

Preparing tree and landscape management plans for plant health

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London Tree Officers Association - National Association of Tree Officers

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Contents

- Tree officers and managers
- Tree and landscape management plans
- Biosecurity
- Collaboration
- Conclusions



The role of tree officers and managers

- Local Authority.
- Public realm or planning.
- Multi-skilled professionals.
- Strategy, policy and plans:
 - Write;
 - Influence;
 - Implement;
 - Enforce.

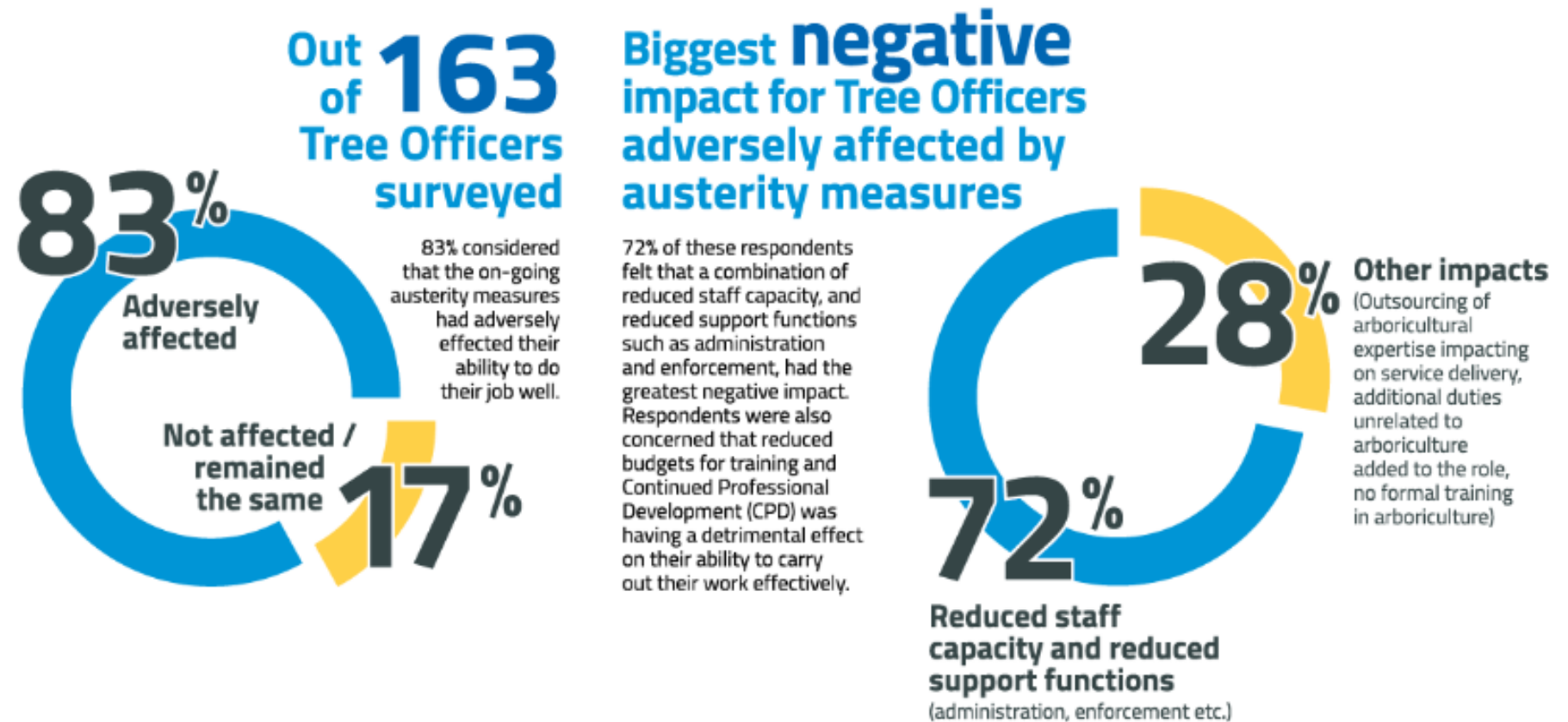


Tree officers: Challenges

- Resources.
- Climate change.
- Pests and diseases.
- How can tree and landscape plans/strategies help?

