The Inner Temple

Tree Management Policy

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Contents

Foreword

This policy covers the Inner Temple, which includes the Grade II listed Garden, the car park and courtyards.

The aim is to protect and prolong the health of the mature tree collection across the estate, whilst recognising the climate and ecological emergency to ensure a robust collection of species for the future.

This policy is designed as a ‘living document’ and intended to be assessed periodically. The policy works in association with the ‘Landscape Succession Planning’ policy, ‘Biodiversity and Sustainability’ policy and ‘Wind Policy’.

1. Current Management Practices

1.1 Down to Earth Trees (DTE) carry out a Full Tree Inspection of all trees on site (excluding newly planted) once a year, which is subcontracted to Greg Packman, Treescape Curator for The Royal Parks.

1.2 During these inspections, if the tree officer suspects internal decay which can be due to the presence of a fungal bracket, further investigation through commissioning a PiCUS scan of the internal wood is commissioned.

1.3 In order to manage Massaria disease on the Plane Trees they are inspected three times a year which covers the active growing season, currently by Greg Packman on behalf of DTE Inspections, using binoculars on the ground. This is deemed an effective management strategy that should allow Massaia diseased branches to be spotted and dealt with before they cause branch drop.

1.4 Protecting the root zone of trees is a priority to reduce the amount of compaction. For over ten years, the areas at the base of the oldest 1770s Plane trees in the lawn has been managed as long grass/wildflower. This keeps both people and machinery off the root canopy area during the main season.

1.5 Following best practice, other areas of the Garden are managed as long grass and meadow around the base of trees reducing the amount of compaction from people and machinery. Alternatively, large beds have been created under the trees, joining up a number of trees in an area.

1.6 In December 2022, DTE were contracted to Geo-inject the root zone of the three oldest Plane Trees (T27, T28, T29) in the lawn. The probe went down to 0.6-1m at 1-2m centres, using high pressure compressed air to de-compact the ground and create a cavity, and fill the open cavities to the surface with FSC compliant enriched biochar. This is thought to improve soil structure and increase populations of beneficial bacteria and fungi such as mycorrhizae. Other possible benefits of adding biochar include increasing water holding capacity of the soil. Biochar is stable solid, rich in carbon and can endure in soil for thousands of years meaning that this is a one-off treatment

mitigating the need for cyclical re-application. From general observation, the trees responded positively to the treatment, increasing in vigour.

1.7 It has been observed that the canopy cover of the avenue of Plane trees along the Broadwalk has not been as dense in recent years. This is through observation from the Head Gardener and team, in addition to being supported by photographs (the gardeners take photographs of all areas of the Garden once a month, which includes the Broadwalk). The reduction in canopy cover was initially thought to be a reaction to the extreme heat of 2022, and increasingly hot and dry summers. The identification of Plane Lace Bug by the Forestry Commission in September 2024 will also be contributing to this.

1.8 This is a major concern for the Garden. Research and subsequent actions are taking place in order to try to boost the health of the trees to allow them to cope better with Massaria, Plane Lace Bug and extreme summers in order to prolong their longevity.

1.9 The trees on the south (Embankment) side of the Broadwalk have a very limited rootzone due to the raised boundary wall and non-permeable pathway through the centre of the Broadwalk. The trees to the north have a much larger root zone due to the grass bank.

1.10 The long beds at the base of the trees on both sides had been planted with a monoculture of *Liriope muscari*, forming a matt of evergreen ground cover. This may have helped limit compaction through keeping people from walking over the roots. Traditionally, the *Liriope* was fed to encourage flowering, which may have been detrimental to water and nutrient uptake for the trees roots, though this has not been practiced for some time. In addition, the matt of *Liriope* restricted water getting to the roots of the trees and the application of organic matter to improve the rootzone.

1.11 Soil Biolab via DTE were commissioned in winter 2024 to carry out soil testing along the Broadwalk Plane trees. This focused on the top 30cm of soil zone, with visual assessments of deeper layers taking place. The headline from the testing was that the top 10cm had the most active roots, with many roots sat on the surface. Below 30cm there were not active rooting (though there would be anchor roots

lower). Based on these finding compost has been spread over the roots on the surface to protect and DTE were commissioned to Geo-inject to 60cm and add treated biochar at the base of all the Broadwalk trees including the grass bank which took place in March 2025.

1.12 The *Liriope muscari* had already been lifted from the borders below the trees in autumn-winter 2024 to make way for a more aesthetic and biodiverse-positive planting scheme, which evolved to importantly needing to assist the ongoing health and management of the trees.

1.13 Based on the soil report, minimal disturbance to the top 30cm of soil is recommended. Therefore, raising the soil level between the trees for planting into, in addition to planting with minimal disturbance to the tree roots.

1.14 Following the Geoinjection to relive compaction, any further compaction of the rootzones will be minimised by avoiding machinery such as the heavy Kubota ride on mower. This includes the grass bank on the north side where light weight, electric, pedestrian mowers will be employed instead. This area will also be developed into a low flowering grass-meadow to provide a cushion surface to protect the soil and minimise need for fertiliser. Irrigation from the borehole will be used for this and the borders along the Broadwalk to aid the Plane Trees providing water to the active rooting zone (0-30cm).

