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# TOM HENRY & ASSOCIATES

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CONSULTING  
CIVIL & STRUCTURAL  
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Our Ref: TCH/JM/30220

21 October 2010

Mr & Mrs Beevers  
34 High Street  
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Sheffield

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Dear Mr & Mrs Beevers,

## **Structural Inspection - 34 High Street, Penistone**

Acting upon your instructions, I have on 6 October 2010, carried out a Structural Inspection at the above property. The purpose of the inspection was to comment on the stability of a boundary retaining wall with reference to cracking and distortion and of the wall and related elements of an attached outbuilding.

I would advise that my inspection was limited to the above aspects of the property and related structural elements. I have not examined the property as a whole in detail and I am therefore unable to comment in detail on the structural condition of the building as a whole. I must also advise that no inspection was carried out of the woodwork or other parts of the structure which were hidden, unexposed or inaccessible at the time of the Inspection, and I am, therefore, unable to report that any such part is free from defect.

The Report of the Inspection is for the use of the Client and the Client's professional advisers and should not be reproduced in whole or in part or relied upon by any third parties for any use without the express written approval of Tom Henry and Associates.

I would report as follows:

## **General:**

For the purposes of this Report, all references to front and rear, right and left, are as viewed from the main highway.

The wall under consideration separated the front / side garden of No 34 High Street, Penistone, from a public footway which leads through from High Street through to Park Lane and public car parking area a short distance to the rear right of the property.

Vegetative presence in close proximity to the wall included two mature deciduous trees, presumed to be Sycamore, located at a distance of 1 metre to the left of the wall. The trees had heights in excess of 12 metres and with trunk girths in the order of 1200 to 1500mm.

Two further mature deciduous trees of similar proportions were located at distances of 8 metres and 10 metres from the rear left corner of the garage.

## **Boundary Wall:**

The wall had a maximum height in the order of 2.2 metres and with a thickness of 400mm. The wall was a traditional appearance and presumed to be traditional mass stone construction, with two skins of coursed masonry and rubble infill to the core.

There was stepped vertical cracking affecting the central section of the wall and also close to the front corner.

The major crack was located at approximately 2.5 metres from the rear corner of the wall and with a second crack 2 metres to the front of this. This corresponds in particularly close proximity with the positioning of the rear of the two trees.

In addition to the cracking, sightings along the wall indicated some planar unevenness and a tilt to the right, and with the distortion most pronounced in the vicinity of the trees.

At all locations the cracking displayed evidence of recent activity.

The two major cracks which correspond in position with the rear tree are noted to pass through the wall visible to the left of the wall.

### **Garage/Outbuildings:**

The garage/outbuildings were located to the mid right of the property curtilage with the front session of this abutting the rear right corner of the house. The rear wall of the garage extended through to the rear corner of the right boundary wall.

Cracking was noted externally to the left end of the rear wall following a raking fashion and extending through to the copings. The cracking was considered to display some recent activity especially at mid wall height.

Further raking cracking was noted towards the right end of the rear wall of the outbuildings affecting the mid to upper section of the wall and the movement evident at this position was coincident with stepped raking fracturing affecting the lower section of the right side wall commencing at ground level at the rear corner of this wall and extending through to mid wall height.

Observations internally within the outbuildings revealed the presence of minor cracking and of displacement / movement at corner intersections.

### **Conclusions:**

The damage to the boundary wall is considered to be caused by the two large trees located close to the left of the boundary wall.

The size and proximity of the trees was such that there would be significant root moisture demands in the vicinity of the wall, the house and the outbuildings. This will exacerbate by seasonal moisture induced volumetric changes in the clay substrata.

The distortion/damage to the wall was similar to that also affecting the outbuildings and with the same cause.

The nature of the damage to the wall and the outbuildings is considered such as to be classified as Subsidence in respect of a domestic Buildings Insurance. Consequently it is recommended that a Claim be submitted to the Insurers in the respect.

Based upon current information it is likely that localised repairs can be undertaken to the cracking affecting the outbuildings.

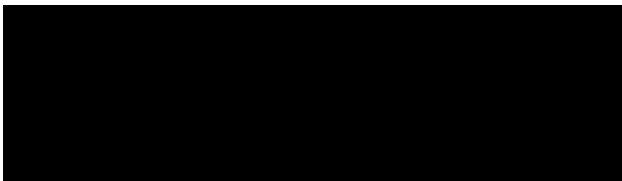
However, more substantial works are required with regards to the boundary wall such as underpinning or rebuilding.

Both of these options would result in major damage to the roots of the two trees and hence other options need to be considered (eg. ground beams supported on piles) after detailed information has been obtained, by means of trials holes, regarding the depth and type of foundations to the wall and the nature of the supporting strata.

At that stage also, consideration could also be given to the possible removal of the trees. Specialist guidance would be required in this respect.

I trust that the above report is sufficient for your present requirements, but please do not hesitate to contact me again if I can be of any further assistance.

Yours sincerely



**Thomas C. Henry**  
for and on behalf of  
**TOM HENRY & ASSOCIATES**