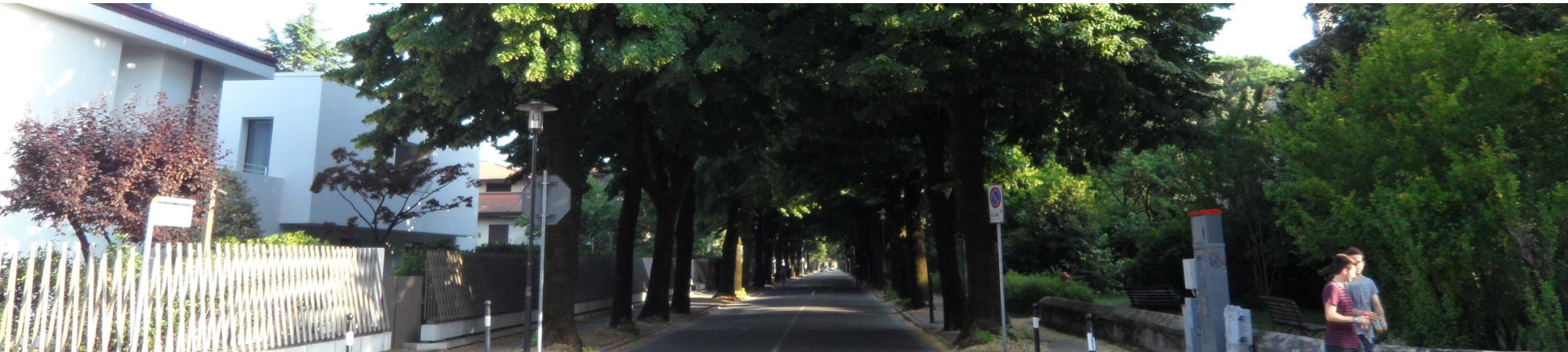


Tree Officer Survey



How can tree and landscape plans/strategies help?

- Resources: Make the case for increased budgets/more staff.
- Climate change: Future-proof the urban landscape and forest.
- Pests and diseases: Promote and enshrine biosecurity.



The value of tree and landscape plans

- Guidance.
- Support and justification.
- Forward planning.
- Evidence-based.
- Policy v strategy.
- One size does not fit all..



