

Ref: 3235

16 September 2025

REPORT ON MOVEMENT AND CRACKING AT
15 BIRCHINGTON ROAD, CROUCH END, LONDON, N8 8HP

INTRODUCTION:

At the request of Luke Hartley, a visual structural examination was carried out to check and report on movement and cracking at the property.

For the purpose of this report the front of the building faces west

DESCRIPTION:

The property is a conventional terraced two storey house with pitched roof over and of late Victorian/Edwardian era. Externally, the house is exposed brickwork throughout (Photo 01) including the two storey front bay. The original construction is of conventional masonry external solid walls and suspended timber floors.

INVESTIGATION OF CRACKING:

Internal cracking:

- Cracking was noted to the bay at ground floor level near the junction where it meets the main front wall of the house (Photos 2 & 3)
- Similar cracking was noted at first floor level (Photos 4 & 5)

External cracking:

- Cracking also occurs in the brick walls either side of the front bay at ground floor level (Photos 6 & 7) and at first floor level (Photos 8 & 9). It was also noted that some of the stone cills had cracked.
- Tell tales have previously been installed to the external ground floor crack on the south side of the bay (Photo 10). These tell tales are small metal studs used by surveyors or engineers to monitor crack widths over a period of time, usually at least 1 year. Therefore it appears that someone has been monitoring this crack in the past.

DIAGNOSIS:

It was noted that there is growing:

- A 17m high mature hornbeam tree in the public footpath at the front, some 10m from the front bay, just beyond No 15A to the south (Photo 11).
- An 18m high mature tree, possibly a box elder, in a nearby back garden 9m from the front bay (Photo 11)
- A 17m high mature hornbeam tree in the opposite public footpath 12m from the front bay.

According to the British Geological Society geological maps, the area is London Clay which is known to be shrinkable clay soil which swells and shrinks with varying degrees of ground moisture. The extent of ground moisture will vary between the summer and winter seasons, causing some swelling and shrinking of the soil. Trees can artificially dry the soil by extracting moisture through their roots, causing the ground to shrink considerably more than normal, in a localised area around it. It is this localised shrinkage within the vicinity of large trees that causes differential ground movement and consequential movement and cracking within nearby buildings.

The National House Building Council (NHBC) have produced guidelines that allow the approximate depth that tree roots have caused shrinkage of soil to be calculated, given the soil type, tree size and type, and the distance from the tree.

Calculations in accordance with these NHBC Guidelines indicate that:

The mature hornbeam tree in the public footpath at the front will affect soil to a depth of 1.3m at the front bay.

The mature hornbeam tree on the opposite side of the road at the front will affect soil to a depth of 1.1m at the front bay.

The mature box elder in the nearby back garden will affect soil to a depth of 1.5 at the front bay.

Therefore, as the front bay is likely to have a foundation of about 0.45m – 0.6m in depth it is very likely that these trees will be causing ground settlement that will be affecting the front bay and creating the cracking that can be seen. Very often these bays were built on relatively shallow foundations in comparison to the main house.

Another consideration is drainage that can leak and cause settlement due to local softening of the ground. There is likely to be a manhole in the front garden for the drain as it heads out to the public sewer in the highway.

REMEDIAL WORKS:

The cracked bay walls can be repaired using Helifix steel stitching ties. However, until the issue of movement is resolved this may result in further cracking occurring elsewhere. It may be that underpinning of the bay may be required.

Enquires should be made regarding the installation and monitoring of the tell tales on the ground floor south bay wall, and if the results are available. The was, presumably, the previous owner?

The Local Authority would normally pollard the trees in the public footpath on a regular basis, say every two years, to minimise these problems. It does not look like they have been pollarded in recent years. It may be possible to request that they be pollarded on the basis that they are starting to cause movement problems with properties in the vicinity.

The tree in the nearby back garden is a private tree. It may be possible to speak to the owner and explain the situation and that it is also likely to cause a similar problem with their back wall in the future.

If efforts to have the nearby trees pollarded do not achieve any positive results, it may be necessary to carry out further investigation to prove which trees are causing the problem.

This will involve using a soil investigation company to dig trial holes alongside the bay to investigate:

- Depth of bay foundations
- Soil type at foundation level
- Presence of any ground water
- Presence of any tree roots
- Test for any desiccation of the soil at foundation level.
- Having the roots tested to determine if they are alive and which species of tree they come from.

The result of these tests it may determine the next course of action, i.e. the local authority, the neighbour or the building insurance company. Getting the building insurance company involved will then mean the house is recorded as subject to subsidence and this may affect future insurance renewals.

It may be prudent to consult an independent insurance adviser on this matter.

CONCLUSION:

The building is on shrinkable clay soil with a mature trees nearby in the public footpath at the front and in a nearby garden. It appears likely that these trees are causing localised ground movement under the front bay, hence the cracking. This is particularly so if they have occurred recently in the hot dry weather we have had this summer.

This can be alleviated to some degree if the Local Authority were to pollard the trees but the tree in the nearby back garden may also need similar treatment.

The next stage would be for a soil investigation company to dig trial holes to test the soil and look for root samples.

It may also be prudent to have a drain CCTV survey carried out to check the condition of the drain running under the bay and ensure that it is not leaking.

GENERAL:

We have not inspected woodwork or other parts of the structure which are covered unexposed or inaccessible and we are therefore unable to report that any such part of the property is free from defect. The scope of the inspection and this report is solely for the purpose of investigating the issue as given in the introduction above, and no other aspect of the building has been investigated or will be reported upon. Any other issues will be subject to separate investigation.

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