

# Brighton's elms

*Last month Robin J Ross looked at the devastation Dutch elm disease has caused across the country. This month we look at how one local authority has saved its elm population – and saved money too.*

Nearly four decades ago the disease commonly known as Dutch elm disease decimated the English elm population. It is estimated as many as twenty-five million trees were lost to a policy of eradication across the country.

Three strains of the disease are now recognised: *Ophiostoma ulmi*, which afflicted Europe to a lesser degree in 1910, reaching North America on imported timber in 1928, *Ophiostoma himal-ulmi*, a strain endemic to the western Himalaya, and *Ophiostoma novo-ulmi*, the extremely virulent strain that has devastated Europe's elms since the late 1960s. *O. novo-ulmi* is now considered to be a hybrid between *O. ulmi* and *O. himal-ulmi*. Imports to the UK are now very carefully managed and monitored with different threats against native stocks largely held at bay.

Four decades on, one local authority's different approach and

policy has, however, paid dividends. The separate unitary authorities of Brighton and Hove, as they were then, took a different course of action. This was implemented by Ray Evison, and later Mike Griffin, both Directors of Parks in the 1950s, '60s and '70s, who were so successful in their management of the disease that Brighton and Hove City Council now manages the largest collection of elms in the UK. It is estimated that between 15,000 and 30,000 of these majestic trees still exist within the city and surrounds, in hedgerows, parks, gardens and countryside. The finest examples are estimated to be 400 years old, and display a character all of their own.

The decision to manage the disease tree by tree was a bold one. No one could have known that it might succeed, and often it was claimed it could not succeed. Some said that tax-payers' money was



*This elm, one of two, is over 400 years old, and believed to be the oldest in Europe.*



*Brighton has adopted a unique and bold approach to the management of Dutch elm disease – completely at odds with the wholesale destruction that has taken place elsewhere.*

wasted on such a policy, that it was wiser, and cheaper, to destroy the stock completely. Such a brutal approach elsewhere in the UK certainly eradicated the disease, by virtually eradicating the whole population of trees. Often, the disease does not completely kill the roots and trees re-grow, sending up 'suckers' which rarely grow beyond more than five metres before succumbing again to a fresh attack of the disease. Maintaining low hedgerows has encouraged healthier growth of these 'suckers' but for a tree that can reach up to 45 metres in height, they are a pale shadow of a tree that once graced our land.

The management process in Brighton and Hove has been, relatively speaking, rudimentary in approach and delivery, but incredibly successful. This has been recognised by the National Council for the Conservation of Plants and Gardens who awarded Brighton and Hove the status of Holder of the National Elm Collection in 1998.

The disease, as many know, did not originate in Holland as the name suggests. Holland was often a transporting point only for diseased timber from elsewhere. It is believed the virulent disease that decimated Britain's elms came from the US, on Rock elm timber imported into the UK. Research in China during 1986, where the disease was originally thought to have come from, found no evidence of the disease itself, although many of the beetles associated with the spread of the disease were present.

In Brighton and Hove, a combination of treatments and management has sustained many of the original trees for nearly four decades. The beetle population is

managed to limit the spread of disease. By necessity, this requires the felling of heavily diseased trees to limit the breeding grounds of beetles and the spread of disease to neighbouring trees. One of the other methods is simply pruning out infected branches, thus saving the tree as a whole. The council's arborists explain further: where inspection reveals an infected tree with less than ten per cent of the leaf area showing symptoms, it is sometimes possible to isolate the disease by severing the limb which is infected.

### Tylosis

When the fungal spores enter the tree they trigger a response known as tylosis which appears in the timber as black streaks caused by this gum-like substance. This staining is used by the arborist to gauge the progress of the fungus through the branch and if the limb can be severed far enough (to where staining does not show), there is a high chance that the tree will be saved.

The pruning relies upon rope and climbing skills to reach the infected branch or branches and simply hand sawing out the infection to a safe distance and monitoring the health of trees afterwards. The council's arborists rely also on the public to report any signs of disease as early as possible, so the public who cherish these magnificent trees act as a considerable line of defence against the disease. With around 15,000 trees to manage, it is a true partnership between council and residents that has helped to sustain the remarkable collection of elms and prevented the disease's progress. Some trees grace the Pavilion Gardens, enhancing the splendour of Brighton's unique item

of architecture.

Another problem exists in the union of tree roots, where roots become intertwined and the fungus disease is transported from one tree to another. The solution, known as root trenching, is a blunt instrument with little finesse, but successful all the same. With the use of a JCB for example, root trenches are, when a tree's stability is not compromised, simply dug out separating roots of neighbouring trees. Another method, known as tree girdling, is used where disease exists, but has not yet reached the roots. This removes the whole circumference of the tree's previous two years' growth, a couple of feet above ground level. This often just buys a little time before a tree is felled but it prevents disease transferring through roots to neighbouring trees meanwhile. Debris and dead or infected trees and materials are disposed of at a specialised burning site, licensed by the Environment Agency, in an area of low elm density, and this is also available for use by other authorities managing elms, in a sustained effort to limit the disease and its disastrous consequences. Elm disease management area notices exist on several main routes into the city encourag-

ing residents to report any signs of poor health in the city's elms, and the greatest threat remains on the city's western border where different control practices exist.

Every council-owned tree lost to disease is replaced to maintain stocks and is managed accordingly. A French elm which has proved particularly resistant to disease, *Ulmus Lutèce*, is being cultivated locally with some success, and specialists from Wakehurst Place in west Sussex (partnered with Kew) have viewed specific elements of the collection and have discussed disease control. Current newly grown trees are at around one metre tall and will be transplanted to the city's parks when mature enough to survive. These will then be managed in the same way as the trees have been managed over the past four decades, ensuring, as far as possible, a good stock of elms remain in the city.

The boldness of the decision to retain the elms is reflected by the fact that almost every other local authority in the country opted to cull them. Rob Greenland, who now manages the parks within Brighton, explains: "In 1971 we faced a dreadful choice. We recommended to



*The stump of an elm in Preston Park, Brighton. Not all trees can be salvaged. Each lost elm is replaced, so this unique line of trees can be maintained in the long term.*

councillors, as officers, to manage disease tree by tree. Fortunately, elected councillors took the advice and continue to support the work to this day. In budgetary terms we spend between £2000 and £12,000 annually. The initial cost to cull all elms here in the city was around £1 million. And we have capacity within budgets to be able to respond to particularly bad years when trees

need more care than average years. The result is this unique treescape." So, next time you think of Brighton, or plan a visit, remember there is more to it than just a pier and seafront bars. Visit the city's parks and take in the splendour of these uniquely incredible trees because they may not last in their current form for ever.

*Jim Gordon*

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