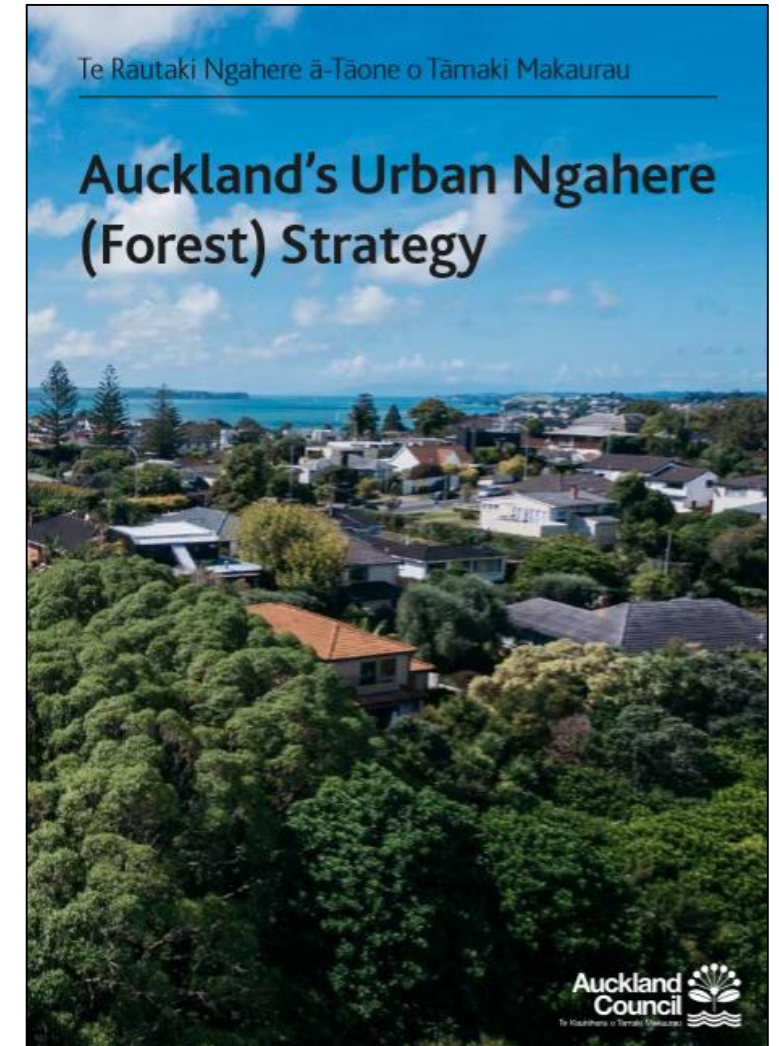
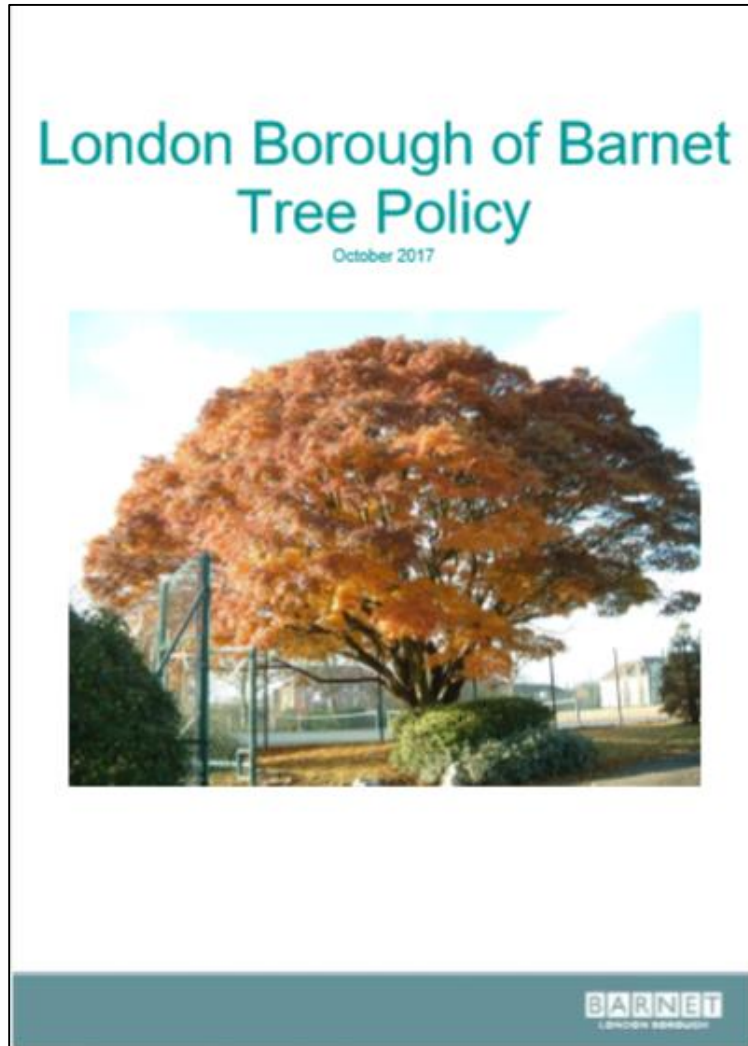
Tree and landscape plans for resilience

- Resilience in the urban forest:
 - Species diversity;
 - Biodiversity;
 - Sustainable water management;
 - Plastic-free alternatives;
 - Sustainable suppliers;
 - Biosecurity policies;
 - Contractor requirements.



