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TREE CONSULTANCY

Trees under siege

RICS Residential Property Journal (April/May 2013)

BTC/82/2013

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The first confirmed UK cases of ash dieback disease early last year highlighted how increasingly vulnerable our native trees are to threats from beyond our shores. **Jeremy Barrell** reviews the practical measures surveyors can take to buffer the inevitable adverse impacts on fragile rural and urban environments.

Ash dieback is caused by a fungus, *Chalara fraxinea,* which only affects ash trees (see www.foresatry.gov.uk/chalara for the government's detailed analysis). It infects new shoots, killing the living cells beneath the bark and causing the leaves to shrivel and die. The cumulative impact of many dead shoots usually results in the death of the tree over a number of years. The disease is spread by spores that can be distributed on the wind, by animals and birds, and through the movement of infected material, mainly as a result of the international nursery trade in young plants.

The government advice is that there is no cure, although there is thought to be natural resistance in the ash population that may allow a small percentage to survive. Otherwise, the prospects are grim, with infections in Europe indicating that up to 90% of the population could be lost. To set that in context, Dutch elm disease killed about 30 million trees in the 1970s and there are thought to be at least 80 million ash trees in the UK. There can be little doubt that ash dieback is going to have a big impact on the way the country looks and the wildlife within it.

Worryingly, the threat has been known about for years (the Horticultural Trades Association warned the government of it in writing in 2009). Yet there was a failure to act quickly to ban the import of ash saplings, identified as a primary vector of the disease.

Whereas U-turns are possible with controversial schemes such as the systematic extermination of badgers and the selling off of forests, there can be no such reprieve for native ash trees. The damage is done and the opportunity for prevention has been missed. Ash dieback is here to stay and attention is now turning to minimising its adverse impacts.

Other biological threats to trees

The ash problem is just one of an increasing number of foreign threats to the UK's trees, with a raft of pests and diseases just waiting for the right opportunity. Two of the most serious at the moment are caused by the fungus-like organism *Phytophthora.* Oak trees have suffered decline and death, while larches are also affected, resulting in swathes of forest being felled to control its spread. Meanwhile, across the Channel, the French are firefighting a devastating outbreak of a disease similar to Dutch elm disease that is affecting plane trees. At France's historic Canal du Midi, a UNESCO world heritage site, thousands of the 42,000

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plane trees that line it are now being felled as a result of a deadly fungus. There is no cure and, should it cross the UK's borders, London planes would be at similar risk.

Management strategies

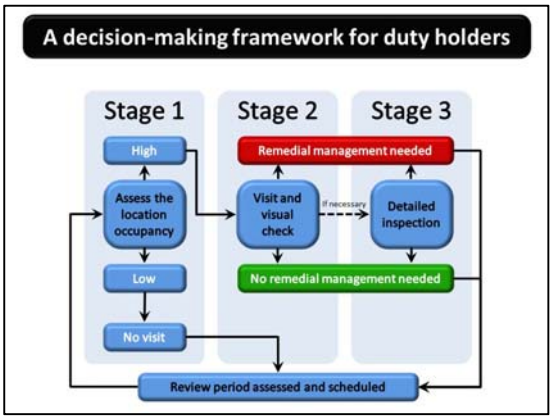
Ash is common in both urban and rural environments and creates a substantial green backdrop, with larger trees often contributing greatly to local character. Despite government advice that the disease cannot be cured, there is emerging evidence that a chemical option may offer good control for individual trees of high importance, with seemingly few adverse side effects for the treated tree or the environment. Dr Glynn Percival from Bartlett Tree Experts *(www.bartlett.com/UK)* thinks that a fungicide called Signum, currently used on fruit and vegetables, could control the disease and is currently attempting to get it approved for use on amenity trees. Micro-injections into the main trunk of infected trees can deliver controlled doses that kill the fungus without any spillage into the wider environment. Injecting is not practical for the whole ash population, but it does offer hope of protecting important individuals.

In the longer term, the bulk of ash trees are likely to be lost. This highlights the inherent risk of relying on monocultures, i.e. tree populations of the same species, because, just like elm trees in the 1970s, they can all die in a single epidemic. The abundance of plane and lime in London is a good example. They are widely planted because they can tolerate harsh urban conditions and have thrived to create our green capital. The downside is that they could all be lost in a few years if a killer disease gains access. Improved border controls and quarantining of plant imports will be an essential first step in reducing this risk, but the only effective way to improve long-term resilience is by increasing species diversity. Planting different species sounds simple, but it will significantly reduce the risk of new diseases devastating green infrastructure.

Safety implications

For property managers, safety is an important issue and the problem of big trees in declining health is set to crop up more often because of this disease. On the positive side, infected trees are likely to take years to deteriorate to a point where intervention is required. Government advice is to carefully monitor trees in areas of high public access and only to prune or fell if risk assessments show them to be a hazard. However, eventually many trees will require significant management works and owners with ashes on their land should be budgeting for increased costs over the next five to 10 years.

In a liability context, the standard of the duty of care that the courts are likely to expect in the event of harm arising from a tree failure remains the same. The precise nature of that standard is likely to vary according to individual circumstances, which makes pinpointing the detail an elusive task. However, the framework set out in Figure 1 provides a means for duty holders to understand the issues and design a management approach to suit their own particular situation.



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Stage 1: Assess the potential for harm that arises purely because of the occupancy of the location by people and property. Occupancy is a measure of the level of access and can be carried out by anyone with knowledge of the land. If there is no significant potential for harm because of low occupancy, then there is no need to visit to even check whether trees are present or not.

Stage 2: If the occupancy is such that there is a significant potential for harm, then the location will need to be visited and any trees visually checked by someone with a working knowledge of trees. If this does not identify any obvious problems, then no further action will be necessary in that management cycle. If problems are identified, intervention works could be specified at that point.

Stage 3: If necessary, a more detailed inspection may be appropriate. It is likely that this would require specialist knowledge and that the inspector should be formally trained for the task.

In practice, the courts expect duty holders to have considered the safety of their trees, and evidence confirming the adoption of the approach in Figure 1 is likely to carry significant weight in successfully refuting allegations of negligence. Due to the extensive publicity surrounding ash dieback and its safety implications, it is unlikely that the courts would accept a defense based on duty holders claiming that harm from dangerous ash trees was not foreseeable. Figure 1 is a good starting point for duty holders and their advisers, but more specialist advice is available from the Arboricultural Association (*www.trees.org.uk*), for urban situations, and from the Institute of Chartered Foresters (*www.charteredforesters.org*), for rural.

Planning implications

Property professionals involved in planning will be aware that trees are a material consideration in the planning process and can significantly constrain the potential for development. Indeed, large trees can completely sterilise sites, so does the prospect of tree losses from disease open up new development opportunities? Almost certainly, but these are likely to gradually arise over the coming decade rather than a sudden bonanza in the next year or two.

It is not inevitable that all ash trees will succumb to the disease, so local planning authorities should not be expected to allow their removal well in advance of their death. However, once the disease is present and recovery unlikely, there is obvious potential for a release of sites for those who are alive to the silver lining of this gloomy cloud.

In summary, ash dieback will eventually kill many trees and property managers should brace themselves for challenging times ahead. Unfortunately, it will not stop with ash, and there is likely to be a constant flow of emerging threats to all trees. The primary responsibility for protection must lie with the government, but if communities are to continue to enjoy the multiple benefits of trees, then all professionals should be aware of their importance and focus on conserving what we have left.

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