

Canker stain of plane

Dealing with an outbreak



A guidance note for tree officers/managers and contractors

1 Introduction

- 1.1 *Ceratocystis platani* (canker stain of plane, or CSP) is a fungal vascular pathogen which affects the genus *Platanus*, causing infected trees to die. There is currently no cure. It is a human-assisted wound pathogen; spread is usually caused by contaminated equipment being used on uninfected trees. Infection can also occur through root grafts.
- 1.2 Since October 2014 the UK has held EU Protected Zone Status (PZS) for *Ceratocystis*, requiring robust controls relating to importations of plane trees and ensuring that planes can only be imported from other areas which have been designated free of the disease. PZS surveys for CSP are carried out annually in the UK. The London Tree Officers Association (LTOA), under contract to the Forestry Commission (FC), has been carrying out these surveys in Greater London since 2014.
- 1.3 CSP is not believed to be in the UK, but in parts of mainland Europe it is known to have been present since the 1940s. Our European colleagues therefore have considerable experience in dealing with this disease and have built up a significant body of academic research and practical guidance. International collaboration – particularly with our colleagues in Italy – has been invaluable to the LTOA in the development of our own knowledge of *Ceratocystis*.
- 1.4 The purpose of this guidance note is to summarise the information provided in the 2014 FC *Contingency Plan for Ceratocystis platani* and to supplement it with additional information relevant to tree officers/managers and contractors. Anyone with an interest in CSP or London planes is encouraged to read the FC Contingency Plan and should also ensure that they keep up to date with the latest FC advice. This note was produced by Greg Packman (Royal Parks) and John Parker (Transport for London).
- 1.5 The guidance note is broken down into three sections: before, during and after an outbreak. It provides a detailed summary to ensure that, should CSP be confirmed in the UK, then it can be managed and hopefully eradicated. Through effective biosecurity controls, good planning and swift action, *Ceratocystis* can be contained and eliminated.

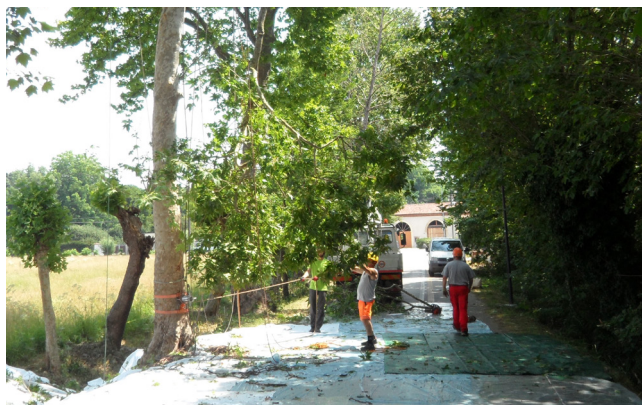


Ceratocystis canker beneath the bark

2 Before an outbreak

- 2.1 Anyone working with plane trees should be familiar with the symptoms, diagnosis and implications of *Ceratocystis*.
- 2.2 Anyone undertaking tree work in countries or regions where CSP is known to be present must ensure that they disinfect their equipment before travelling to an area thought to be free of CSP. Local authorities, individual tree officers/managers and their contractors must all take responsibility for biosecurity.

- 2.3 Rules around biosecurity relating to imported plant stock such as those associated with the EU Protected Zone Status of the UK must be strictly observed.
- 2.4 Tree officers/managers should keep records of all maintenance work carried out to London plane trees within their local authority going back a minimum of 12 months recording what work was undertaken, when and who by. Records should also be kept of tree planting and the provenance of those trees.
- 2.5 Contractors should keep records of all work undertaken on London plane trees going back a minimum of 12 months. This is to ensure a traceable timeline exists which could help predict/control spread of CSP.
- 2.6 A contingency budget should be made available to deal with any pest and disease outbreaks. Early estimates suggest that removing three mature plane trees infected with CSP might cost in the region of £10,000-£15,000. If no budget is likely to be available it is recommended that tree officers/managers discuss the importance of the issue with their line management.
- 2.7 Trees infected with CSP require incineration. Tree officers/managers and contractors should know in advance of an outbreak where their nearest incineration site is located and have plans in place for transporting infected material to that site.
- 2.8 Contractors should have access to adequate amounts of disinfectant for equipment and large quantities of tarpaulin for use as ground sheets. Contractors might like to consider the possibility of setting aside dedicated equipment and ropes for working on planes suspected of having CSP.
- 2.9 It is recommended that tree officers/managers include looking for the symptoms of CSP as part of their standard tree inspection regime. Further guidance for identification can be found at the end of this note.