Forestry England

Tree strategies: International examples



Auckland's Urban Ngahere (Forest) Strategy

- Right tree in the right place.
- Preference for native species.
- Ensure urban forest diversity.
- Protect mature, healthy trees.
- Create ecological corridors and connections.
- Access for all residents.
- Manage urban forest on public and private land.
- Deploy regulatory and non-regulatory tools.
- Manage the whole lifecycle of urban trees.



He mahere rautaki mō te ngahere ā-tāone o Tāmaki Makaurau A strategic plan for Auckland's urban ngahere (forest)

When Tāne went to the heavens – so the story goes – he was enraptured by the tūi that lived in his brother Rēhua's hair. Tāne desperately wanted to bring the tūi back to earth but he was told he must first plant trees to provide food. So Tāne introduced trees to our world and, three years later when the kahikatea blossomed, Tāne's wish came true. The tūi came to live with him.

When it comes to trees, the message is much the same. If we plant trees now, in time, we create value for our communities. We might even hear the dawn chorus – e kō i te ata – once again within urban Auckland.

Auckland is growing and changing rapidly. To accommodate this, Auckland Council has committed to a strategy of urban intensification to increase housing density, deliver the benefits associated with a compact urban form and limit the negative impacts linked with continued outward growth. Successful development requires careful planning; intensification and growth need to complement the protection and planting of trees and vegetation to create liveable neighbourhoods. Trees and vegetation also provide a range of services required for Auckland to function and thrive. These include enhanced stormwater management, air pollution removal, improved water quality, cooling to reduce the urban heat island effect, and ecological corridors to connect habitats and improve biodiversity.

Our urban ngahere faces a number of pressures. Alongside the need for urban development, amendments to the Resource Management Act (RMA) came into effect in 2015, lifting blanket tree protection in urban areas. As a result, the vast majority of trees on private urban properties are no longer protected. Threats from pests and diseases, as well as the impacts of climate change are further challenges. If we want to continue to benefit from the services provided by our urban ngahere it is essential that we better understand its status and value and plan to protect and grow it. Our urban ngahere has the mauri (life force) to care for us but needs our help to be sustainable and healthy.

