

12 FEB 2015

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1 Beech Hill Road  
Sheffield  
S10 2SA

Legal Services Department  
Legal and Governance  
Sheffield City Council  
Town Hall  
Pinstone Street  
Sheffield  
S1 2HH

05/02/2015

Your Ref: LS/RC/70882

Dear Mr Cannon,

I am writing, in response to your communication dated 22 January 2015, to object to Tree Preservation Order No. 398, which was imposed on a single lime tree in the grounds of the neighbouring property (442 Glossop Road) on Thursday 22<sup>nd</sup> January 2015 in response to a notification of proposed works to two trees at the property, which is in a conservation area (Yr Ref: 14/03478/TCA4806).

The tree covered by TPO No. 398 stands close to a retaining wall that occupies the boundary between No. 442 Glossop Road and my own property, No. 440 Glossop Road. The wall constitutes part of my property and is protected by virtue of the statutory listing of No. 440 as a building of special architectural and historic interest.

We have recently obtained a professional report on the retaining wall from a structural engineer. This advises that: *"The [two] large Lime trees immediately behind the wall [ie the two trees the subject of notification Ref: 14/03478/TCA4806] ... threaten the long-term stability of the wall due to increased surcharge loading, mechanical root action and leverage of the wall under wind action"*. The report also notes that one section of the protected wall has already failed and that the remainder exhibits significant bulging and a general, though variable, lean towards the car park, which *"demonstrates that the wall is unstable and vulnerable to collapse"*. The report also notes that both trees, including the recently protected tree, are reliant on the failing wall for their own stability.

Given the proximity of the recently protected tree to the buildings and to the car park at No. 440 (now known as 1 Beech Hill Road), which is used on a daily basis by employees and clients of my physiotherapy business at 1 Beech Hill Road, the current situation clearly represents a present and developing hazard. Indeed, the structural engineer concludes that both lime trees should be removed in order to avoid further damage and permit restoration of the listed structure.

It is our intention to apply for listed building consent to undertake the restoration of the wall, as part of an ongoing and comprehensive scheme of conservation of the property, which will safeguard its heritage value, including that of its setting, and its contribution to the special character and appearance of Broomhill Conservation Area for the future.

I know that the Council raised no objection in 2013 to the felling of eight trees along the frontage of No.442 Glossop Road on similar grounds to those that apply in relation to the trees near the wall between Nos 440 and 442 (although the frontage wall is not listed) and that the officer's report said: "*to enable necessary repairs and to prevent further damage to the wall it is considered that the trees have outgrown their location and require to be removed.*"

I also note that no objection has been raised by the Council to the recently proposed felling of one of the two lime trees at No.442 and given that there is little to choose between the two in terms of the contribution they make to amenity, this suggests to me that the TPO made in respect of the other lime tree is not "*expedient in the interests of amenity*", as required by the relevant legislation.

In the light of all the above, I trust that the reasoning applied in the case of the tree which has been made the subject of TPO No 398 will be revisited and that the Council will decide that sustaining the recognized national significance of the listed building and its contribution to the special interest of the Conservation Area outweighs the questionable, and indeed replaceable, amenity value of an over-mature, ivy-clad lime, which is compromising a historic structure.

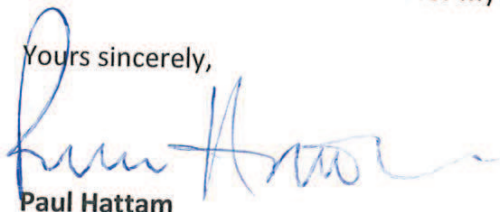
On these grounds, I am therefore writing to object to TPO No.398 and to request that it should not be confirmed.

Incidentally, I received no fewer than four separate notices about the TPO:

- By special delivery to this address
- By special delivery to our previous address (1 Taptonville Road) which we left 6 years ago
- By special delivery to my home address (with incorrect addressees)
- By hand to this address.

I am slightly bewildered by this and would like to advise you that further communications should be sent for my attention at this address only.

