



# TREES & THE LAW

BY JULIAN DUNSTER

## Getting to the root of the matter (part 3)

Trees + clay + moisture loss + building damage = lawsuit!

In parts 1 and 2 of this recent series of articles, several cases of roots causing damage to property were noted, including roots growing across property lines, and roots in drain and sewer lines. A third aspect occurs when roots are suspected of causing material damage to buildings. This is an especially sensitive issue in clay soils.

Soils with very high clay content shrink when the soil moisture content drops, and swell when it increases. In areas where houses and other structures are built on top of clay soils structural damage can occur when the soil moisture changes. Usually, the damage occurs when the clay soils shrink, leading to settling of the foundations, cracks in walls and floor slabs and doors that no longer close properly. The damage can be quite extensive.

Rehydrating the soil may bring some relief, but often it is only temporary. Expensive engineering solutions, such as underpinning may be needed to permanently stabilise the structure and overcome the problem of the soil movement. Some of the soil shrinkage can be climate related; prolonged droughts dry out all soil types, lowering the water table and leading to soil shrinkage in clay soils. But, the presence of tree roots can exacerbate the problem since trees are soaking up water through the roots, possibly becoming the primary cause of soil shrinkage and soil settling.

The influence of tree roots in clay soils is a big problem in parts of Great Britain, for example, and has spawned an industry dedicated to documenting root/building interactions. In some parts of Britain it is not easy to obtain a mortgage and/or insurance if there is any suggestion that a nearby tree might lead to building damage. While many of the technical issues are hotly debated among arborists, engineers and insurance professionals, there should be no doubt that they are serious and can be very expensive.

Such was the case in *Guinan v. Ottawa (City)*, 2010 ONSC 807. The Guinans (Plaintiff) owned a home in Ottawa. The City of Ottawa (Defendant) owned a silver maple located on City property just beyond the

Plaintiff's property. The maple was reported to be 16 metres high, with a trunk diameter of 85 centimetres. At issue was structural damage to the Plaintiff's house alleged to be a direct result of the maple roots causing soil shrinkage, settlement and extensive damage to the house.

The Plaintiffs sued for a mandatory injunction requiring the City to remove the tree, on the basis that the tree was causing nuisance in the form of serious property damage.

The Defendant had a bylaw in place that did not permit removal of trees alleged to be causing structural damage. Instead, it allowed for mitigation measures to be deployed, such as watering

but treated to mitigate possible damage.

Once the Plaintiff applied for tree removal, mitigative measures were implemented, including watering, pruning and attempts to install root barriers — the latter idea abandoned as it was felt that installation would damage the roots too much. The plaintiff claimed these were ineffective and made no difference. The defendant disagreed, and also noted that the tree was but one factor contributing to the damage.

Several experts submitted reports, including engineering experts. While they did not all agree about the exact cause, there seems to have been common agreement that the large silver maple was a big concern, and

***In some parts of Britain it is not easy to obtain a mortgage and/or insurance if there is any suggestion that a nearby tree might lead to building damage.***

to swell the soils (or at least minimise shrinkage), and pruning of the tree to reduce crown area and thereby, overall soil water demand. The house was built in 1982. Part of the application process included the need for a soil report, which had been provided. Fifteen years later cracks appeared in the house walls, the floors started to tilt, and doors no longer closed properly. In 2004 the Plaintiff consulted the City and was told to consult a structural engineer.

In the background of this case, was the City's desire to retain a healthy urban forest, and ensure that the large silver maples contributing to the overall landscape and desirability of the City could be retained without causing property damage. Up to 1993 City policy had been to remove trees if the homeowner requested it and could show that the tree was causing property damage. After a period of review and analysis starting in 1993 City policies changed and in 2006 a new bylaw and policies were adopted to deal with trees and clay soils. Under the new bylaw, trees were not to be removed,

a major contributor of the soil shrinkage and subsequent building damage. There was contradictory evidence submitted about whether or not other nearby trees might have contributed to the damage, including a small crab apple claimed by one engineer to be a contributory factor even though the City suggested it was a low water demanding tree and just the type of tree recommended for this type of site.

At trial the judge rejected some of the expert evidence, some of which was found to be in error, some too subjective and some of it "...designed to advance the City's case for retention of the silver maple than to independently assist the court in its determinations." Having sifted through the documents and evidence the judge found that "... it is probable that the silver maple was the primary cause." The defendant argued that there should be no basis in law for a successful claim since they had made efforts to remedy the damage. This argument was rejected by the judge since it was clear that these attempts had failed to make any difference to



**Tree roots can exacerbate the problem of building damage caused by soil moisture changes, since trees are soaking up water through the roots.**

the amount of damage. The notion that the environmental benefits of the tree outweighed possible damage associated with the tree was also rejected.

Ultimately, nuisance caused by the silver maple was accepted as fact by the Court. Its roots had encroached onto the Plaintiff's property, had caused soil shrinkage by reducing soil moisture content, and the result was structural damage to the Plaintiff's house. The tree was an unsuitable species to have planted so close to the house, and the Defendant's conduct in maintaining the tree in place was

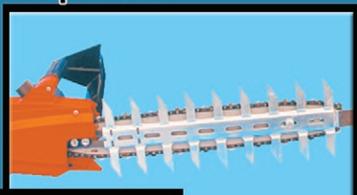
not reasonable. On balance, the Judge noted that the benefits of tree retention were outweighed by the financial burden placed on the Plaintiff to remedy the damage caused by the silver maple.

The mandatory injunction to remove the silver maple was granted.

*Julian Dunster is not a lawyer and the above should not be construed as legal advice. If you have an issue requiring legal advice please consult a lawyer. Additional case law can be found in the book *Arboriculture and the Law in Canada*. Copies are available from Julian Dunster. [www.dunster.ca](http://www.dunster.ca)*

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