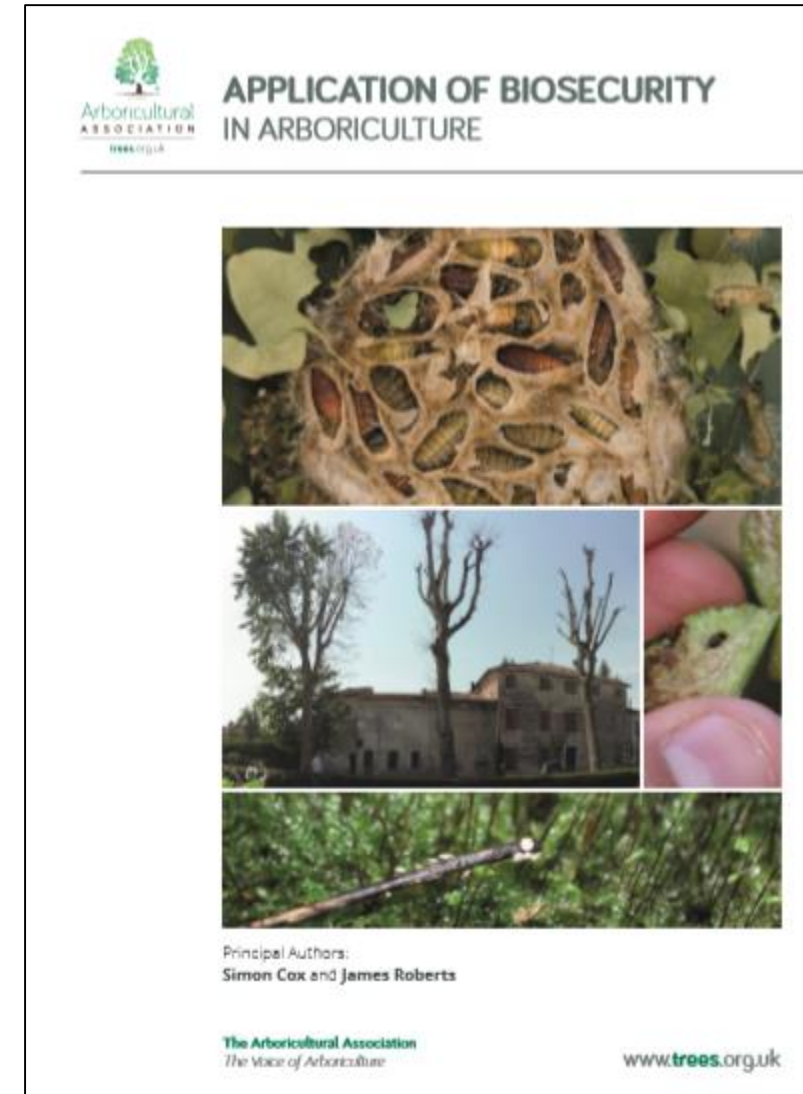


The importance of biosecurity

- Implications:
 - Plant health;
 - Environmental;
 - Amenity;
 - Cultural;
 - Financial;
 - Reputational.
- *“Imported, not invasive”*
(Prof. Lucio Montecchio).



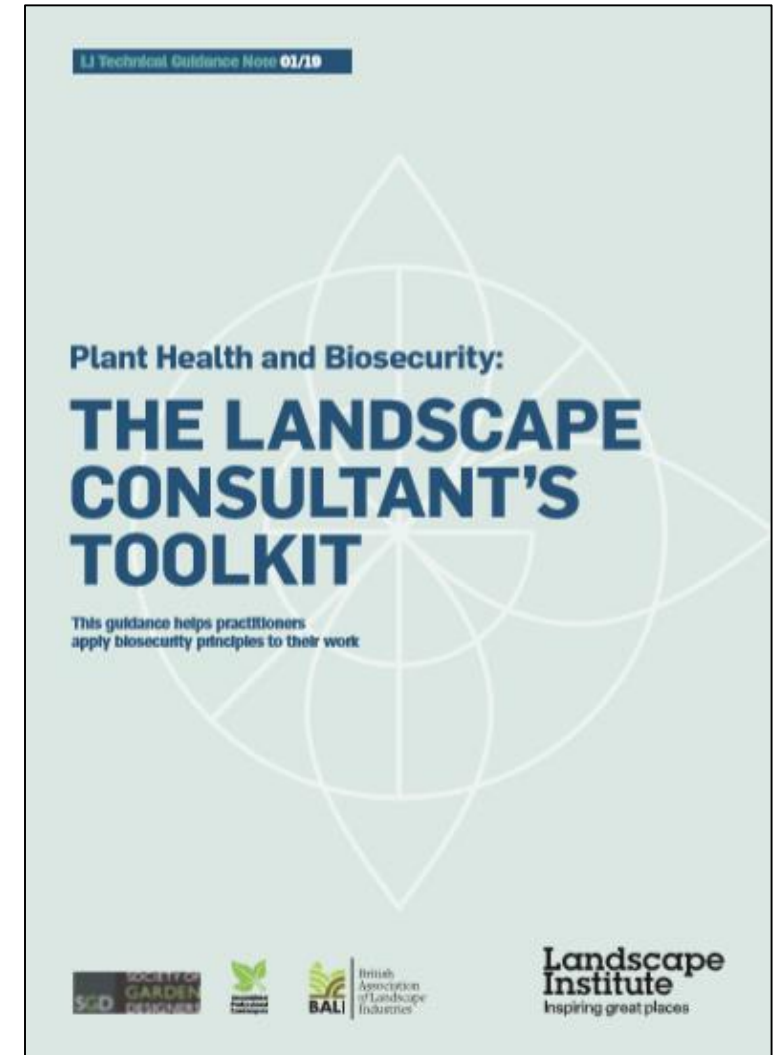
- Practical advice.
- Helpful for tree officers.
- Royal support for biosecurity.



