
ANDREW MARCHAM & Co.

Chartered Structural Engineers

Our Ref:- 15/062/AWM/kb

Date:- 18th February 2015

Mrs A Leese
29 Tewkesbury Road
Gloucester
GL2 9AY

Dear Mrs Leese,

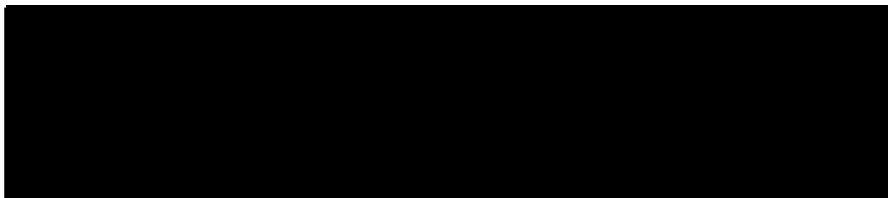
Re:- Damaged wall, 29 Tewkesbury Road, Gloucester

I refer to instructions conveyed in connection with your concern regarding the above and following my site inspection of the 11th February 2015, I am pleased to confirm the following:-

The subject property comprises a semi-detached residential building occupying a relatively level plot approached via a shared drive from Westfield Terrace the rear garden to which is bounded by the Tewkesbury Road. My involvement is purely to advise on the cause and extent of damage to the garden wall and to report findings including recommendations for remedial work where appropriate.

I carried out a visual inspection during dry overcast weather conditions on the 11th February 2015 and whilst trial pits have not been excavated at this stage, subsoil conditions beneath the site are known to comprise alluvial deposits of sand and gravel and not a heavy shrinkable clay.

The wall in question is constructed of 225mm thick solid brick masonry with concrete coping stones the top of which is located approximately 1.2m above the garden although the base of the wall relative to the Tewkesbury Road pavement is approximately 1.0m below the garden level. The pavement along the stretch of the Tewkesbury Road is a very busy thoroughfare frequently used by large crowds of spectators attending the Gloucester rugby ground.



29 Tewkesbury Road, Gloucester

There is a mature Beech Tree growing in the garden with a trunk diameter approaching 1.0m at close proximity to the garden wall the shallow root system of which is well above the adjacent pavement with the result that root spread exerts lateral forces on the garden wall which will tend to increase progressively as the specimen grows over the years. This situation will be exacerbated periodically as the tree sways under wind forces. In this respect, the Beech has an extensive canopy which will pick up high wind pressure.

When viewed from the road, it is evident that the garden wall has developed an outward lean approaching 150mm which in turn has caused at least two major fractures in the brickwork. I understand that the wall in question was partly taken down and rebuilt approximately 20 years ago and the current damage therefore is clearly of a recent nature and which is likely to increase progressively over the years.

As given above, subsoil conditions beneath the site are unlikely to comprise a heavy shrinkable clay and damage to the garden wall under the influence of the tree therefore is confined to mechanical caused from direct lateral pressure of the root system. In the past, rebuilding of the wall incorporated an increased thickness of concrete just above the garden in an attempt to resist the lateral forces although quite frankly, it is highly unlikely that the magnitude of loading imposed could be catered for.

I understand that your main concern is that the garden wall could collapse which in turn could quite conceivably cause serious injury to anyone using the pavement and perhaps even to vehicles travelling along the Tewkesbury Road. From my visual assessment of the wall at present time, I do not consider that collapse is likely to occur in the short term although as given above, the masonry only has finite strength and eventually it will succumb to the lateral forces involved.

The tree in question is growing within your garden and is therefore under your ownership although I understand that Gloucester City Council have imposed a TPO and will not allow you to fell the tree or to sever its root system. I have had sight of certain documents issued by Gloucester City Council who seem to be satisfied that the amenity value of the tree to local residents outweighs your request for felling although one wonders how valid such an argument would be in the event that people using the pavement suffered injury from collapse of the wall.

29 Tewkesbury Road, Gloucester

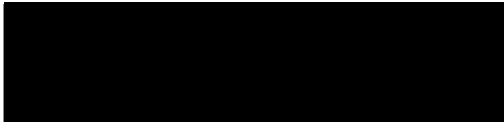
As opposed to complete felling, I consider that substantial pollarding of the tree as has already been carried out to a similar adjacent specimen in the same garden would prevent future spread of the root system such that the damaged section of wall could perhaps be taken down and rebuilt without risk of future damage. At present time however, taking down and rebuilding of the damaged section of wall would be fruitless since the damage would simply reoccur in a relatively short period of time. I also understand that you have had a verbal quotation from a local builder in the sum of £8000.00 plus VAT for part taking down and rebuilding which is a very high price to pay for a pensioner with limited financial resources. I also understand that this builder advised that he would not be able to guarantee his work.

My knowledge in these matters is confined to structural issues although it would seem to me as a layperson that Gloucester City Council have a duty of care to allow you to take suitable action to remove the very real risk of physical injury to people using what is a very busy thoroughfare. To conclude therefore, I consider that Gloucester City Council should be strongly requested to review the situation of the tree with far more interest in protecting the public from serious injury as opposed to the amenity value of a specimen which could in fact be replaced in the same garden albeit at a safer distance from the garden wall.

This report is for your private and confidential use although I confirm that a copy may be sent to Gloucester City Council or any other party directly involved in your attempt to resolve the situation of the damaged garden wall.

I trust the above is self explanatory and sufficient to the purpose for which the report was commissioned however please do not hesitate to contact me without delay should any clarification be required.

Yours Sincerely,



Andrew Marcham
C.Eng.M.I.Struct.E.