

**Boundary Wall
Inspection Report**

**Land at Oaktree Drive
Emsworth**

**Prepared for
Banner Homes
by
Stuart Michael
Associates Limited**

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1.0 INTRODUCTION

- 1.1 On the 13th March 2014 Stuart Michael Associates Limited was instructed by Stuart Forrester on behalf of Banner Homes Limited to inspect and report on the structural integrity of an existing masonry boundary wall.
- 1.2 The purpose of the inspection is to assess the condition of the wall, and whether it should be retained, repaired or demolished.
- 1.3 The existing wall would form the northern boundary of Plot 32 of the permitted residential development by Banner Homes. At present Plot 32 has not been built and building materials are stored in an area in front of the wall. The location of the wall is shown on the drawings and sketches at **Appendix A**.
- 1.4 Photographs of the wall are reproduced at **Appendix B**.

2.0 SITE VISIT

- 2.1 On the 20th March 2014 Sharif Abdel-Hamid on behalf of Stuart Michael Associates Limited inspected the wall.
- 2.2 It was only possible to inspect the face of the wall from the Banner Homes site. No access was available to inspect from the neighbouring land. However photos were taken from the opposite side of the Site showing the back of the wall (Refer to photo numbers 3 and 4).
- 2.3 The inspected wall has been considered in three sections. Sketch SK02 at **Appendix A** refers.

3.0 DESCRIPTION AND CONDITION OF WALL

Section 1:

- 3.1 This section of the wall was originally part of a longer wall which was partially demolished to gain access to the Site. The remaining part is about 3 m long by 2 m high. Section 1 forms a return to Section 2 (refer to photo number 5). The wall is constructed of what appears to be two skins of rubble stone with mortared joints separated by a cavity. The overall thickness of the wall is about 300mm thick (refer to photo number 6). This section of wall is overgrown with roots penetrating the joints and cavity.

Section 2:

- 3.2 This section of existing wall is about 25 m long. The original part of the wall is about 2.2 m height. Subsequently the wall has been increased in height in some locations with additional brickwork courses being added to the original stonework. There are between 2 and 14 additional brick courses (refer to photo numbers 7 and 8). Some of the bricks are loose and displaced. Some of the brick courses are out of vertical alignment. There is vegetation on the upper part of the wall.
- 3.3 There is an existing timber door through the middle section of the wall (refer to photo number 2). There are signs of previous rendering on the middle part of this wall (refer to photo number 9). Open mortar joints, cracks and some local spalling of brickwork were noted along the top section of the wall (refer to photo number 10).
- 3.4 No access was available to inspect the back of the wall. However, photos were taken from the opposite side of the Site showing the back of the wall. The majority of the back of the wall is covered with vegetation. There is also a small brick built lean-to with metal sheet roof at the back of the wall (refer to photo number 11).

Section 3:

- 3.5 This section of existing wall is about 20 m long by 2.2 m height. The wall is constructed of brickwork. The wall is constructed using Flemish garden wall bond. (1 no. header to 3 no. stretchers in each course). Refer to photo numbers 12 and 14. The wall is constructed with 2 skins of 75 mm brickwork with an 80 mm cavity (refer to photo number 13).
- 3.6 There an existing opening through the wall which is covered with a timber fence panel and vegetation. Open and cracked mortar joints are visible in some areas. In other areas the mortar layers between the bricks has deteriorated completely. Some bricks are loose and some are missing (refer to photo number 14).
- 3.7 No access was available to inspect the back of the wall. However, photos were taken from the opposite side of the Site showing the back of the wall. The majority of the back of the wall is covered with vegetation (refer to photo number 4).

4.0 CONCLUSION AND RECOMMENDATIONS

Section 1:

- 4.1 The overall condition of wall Section 1 is poor. It is proposed that wall Section 1 will be demolished at a later stage to allow for proposed landscaping. Removing wall Section 1 may lead to the collapse of wall Section 2.

Section 2:

- 4.2 The overall condition of the wall is poor. The client would like to retain wall Section 2. The verticality of the upper brick courses indicates that they are no longer stable and are therefore potentially dangerous. By reviewing the proposed ground levels for the Site side of the wall against the existing levels on the survey, it appears that the proposed ground levels will be approximately 710 mm lower than the existing levels. In this case, the top of the existing wall foundation is likely to be exposed. In a worst case, the proposed ground levels may be lower than the bottom of the existing wall foundation. In both cases, the stability of the existing wall will be compromised as the existing wall would have to retain the difference between the ground levels at the front and back of the wall, which was clearly not considered when the wall was built. The thickness and condition of the existing wall is not suitable for this purpose.
- 4.3 We recommend that Section 2 of the wall is demolished and replaced with a new wall. The depth of the new foundations and the new wall thickness should be designed to suit the proposed levels.