Landscape Institute Biosecurity Toolkit

Specifying plants with confidence continued

Plant genus or species	Pests or pathogens	Control or mitigation measures	Pathways	Policy and regulations	Risk Rating
Abies	Pinewood nematode (<i>Bursaphelenchus xylophilus</i>)	Notify Forestry Commission or APHA	Cut flowers or branches; Plants for planting (except seeds bulbs and tubers); Non-squared wood	Emergency measures	30
Acer	Citrus longhorn beetle (<i>Anoplophora chinensis</i>)	Citrus longhorn beetle is not yet in the UK. However, familiarisation with the symptoms is suggested and notification of relevant authorities essential in the event of a discovery.	Cut flowers or branches; Plants for planting (except seeds bulbs and tubers)	EU Annex 1	30
	Asian longhorn beetle (<i>Anoplophora glabripennis</i>)	Asian longhorn beetle is not yet in the UK. However, familiarisation with the symptoms is suggested and notification of relevant authorities essential in the event of a discovery.	Plants for planting (except seeds bulbs and tubers); Wood and wood products; Wood packaging material	EC IAI; EPPO A1	40
	Sweet chestnut blight (<i>Cryphonectria parasitica</i>)	Suppliers must be able to supply a Plant Passport. If possible, order plants early and quarantine in a low risk area for a period of time before planting	Plants for planting (except seeds bulbs and tubers)	Annex IIB (UK protected zone) and plant passporting reqs	30



Tree officers and biosecurity

- Tree officers:
 - Specify planting.
 - Engage and oversee contractors.
 - Write/influence strategy and policy.
 - Regularly inspect their trees.
- Key role in biosecurity.
- Local Authority biosecurity policies.



London Tree Officers Association and biosecurity

- 2017 position statement.
- Pan-industry Biosecurity Working Party.
- Specific Working Groups:
 - OPM;
 - Canker stain of plane;
 - Massaria.
- Industry collaboration.
- May 2019 Seminar.



