ADDRESS: BAY TREE COTTAGE
50 MAIN ROAD
HOCKLEY
ESSEX
SS5 4QS

DATE: 04 APRIL 2011