Yours sincerely,



Paul Hattam

11 MAR 2015

1 Beech Hill Road  
Sheffield  
S10 2SA

Richard Cannon  
Professional Officer  
Resources: Legal and Governance  
Town Hall  
Sheffield  
S1 2HH

March 7, 2015

Your Ref: RC/070882

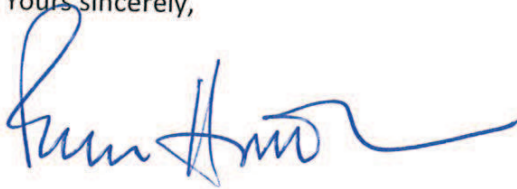
Dear Mr Cannon,

**Re: Tree Preservation Order No 398 – 442 Glossop Road, Sheffield S10 2PX**

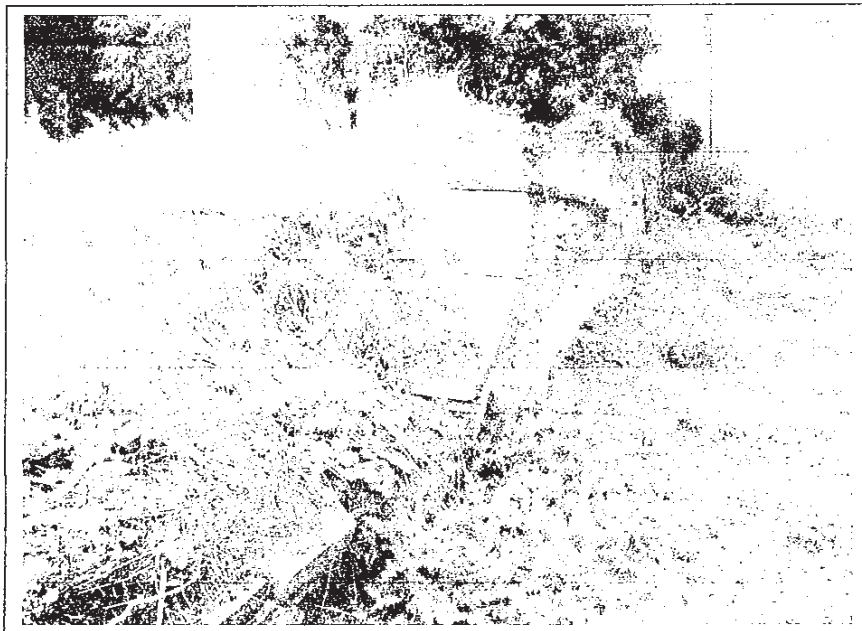
Further to your letter dated 19<sup>th</sup> February, please find the structural inspection report you have requested for your further consideration.

I look forwards to hearing from you.

Yours sincerely,



**Paul Hattam**



**Boundary Wall Adjoining  
1 Beech Hill Road, Sheffield. S10 2SA**

Prepared for            Mr P. Hattam  
Report Date            23<sup>rd</sup> January 2015  
Inspection Date        13<sup>th</sup> January 2015  
Prepared by            Dr M Seaton PhD BEng(Hons) CEng MStructE  
Occupation             Chartered Structural Engineer  
Signed                    *M Seaton*  
Date                        23-01-15

## EXECUTIVE SUMMARY

- This report is intended for the specific purpose of recording the observed condition of the boundary retaining wall adjoining property between 1 Beech Hill Road and 442 Glossop Road.
- The report has been commissioned by Mr P. Hattam who is the owner of the property at 1 Beech Hill Road. It is proposed to landscape the existing car park and garden area to the front of the site and this work will need to be considered in context with work required to the boundary retaining wall. The premises are used as a physiotherapy practice and consequently members of the public visit the property and make use of the car park in front of the boundary retaining wall.
- The boundary wall retains a difference in ground level of approximately 1.7 metres between 1 Beech Hill Road and 442 Glossop Road. The wall has a significant lean and a section of wall to the lower part of the site adjacent to Glossop Road has already collapsed. It is therefore concluded that the boundary retaining wall has become unserviceable and is vulnerable to further collapse.
- The proximity of the two Lime trees which have since reached maturity, growing close to the back of the retaining wall is ill advised and it is inevitable that their presence will threaten the long-term stability of the wall due to increased surcharge loading, mechanical root action and leverage of the wall under wind action.
- The report further identifies that the trees are reliant on the wall for stability of their root system. There remains a significant risk that these trees could fall onto the property or the adjoining car park.
- The proximity of the trees will potentially prevent the safe reconstruction of the wall, since there is potential for root system to become destabilised or damaged during excavation work.
- It is therefore recommended that permission to remove the trees should be obtained since the trees are reliant on support from the retaining wall, the condition of which is questionable. Thereafter, the wall should be taken down and rebuilt using reclaimed material to match the existing appearance. Recommendations are made regarding the re-construction of the retaining wall and an indicative cross-section through the wall construction is provided in Appendix A.

