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Good Afternoon [REDACTED]

Re: 19 Pound Lane, Sonning

I examined the crack damage to the garden retaining wall on 10th October.

The wall comprises 100mm block and 102mm facing brick retaining the garden lawn at 800mm height against a paved terrace. The crack was apparent to the brick face running up diagonally up from the terrace level to the top of the wall following the brick level joints. The crack runs up towards steps which access the lawn from the terrace. A 20m approx. high Oak tree was noted 6.9m from the wall.

A subsequent trial hole investigation revealed the crack occurs through the rear block leaf to the wall. The wall foundation is formed 600 below ground and 600 - 750 wide. There was no apparent damage to the foundation at the trial hole location.

The crack profile indicates that differential foundation movement has occurred with the footing lower towards the steps. The foundation movement is more than likely caused by the Oak tree root action on the bearing strata. The soil conditions are noted in the original ground investigation report undertaken on the house construction in 2012. The report states the strata is highly plastic clay with an index of 65 which shows the clay is highest volumetric change potential. The water demand of the Oak roots tree would result in significant shrinkage of the clay up to 20m from the tree. Clearly the subsidence of the wall foundation would be the result of the clay shrinkage related to the proximity of the Oak Tree.

The foundation movement will be progressive unless action is taken to rectify the fault. Following removal of the tree the crack in the block work should be repaired by re-pointing the joints and the facing brick rebuilt.

I trust the information is clear and enables you to rectify the fault. Should you require clarification or further assistance however please contact me.

Kind Regards

[REDACTED]
R I Hewitt