Section 3:

- 4.4 The overall condition of the wall is poor. The client would like to retain wall Section 3. . By reviewing the proposed finished ground levels for the site side of the wall against the existing levels on the survey, it appears that the proposed ground levels will be approximately 1 m lower than the existing levels. In this case, the top of the existing wall foundation is likely to be exposed. In a worst case, the proposed ground levels may be lower than the bottom of the existing wall foundation. In both cases, the stability of the existing wall will be compromised as the wall would have to retain the level difference between the front and the back faces.

- 3.4 We recommend that Section 3 of the wall is demolished and replaced by a new wall. The depth of foundations and thickness of the new wall should be designed to suit the proposed levels.

APPENDIX A

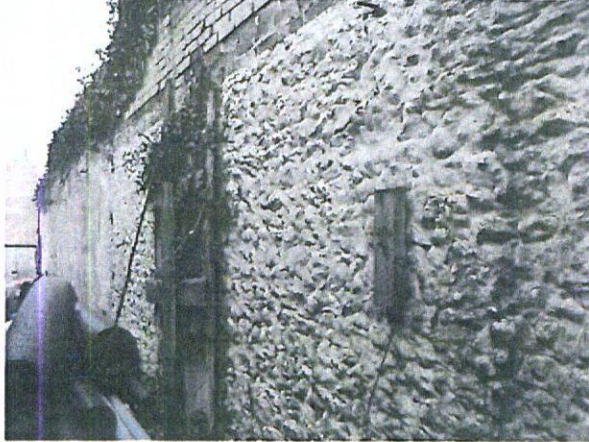
Drawings & Sketches



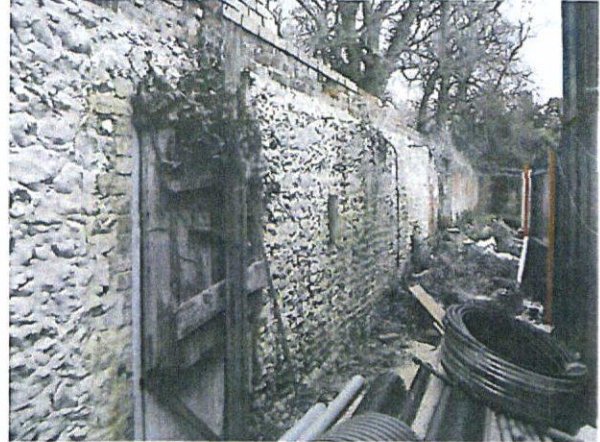
Sketch $\sim k \propto \omega^2$

APPENDIX B

Photographs



Photograph No. (1)



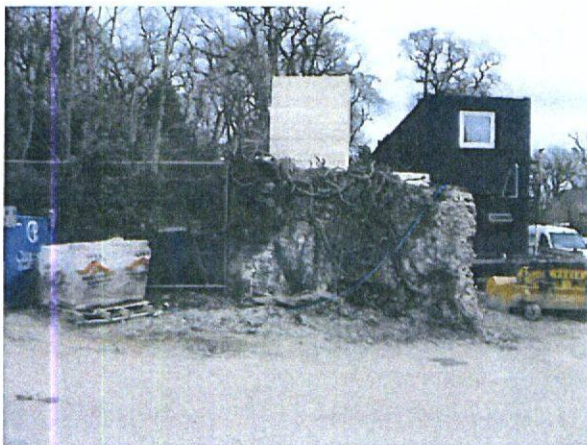
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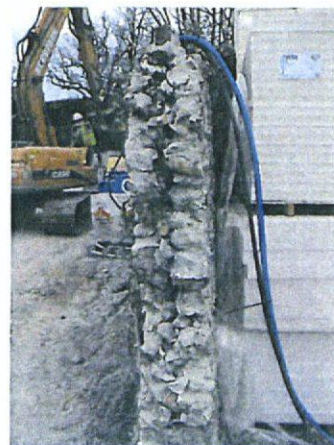
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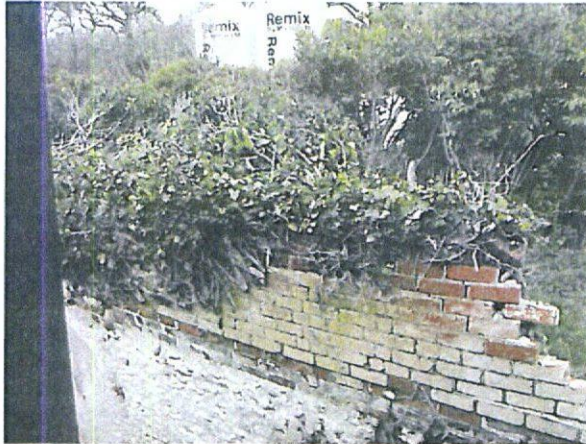
Photograph No. (4)