3 During an outbreak

- 3.1 When a tree is initially suspected of being infected with CSP it must be reported to Forest Research (FR) via the TreeAlert system – **www.forestry.gov.uk/treealert**
- 3.2 If CSP is confirmed by FR as being present, the FC Contingency Plan immediately comes into force. The full Contingency Plan can be found at **www.forestry.gov.uk/forestry/bee9ruekf**
- 3.3 A containment notice will likely be served by the FC, meaning that no material can leave the outbreak site and that all local operations associated with tree management should be halted until the suspected case is either verified or confirmed as a false alarm. The FC will appoint a Response Officer to lead on the immediate response.
- 3.4 All plane trees within a 1km radius of the infected tree must be inspected for signs of CSP to establish the extent of the outbreak. Contact FR or the LTOA if any assistance or guidance is required.
- 3.5 The most effective method of dealing with a tree infected with CSP is to fell the tree and burn the infected material. The infected tree should therefore be dismantled, the stump and as much root material as possible removed, and all arisings removed safely for incineration. No material is to be chipped. Minimising the number of cuts required to fell the infected tree will reduce the amount of frass/sawdust produced and therefore reduce the risk of spread.
- 3.6 In an avenue situation it may be necessary to remove the tree either side of the infected tree.
- 3.7 Burning must comply with appropriate waste management regulations administered by the Environment Agency in England, the Scottish Environment Protection Agency (SEPA), and Natural Resources Wales. Forestry Commission England has a framework contract in place for a mobile incinerator which could be used if necessary.

- 3.8 Material being moved off site for incineration must be transported with a protective covering (tarpaulin, heavy-duty plastic or similar) ensuring all material is contained. This protective covering must be disinfected after use or incinerated as appropriate.
- 3.9 As the disease can spread via windborne spores, where possible tree removal operations should be undertaken on still, dry days.
- 3.10 The ground at the base of the tree should be covered with tarpaulin in order to capture as much infected sawdust and material as possible. This material should be handled carefully and incinerated.
- 3.11 On-site biosecurity is essential to prevent spread. Boots, clothes, vehicles, tools etc. which have entered or been in close proximity to the work site must be thoroughly cleaned and disinfected in an appropriate manner.
- 3.12 Once the operation is complete all material from the infected tree must be incinerated as per the above instructions. All machinery, tools, equipment, clothing, boots, ropes etc. must be stripped down, cleaned and thoroughly disinfected. This includes vehicles and stump grinders.



4 After an outbreak

- 4.1 A regular monitoring programme of all plane trees within 1km of the infected tree should be put into place.
- 4.2 The removed tree should not be replaced with a plane until it has been confirmed that the site (as defined by the FC Response Officer) is deemed as being in recovery. A site is deemed in recovery when annual monitoring indicates no presence of the disease for three years.
- 4.3 Regular meetings should take place between the tree officer/manager and contractor to discuss the process, lessons learned and any necessary changes. Representatives from the FC and LTOA should ideally also be involved. Any reports or feedback generated by these meetings should be sent to the FC.

5 Conclusions

- 5.1 Pre-planning is critical. Having a robust management plan in place and being familiar with documents such as the LTOA guidance document *Detecting and identifying canker stain of plane* and the FC *Ceratocystis platani Contingency Plan* will increase the chances of effectively preventing spread of the disease.
- 5.2 Swift, proportionate action and clear lines of communication and responsibility during an outbreak will help contain it.
- 5.3 Collaboration – within the UK and internationally – is essential. Knowledge-sharing and the dissemination of experiences and lessons learned will increase the likelihood of successfully dealing with *Ceratocystis* in the future.
- 5.4 CSP prevention and management must be approached in a proportionate and appropriate manner. There is absolutely no need to stop planting plane trees, assuming they are sourced responsibly. It is also important to note that pre-emptively removing planes and replacing them with a different species will not mitigate the risk of CSP and should be regarded as entirely inappropriate.

Contact

To contact the LTOA please email the Executive Officer at [**executive.officer@ltoa.org.uk**](mailto:executive.officer@ltoa.org.uk)

Further resources

- For the full FC Contingency Plan visit: [**www.forestry.gov.uk/forestry/bee-h-9ruekf**](http://www.forestry.gov.uk/forestry/bee-h-9ruekf)
- For the LTOA document Canker stain of plane: A guide to prevention:
[**www.ltoa.org.uk/images/canker_stain_of_plane-prevention.pdf**](http://www.ltoa.org.uk/images/canker_stain_of_plane-prevention.pdf)
- For details about *Keep it Clean* visit: [**www.forestry.gov.uk/england-keepitclean**](http://www.forestry.gov.uk/england-keepitclean)
- For the TreeAlert reporting system visit: [**www.forestry.gov.uk/treealert**](http://www.forestry.gov.uk/treealert)
- For tips on disinfecting equipment visit: [**www.cabi.org/isc/datasheet/12144#tab1**](http://www.cabi.org/isc/datasheet/12144#tab1)
- The Arboricultural Association Biosecurity Statement:
[**www.trees.org.uk/Trees.org.uk/media/Trees-org.uk/Documents/AA-Biosecurity-Policy.pdf**](http://www.trees.org.uk/Trees.org.uk/media/Trees-org.uk/Documents/AA-Biosecurity-Policy.pdf)

The definitive UK *Ceratocystis* text *Detecting and identifying canker stain of plane*, by Lucio Montecchio; revised and updated by Neville Fay and John Parker, is available from the LTOA: [**www.ltoa.org.uk**](http://www.ltoa.org.uk) or Treeworks Environmental Practice: [**www.treeworks.co.uk**](http://www.treeworks.co.uk)