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## 1.0 INTRODUCTION

- 1.1 This report is intended for the specific purpose of recording the observed condition of the boundary retaining wall adjoining property between 1 Beech Hill Road and 442 Glossop Road.
- 1.2 The report has been commissioned by Mr P. Hattam who is the owner of the property at 1 Beech Hill Road. The premises are used as a physiotherapy practice and consequently members of the public visit the property and make use of the car park in front of the boundary retaining wall.
- 1.3 It is proposed to landscape the existing car park and garden area to the front of the site and this work will need to be considered in context with any work required to the boundary retaining wall.
- 1.4 The property lies within the Broomhill Conservation Area and therefore any work to the boundary wall will require Planning Consent. It is understood that this report may be submitted as part of the Planning Application.

## **2.0 DESCRIPTION OF EXISTING WALL**

- 2.1 The listing record for the property dates the building circa 1840. The 1890 (1:500 scale) map shows the two adjoining properties and the boundary retaining wall is clearly marked.
- 2.2 The wall runs in a straight line north-west to south-east and forms the boundary between 1 Beech Hill Road and 442 Glossop Road; refer to Front Cover Photograph.
- 2.3 The immediate site topography slopes in a south-easterly direction down towards Glossop Road and the corner of Beech Hill Road. To the front of the property the ground levels between the two sites are approximately level, however as the land to 1 Beech Hill Road steps down towards Glossop Road, the boundary wall retains an increasing difference in ground level, with the maximum difference in height of approximately 1.7 metres; refer to Photograph 1.
- 2.4 The wall is approximately 20 metres in length between Glossop Road and the property frontage and the wall continues between the buildings as a freestanding boundary wall; refer to photograph 2. This part of the wall between the buildings has not been inspected.
- 2.5 The wall is constructed in random un-coursed rubble sandstone, laid originally in a lime-sand mortar. The top of the wall is finished with the original sandstone coping stones and these have been shaped to follow the curved profile of the wall where the wall height steps on elevation; refer to Photograph 3.

## **3.0 OBSERVATIONS**

- 3.1 Localised areas of the stonework have been repointed in the past and the pointing is unsightly and not to a good standard; furthermore the pointing appears to have used a strong cement-sand mortar which is not compatible with the relatively soft sandstone; refer to Photograph 3.
- 3.2 The base of the wall on the low side adjoining 1 Beech Hill Road is covered by a shallow soil slope leading down to the car park; refer to Photograph 4. It is considered that the soil has been retained in order to not undermine the base of the wall when the original car park was created.
- 3.3 Immediately adjacent to the high side of the boundary retaining wall there are two mature Lime trees and a holly tree. The Lime trees are covered in ivy and do not appear to be in particularly good condition; refer to Photograph 5 & 6.



- 3.4 A section of the wall towards the Glossop Road end has collapsed and several of the stones have fallen out; refer to Photograph 7. In this location the ground level to the higher side of the wall has been artificially raised at some time in the past. There is evidence that an improvised retaining wall, in the form of large stone boulders, has been constructed on top of the wall to retain the raised ground level; this will have placed an increased surcharge load on the back of the retaining wall.
- 3.5 The vertical profile of the wall varies along its length due to bulges in the stonework and a general tilt towards the car park on the low side; refer to Photograph 8. At the point of maximum displacement the verticality of the wall was measured using an 1800mm long spirit level and this demonstrated an eccentricity of approximately 170mm over the length of the spirit level; representing an angle of tilt of approximately 5.5 degrees; refer to Photograph 9.

#### 4.0 CONCLUSIONS

- 4.1 It is considered that the wall construction is original, dating the wall at over 150 years old. Other than some evidence of re-pointing, there is no indication that the wall has been altered from the original construction. The re-pointing to areas of the wall with cementitious mortar will be detrimental to the continued durability of the wall construction and weathering of the stonework. Furthermore, the original wall construction will have been relatively free draining, while the later cement-sand pointing will be impervious, allowing water pressure to build up behind the wall.
- 4.2 The large Lime trees immediately behind the wall further threaten the long-term stability of the wall due to increased surcharge loading, mechanical root action and leverage of the wall under wind action. Furthermore, the position of the trees present a logistical problem when considering reconstruction of the wall, since removal of the wall could compromise the stability of the root ball. It is therefore recommended that the trees should be removed as they are reliant on support from the retaining wall, the condition of which is questionable.
- 4.3 The overall thickness of the wall is approximately 350mm, however it is not known whether the wall increases in cross-section below the upper ground level. The degree of eccentricity of 170mm shows that the centre of gravity of the wall is outside the middle-third of the assumed overall thickness, indicating that the wall is unstable and vulnerable to collapse.
- 4.4 The earth slope in front of the base of the wall to the low side, discussed in Paragraph 3.2, appears to have been retained in order to cover the base of the wall. It is considered however that the depth of this fill material is not sufficient to protect the wall foundation from the influence of frost. Furthermore, there is insufficient mass of fill material at the base of the wall to resist lateral pressures exerted by the retained material behind the wall. It is therefore recommended that the foundations to new wall should be taken deeper and subsequently the new wall stem should be designed to take account of the increase in retained height. Similarly the raised ground level on the high side of the wall, discussed in Section 3.4, will cause an increased surcharge loading on the back of the retaining wall and this will also need to be taken into consideration when designing the new retaining wall.