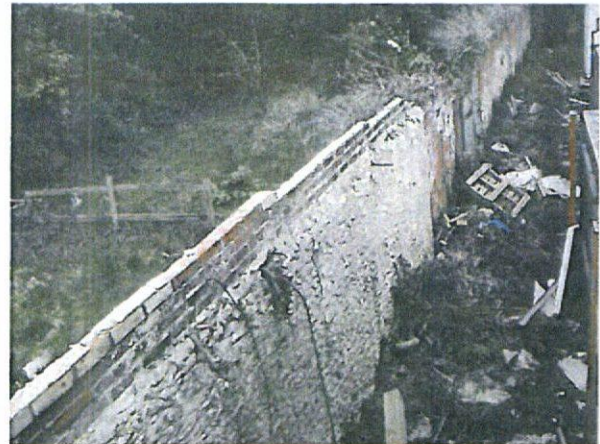
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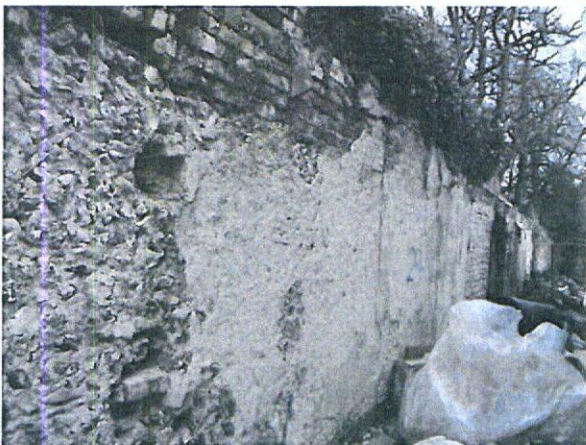
Photograph No. (6)



Photograph No. (7)



Photograph No. (8)



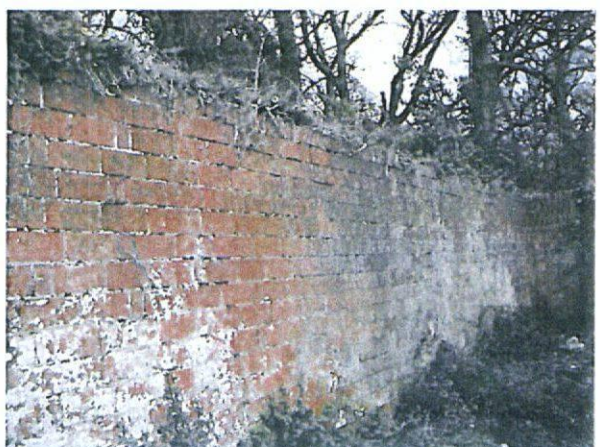
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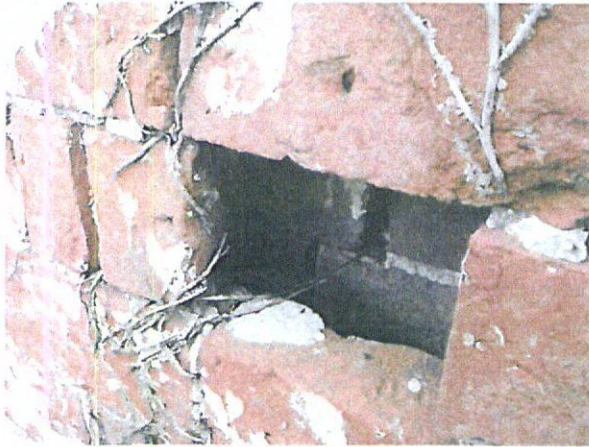
Photograph No. (10)



Photograph No. (11)



Photograph No. (12)



Photograph No. (13)



Photograph No. (14)