

Summary of a failed TPO prosecution

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The prosecution of tree preservation order (TPO) contraventions often fails due to the poor collection and presentation of evidence.

There is frequently failure to follow the Police and Criminal Evidence Act 1984 (PACE), which stipulates rules for the gathering of evidence and the presentation or consideration of evidence. In terms of tree preservation order contraventions, it is necessary to prove that damage has occurred and what the effects may be on the trees. Contravention of the protection provisions under the Town and Country Planning Act 1990 (as amended) is a criminal offence and therefore it must

be proven that all the constituents of an offence are present otherwise the action will fail.

There are indications that arboriculturists are not utilising current science-based tree physiology assessment techniques to support cases for tree removal or retention, or to counter evidence supplied by the other side.

In a recent case, a former clinic had been replaced by one detached and two semi-detached houses. The tree (a silver birch – *Betula pendula*, see Figure 1), the subject of the alleged contravention, was situated in the south-east corner of the site, adjacent

to the eastern boundary with the highway and 6.8m from the rear boundary of the detached property. During development the tree was incorporated into the garden of one of the new properties in an area previously covered with a tarmac car park serving the former clinic.

Due to poor administration by the main contractor, a demolition contractor started work on site before a tree protection scheme and method statement had been submitted or approved. This resulted in damage to the tree root system when the tarmac area was excavated and replaced with soil for the new garden. The main contractor admitted they had caused the damage and pleaded guilty. The local planning authority (LPA) decided that they would also prosecute the demolition contractor but waited for more than one year to bring the prosecution; this limited the prosecution's options to one of destruction of the tree, as prosecution for damage to a TPO tree must be brought within six months of the alleged offence.

Following legal advice the demolition contractor pleaded not guilty to the offence and opted for trial in the Magistrates Court. A private sector arboricultural consultant was retained to undertake a separate investigation of the tree to counter the local planning authority's allegation that the tree was destroyed as a result of the demolition contractor's activities. The consultant undertook chlorophyll fluorescence and performance index (PI)¹ testing and the values were collected and analysed on site using a Hansatech Pocket PEA fluorimeter.

In addition to the chlorophyll fluorescence and PI tests, a climbing inspection was carried out. This involved the collection of measurements from annual extension growth to establish if the tree had shown any sudden decrease in growth since the alleged contravention. Growth measurements were taken from a series of randomly selected lateral limbs and main scaffold branch tips. A total of 94 extension growth measurements, 47 each from the 2009 and 2010 seasons, were recorded. The 2009 extension growth measurements (prior to the damage) and those of 2010, one complete growing season following the alleged damage, were compared. The comparison showed no significant difference in growth between 2009 and 2010. The consultant provided a set of references to support this approach.

In addition to the above-ground tests, the consultant undertook an excavation of the area of alleged damage by using

¹ The performance index (PI) has been defined as the ratio of two structure-function indexes (SFI).



Figure 1 A silver birch (*Betula pendula*) was the subject of the alleged TPO contravention.



Figure 2 The area opened up for AirSpade investigation.

an AirSpade (Figures 2 and 3). The local planning authority tree officer was on site at the time and directed the investigation in part.

The local planning authority officer's investigation consisted of:

- Using a spade and a trowel to excavate the area of visible root damage, excavating a 1m trench, approximately 1m from the southern side of the tree.
- Within this trench was found a 75mm diameter root that had been severed.
- A further root, 50mm in diameter, further to the south of the trench was also found to be damaged.
- The union between the two roots was visible in the trench with the larger 75mm diameter root running to the right, shown on the photograph which was provided as court evidence. However, the photograph provides no scale or compass point and there was no site plan to show the actual location of the trench.

- Within the trench could be seen the soil profile with on one side the sandy-coloured local soil and on the other side of the trench the darker imported top soil.
- There were also a considerable number of fine roots within the old soil profile and none in the introduced darker top soil.
- The set of photographs used to show the above were of poor quality.
- In summary the investigation of root damage showed relatively minor root loss, root colonisation of the area having been apparently limited by the compacted sub-base of the former car park. This was apparent following the investigations carried out by the local planning authority tree officer.