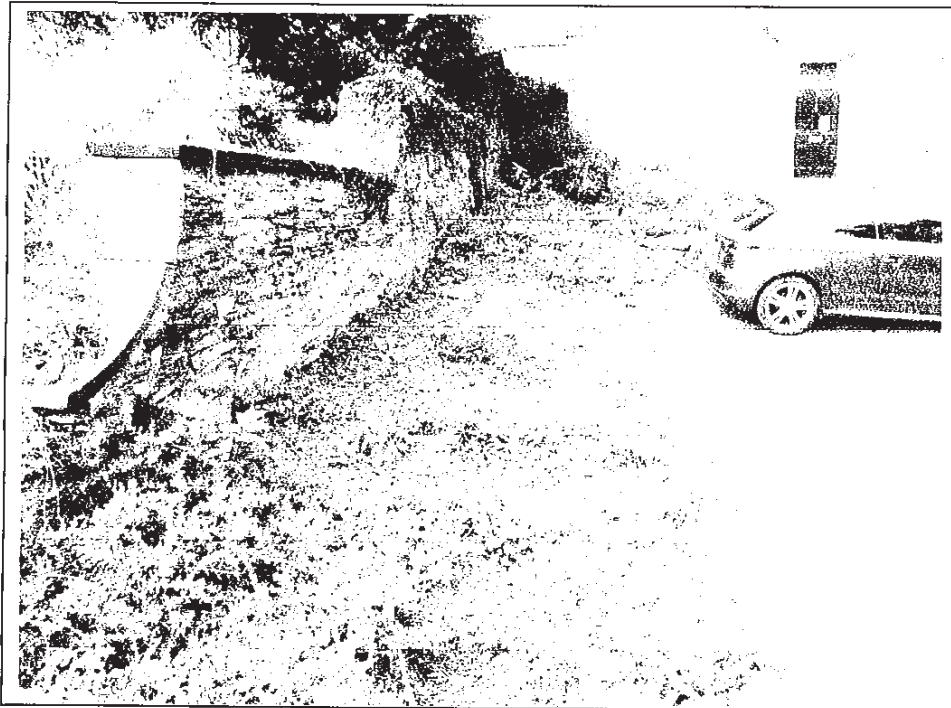
- 4.5 The new retaining wall should retain the appearance of the original wall and where possible utilize the existing coping stones and reclaimed sandstone. In order to construct the new wall as a pure gravity retaining structure, similar to the original construction, the wall thickness required would be considerable and this would involve excavation and removal of a large volume of the adjoining garden in order to create working room and ensure stability of the temporary soil slope behind the wall. It is therefore recommended that the new retaining wall should be constructed with a reinforced concrete wall stem, cast between blockwork walls; the wall can then be faced up using reclaimed sandstone laid in a lime-sand mortar. The structural stem of the wall will need to incorporate vertical movement joints at typically 6 metre centres, however it should be possible to avoid movement joints in the facing stonework by laying this in a low strength lime:sand mortar. Appendix A contains an indicative cross-section through the proposed construction of a new boundary retaining wall. The wall profile shown is intended for pricing purposes only and the final construction detail will need to be confirmed by further structural calculation.
- 4.6 In conclusion, the boundary retaining wall has become unserviceable and is vulnerable to collapse. The proximity of the two Lime trees which have since reached maturity, growing so close to the back of the retaining wall is ill advised and it is inevitable that their presence will lead to collapse of the wall as discussed in Paragraph 4.2. Furthermore, the trees are vulnerable to instability, since they are reliant on the wall for anchorage of their root system. There remains a significant risk that these trees could fall onto the property or the adjoining car park. The proximity of the trees prevents the wall from being rebuilt on the existing boundary line, since there is a significant risk that their root system will become destabilised or damaged during excavation work. It is therefore recommended that permission to remove the trees should be obtained and then the wall should be taken down and a new retaining wall constructed using reclaimed material to match as far as possible the original wall appearance and profile.
- 4.7 The provision of The South Yorkshire Act 1980 (Clause 34) requires any new wall retaining a height difference in excess of 1.5 metres to be designed by a competent person and details of the proposed wall will need to be submitted to the Local Authority for approval, prior to starting work.