Biosecurity - Managing the Threat to London's Trees from Pests & Diseases

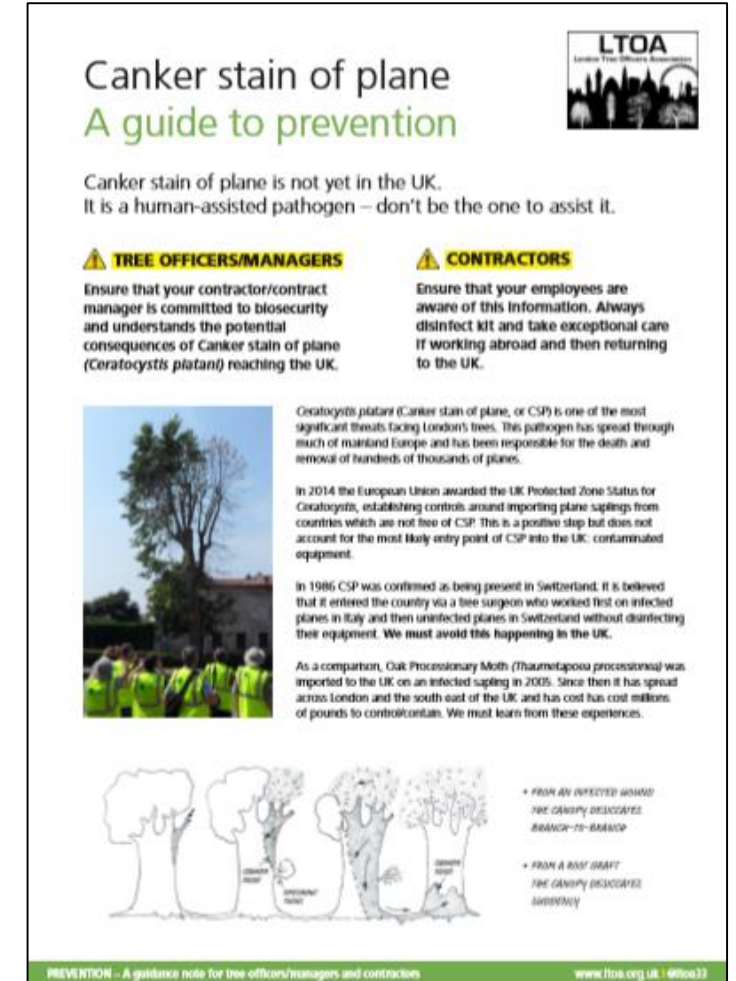
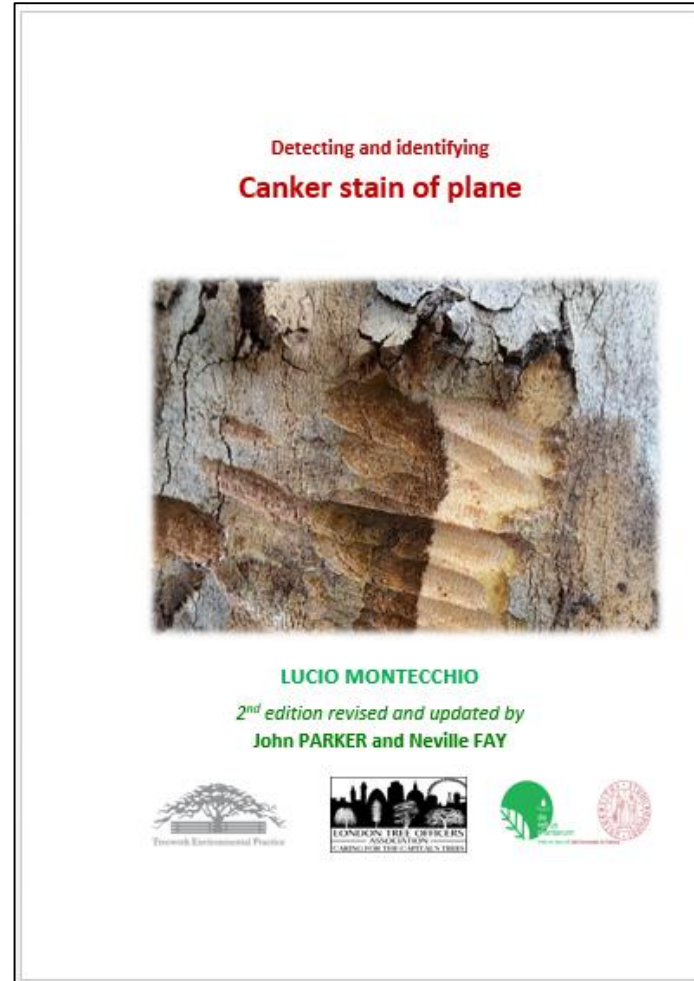


Canker stain of plane (CSP)

- *Ceratocystis platani*.
 - UK Protected Zone Status 2014.
 - LTOA CSP surveys.
 - Dissemination: document and training.
 - International network.
 - Euphresco project.
-
- Influence on tree management plans: Biosecurity, diversity.