When the case eventually came to court, almost two years after the alleged offence, the LPA contended that the chlorophyll tests did not provide evidence of the tree's condition and that the sampling was not random. However, no evidence was given to support either of these views. The LPA also disputed the evidence relating to the AirSpade investigation of actual root damage, despite the fact that they had a representative on site at the time of the operation and that observations made were agreed. Photographs were taken by the private sector consultant.

The local planning authority had a minimum of two months to review the evidence provided by the defendant. In two growing seasons since the alleged damage the tree had shown no symptoms of decline (branch/twig die-back, leaf necrosis/chlorosis, reduced stem extension etc.). The local planning authority was unable to demonstrate to the court's satisfaction that the tree was destroyed and consequently the prosecution failed.

Conclusion

The outcomes from this case raise a number of issues relating to the administration of TPO contraventions

Despite the fact that the tree showed no signs of decline during the 2010 and 2011 growing seasons the LPA continued with the prosecution. Silver birch are known to show symptoms of drought stress² very

² *Combating Climate Change 2009* – National assessment of UK Forestry and Climate Change Steering Group, p. 80.



Figure 3 The damaged root section.



quickly (which would have been expected in this case on a sandy soil); there was no evidence to show that the local planning authority officer visited the site, apart from in April 2010, to ascertain if the tree was showing any symptoms of decline.

The local planning authority officer did not at any time appear to consider the condition of the above-ground parts of the tree as a possible indication of the extent of damage to the tree's resource uptake capabilities.³ Given that the tree had been through two growing seasons prior to the court case, they could have saved the courts, the LPA and the defendant time and expense by acknowledging the tree's continued good condition.

It was clear from the cross-examination of the local planning authority tree officer that he did not understand, or wish to acknowledge, that the chlorophyll fluorescence and PI tests together with the shoot extension comparison provided sufficient evidence to cast significant doubt on their opinion that the tree would die within three to five years.

³ J Roberts et al. 2006, *Tree Roots & the Built Environment*, TSO, p. 246.

Despite documented evidence⁴ that trees whose roots have been damaged on development sites can take up to 10 years for signs of that damage to appear in the tree's canopy cover, the LPA did not use this in evidence to cast doubt on the validity of the defendant's evidence. The shoot extension data and photographs of the tree's canopy without signs of drought stress, with good leaf colour and with adequate canopy density (two growing seasons after damage to the roots occurred) clearly provided strong visual evidence to support the defendant's case.

The delay in bringing a prosecution, relatively poor evidence gathering and lack of vigorous analysis of the defendant's evidence by the LPA were major factors in the LPA not securing a successful outcome to the prosecution for contravention of the TPO. The LPA should consider putting in place procedures that ensure that these issues are addressed when preparing prosecutions for TPO contraventions in the future.

The evidence provided by the defendant's arboricultural consultant appears to be

⁴ J Roberts et al. 2006, *Tree Roots & the Built Environment*, TSO, pp. 252/3.

comprehensive and reasonably balanced. They provided references by which the LPA could check the soundness of the scientific methods used in establishing the physiological condition of the tree. The LPA may wish to consider using similar evidence-gathering tests in future prosecutions.

While there are gaps in knowledge and the analysis relating to the outputs from the testing for photosynthetic efficiency on large mature trees⁵ as a valid way of determining a tree's vitality, the apparent dismissal of the two tests of photosynthetic activity and the comparative study of shoot growth over two seasons would suggest that industry bodies should consider making information on this technology more widely available within the arboricultural profession.

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⁵ S Holmes and G Percival 2014, 'Answering a few practical questions about chlorophyll fluorescence', *ARB Magazine* 164.



(Lucarelli (own work) [CC BY-SA 3.0], via Wikimedia Commons)

What and where?

*Peter Thurman has sent us these photographs of 'elevated' trees to mark the publication last year by the Trees and Design Action Group of *Trees in Hard Landscapes: A Guide for Delivery*, which explores the practical challenges of and solutions to integrating trees in 21st-century streets, civic spaces and surface car parks (downloadable free from the TDAG website).*

Do you know where and what these trees are?

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