## 5.0 RECOMMENDATIONS

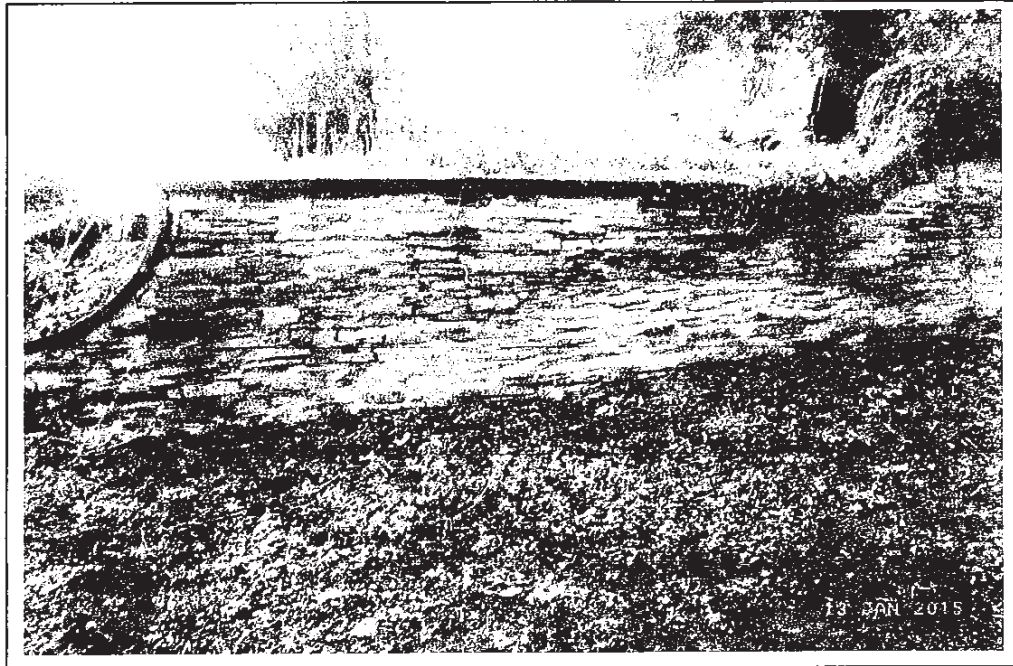
- 5.1 Permission to remove the two Lime trees should be obtained at the earliest opportunity and prior to developing a detailed design for the retaining wall.
- 5.2 Once the trees have been removed the existing boundary wall should be taken down and the existing coping stones should be carefully marked and set aside for re-use. Similarly the existing sandstone blocks should also be retained and cleaned for re-use.
- 5.3 The existing ground should be battered back in order to form a stable slope and a new concrete foundation should be constructed in accordance with the design specification. Two leaves of blockwork should then be constructed off the foundation and the cavity between the leaves infilled with reinforced concrete, to form a reinforced stem. Once the concrete has gained sufficient strength the rear of the wall should be backfilled with free draining granular material. The front face of the wall should then be faced up using the existing sandstone laid in a hydraulic lime-sand mortar to match the existing. The original sandstone coping stones should then be re-bedded in their original sequence.



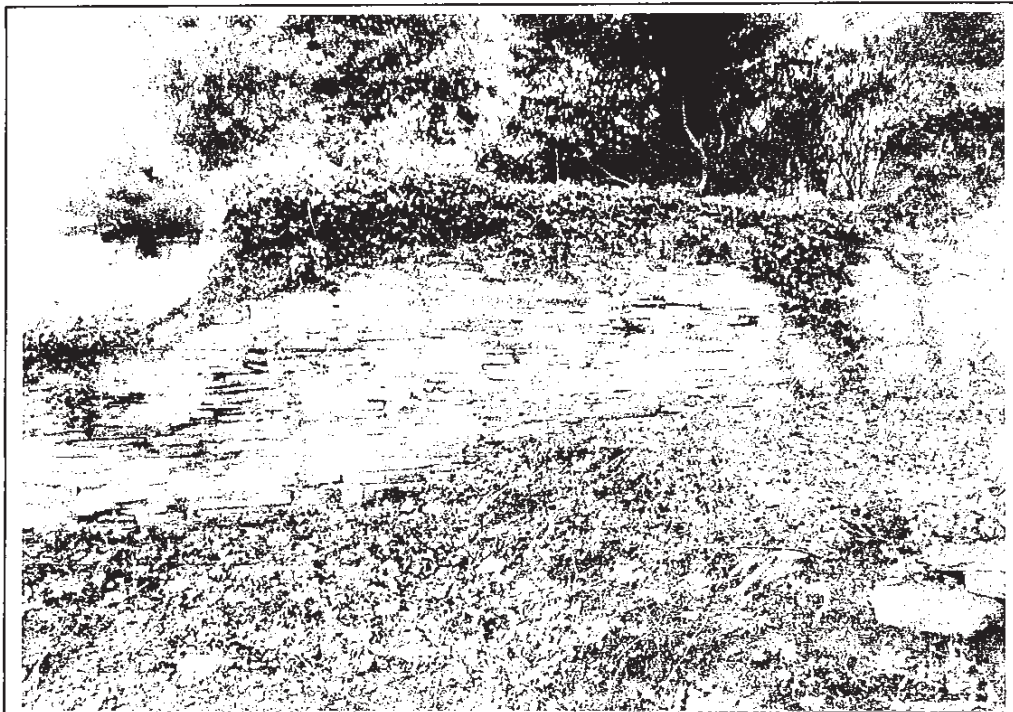
**Photograph 1:**  
Showing Elevation on Boundary Retaining Wall From Car Park.