Collaboration and knowledge sharing



Massaria

- 2013 LTOA document.
 - Industry best practice.
 - New information and input.
 - 2019 revised document.
-
- Influence on tree management plans: Increased inspection regimes.




Xylella

- Tree and landscape concern.
- Collaboration between industries.
- www.forestresearch.gov.uk/tools-and-resources/tree-alert/
- Influence on tree management plans: Increased biosecurity controls.

Forestry Commission England

Xylella fastidiosa – Bacterial leaf scorch



Xylella fastidiosa is a bacterium which causes disease in a wide range of woody plants, such as citrus and olive trees and in grape vines. Whilst not known to be present in the UK yet, it has the potential to infect several species of broadleaf trees widely grown here.





Xylella fastidiosa restricts or blocks the movement of water and nutrients through the plant with serious consequences, including death for some host plants. The pathogen is exclusively transmitted by xylem fluid feeding insects. There are several species of insects in the UK which could spread *Xylella fastidiosa*, including the common froghopper.

There are four known sub-species of the bacterium. In the UK the strain which would cause most concern is *Xylella fastidiosa* subspecies *multiplex*, which has the potential to infect the widest range of host plants, including Britain's native pedunculate oak and wych elm, as well as plane and northern red oak.



Photo: David Brown, University of Kentucky, Bugwood.org

Symptoms Guide: *Xylella fastidiosa* spp. *multiplex*

Symptoms vary depending on the host plant species and its degree of susceptibility.

 <p>Leaf margins The characteristic leaf symptoms, which are visible in summer, include browning of the leaf margins.</p> <p><small>Photo: John Galloway, University of Kentucky, Bugwood.org</small></p>	 <p>Central veins remain The last part of the leaf to be affected are the central veins.</p> <p><small>Photo: David G. Lippert, USDA Forest Service, Bugwood.org</small></p>
 <p>Yellow halo Can be distinguished from other scorch-like symptoms by the presence of a yellow halo between the area of marginal leaf necrosis and green leaf tissue.</p> <p><small>Photo: John Galloway, University of Kentucky, Bugwood.org</small></p>	 <p>Dieback Severe infections in some of the most damaging combinations of host plant and <i>Xylella</i> sub-species can result in dieback, stunting and eventual death.</p> <p><small>Photo: John Galloway, University of Kentucky, Bugwood.org</small></p>

A number of other disorders can produce symptoms similar to those caused by *Xylella fastidiosa*, including:

 <p>Anthracnose of Plane Anthracnose on plane trees caused by the fungus <i>Apogonisma veneta</i>, which results in twig death and leaf blight.</p>	 <p>Guignardia ascali Infection of horse chestnut trees by the <i>Guignardia ascali</i> fungus, causes a brown leaf blight with a yellow halo.</p>
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For more details, please visit www.forestresearch.gov.uk/xylella

KEEP IT CLEAN

Don't give pests and diseases an easy ride

Think kit
The cleaning and disinfecting of any tools used on trees, especially those suspected to be affected by a serious tree pathogen, is considered to be good practice.

Think transport
Regulations are in place which restrict movements of specified host plants from the infected regions within the EU, and from countries outside the EU, to reduce the risk of entry.

Think trees
Landings of host species such as plane, elm, prunus species and oak, must be pre-notified to the Animal and Plant Health Agency (APHA) in order to enable inspection.

If you think you have spotted a new case of this disease in a tree, then report it through the Forestry Commission's online Tree Alert form: forestry.gov.uk/treerapid

Although *Xylella fastidiosa* is not known to be present in the UK, there is a heightened risk of it being accidentally introduced since it was discovered in Italy in 2013, and then in Corsica and mainland France in 2015. You can help to slow the spread of this disease by practising good biosecurity.

Conclusions

- Tree officers are on the front line of plant health.
- Tree and landscape management plans can help.
- Wider collaboration is essential.



Thank you

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www.ltoa.org.uk

- TED Talk (YouTube):
*Why trees are better
than people*