**Photograph 2:**  
Showing Boundary Wall Continuing Between Properties.



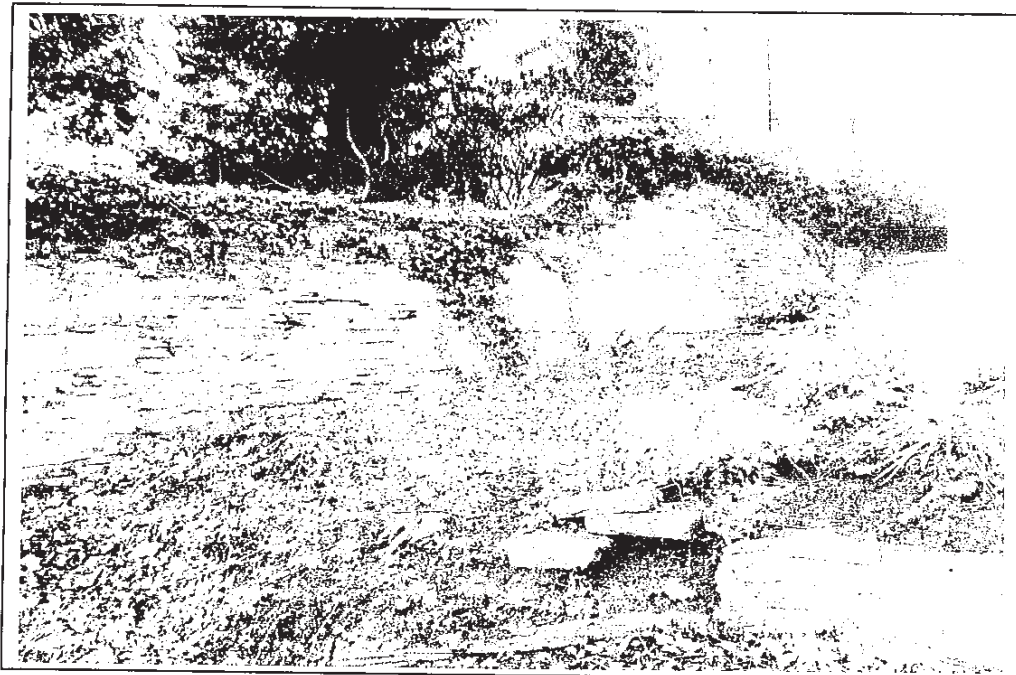
**Photograph 3:**  
Showing General Condition of Wall and Areas of Unsightly Re-pointing.



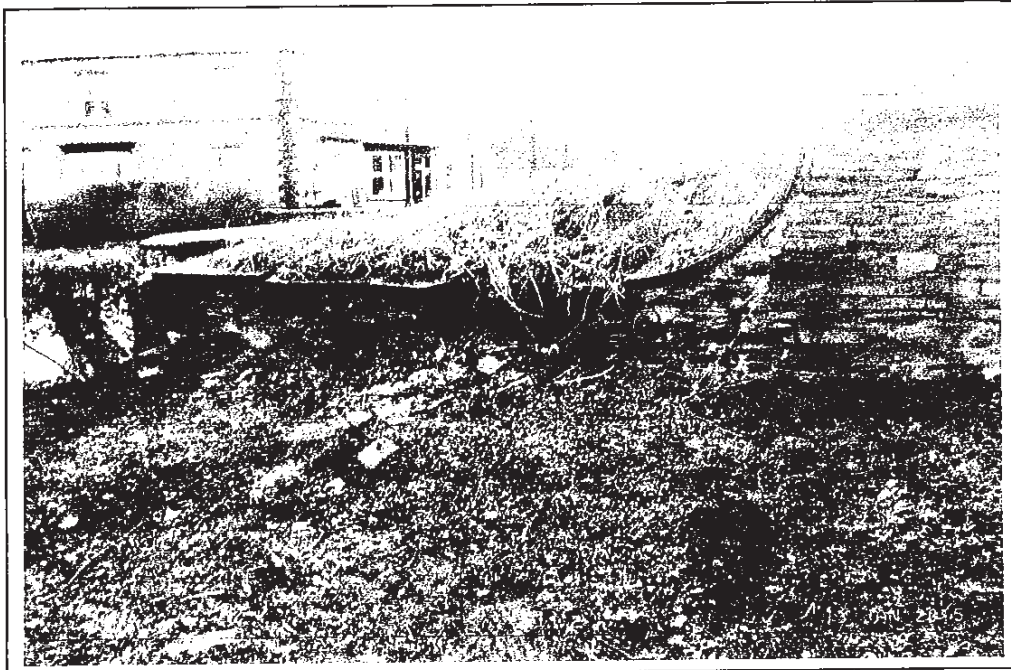
**Photograph 4:**  
Showing Retained Soil Slope to Base of Wall.



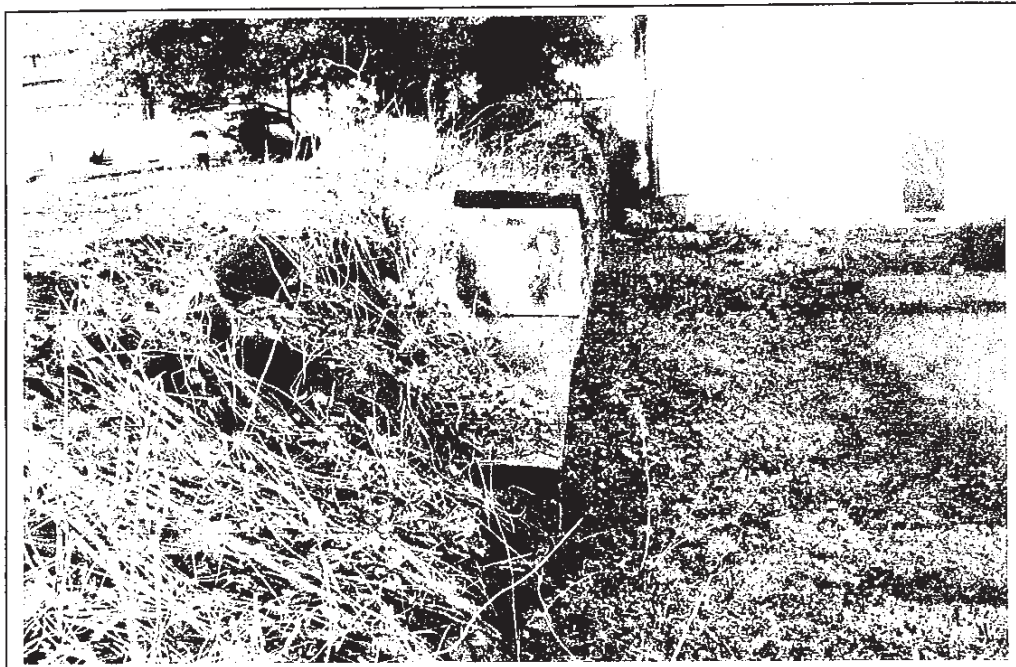
**Photograph 5:**  
Showing Ground Level on High Side of Wall and Proximity of Trees to Rear of Wall.



**Photograph 6:**  
Showing Proximity of Lime Trees to Wall and Existing Buildings.



**Photograph 7:**  
Showing Collapsed Section of Wall and Raised Ground Levels Above.



**Photograph 8:**  
Showing General Outward Lean of Retaining Wall.

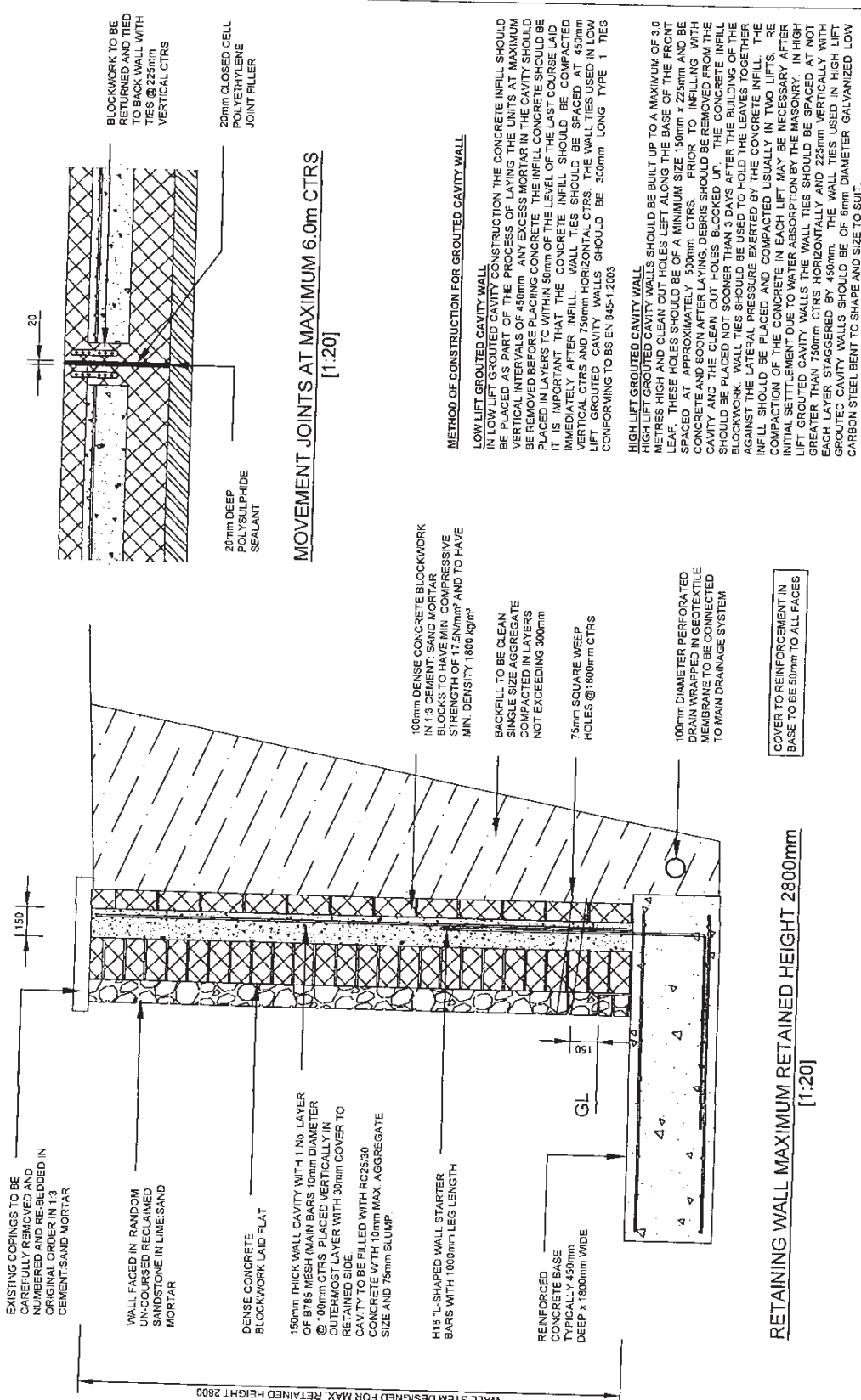




**Photograph 9:**  
Showing Lean of Retaining Wall Relative to an 1800mm Long Spirit Level.

APPENDIX A

Indicative Cross Section Through  
Proposed Retaining Wall Construction



|  |   |     |           |   |                       |
|--|---|-----|-----------|---|-----------------------|
| SEATON STRUCTURAL LTD.<br>FERNLEA, ROSLYN CRESCENT<br>HATHERSAGE<br>HOPE VALLEY<br>S32 1BX<br>T: 01439 651036 / 07710 889125<br>E: seatonstructural@btinternet.com | REV   | DWL | REVISIONS | CLIENT<br>MR P. HATTAM<br>25-26 BEECH HILL ROAD<br>SHEPHERDSDEN S10 2SA | STATUS<br>FEASIBILITY |
|  | GENERAL NOTES<br><ul style="list-style-type: none"> <li>Do not scale from this drawing</li> <li>All dimensions are shown in millimetres</li> <li>All dimensions are to be confirmed on site by Contractor and Fabricator</li> <li>Structural Engineer to agree to any variation to specified works</li> </ul> |     |           | DATE<br>23-01-15  | SCALE<br>1:20         |
| RETAINING WALL MAXIMUM RETAINED HEIGHT 2800mm<br>[1:20]  |   |     |           | TITLE<br>PROPOSED REPLACEMENT TO<br>BOUNDARY RETAINING WALL             | DOCS NO<br>01         |
|  |   |     |           | REV   | A3                    |

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