1.15 In February and March 2026, Field No 6 premium topsoil was added across the Broadwalk beds (avoiding the trunks and buttress of the trees) to a depth of roughly 7 inches (which dropped to roughly 6 inches when settled). Before this the overall surface level was low, this has now protected the surface roots and provided a new topsoil level to be planted into.

1.16 The new planting under the Broadwalk is a mixture of shrubs and herbaceous which will provide various levels of rootzone, helping to break compaction and increasing likelihood of beneficial mycorrhizal connections between the tree roots and that of other plants.

Actions

1. Continue yearly full tree inspections, alongside the extra Massaria inspections which cover spring, summer and autumn.
2. Follow recommendations for any works, alongside in depth monitoring such as schedule for PiCUS scans.
3. Monitor the impact of Massaria and Plane Lace Bug, whilst keeping abreast of potential pest and diseases (see fig. 3, 4, 6, 7), especially Plane Tree Wilt (also known as Canker stain, *Ceratocystis platani*) and Pine processionary moth *(Thaumetopoea pityocampa*) which affects Pine sp but also *Cedar atlantica* (which we have a large specimen in the Garden) .
4. Follow guidelines issued by Forestry Commission in relation to Pest and Disease management.
5. Continue to relieve areas of high compaction as required through Geoinjection and where appropriate add biochar and organic material (including leaf mould created from the Plane Trees on site).
6. Continue to manage areas under trees as long grass-meadow, or as beds with complimentary planting. Look for opportunities in other locations for similar if not already managed in this manner. Limit any events from impacting on Root Protection Areas (RPA).
7. Limit use of heavy machinery such as ride on mowers and tractors on rootzone, move to light weight electric alternatives.
8. Limit impact of stress from extreme temperatures and pests/disease. Use bore hole irrigation programmed at night to support weak trees such as the Plane trees on the Broadwalk whilst carrying out other initiatives to try to boost vigour.
9. Increase organic content across Broadwalk and other areas through applications of leaf mould, bark chip and composts.
10. Plan in actions to protect and boost root zones of trees in car park for when project to redesign and re-surface takes place.

Appendices

1. History & Context

1.1 The Inner Temple Garden is the largest garden in the City of London and one of the most historic sites in London. The Inn's archives record the first Gardener in 1307.

1.2 The footprint of the Garden has increased twice in its history due to land being reclaimed from the River Thames, in the 1770s for the building of Blackfriars bridge, and again in the 1860s for the Bazalgette Embankment project.

1.3 The most historic trees are the 'London' Plane trees (*Platanus x hispanica*) which date to these periods. The three trees in the lawn are the oldest dating to the 1770s, and the avenue of trees to the south were planted as part of the design by Robert Marnock, post the Embankment works in 1870.

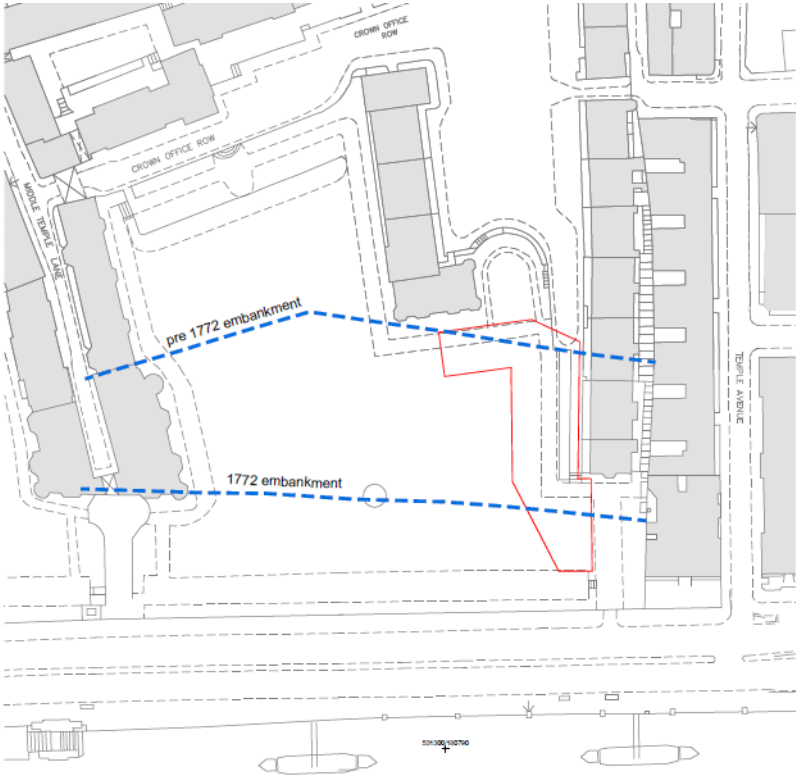

Fig 1: map of Inner Temple Garden showing previous boundaries/Thames embankments.

Fig 2: Aerial view of Inner Temple Garden

2. Notes on the mature Tree Collection (including the London Plane trees)

2.1 The current mature tree collection is heavily dependent on London Plane trees (*Platanus x hispanica,)*. There are 34 large London Plane trees across the Inner Temple estate (24 in the Garden) which makes up almost 40 percent of all the established trees.

2.2 *Platanus x hispanica,* the London Plane is a hybrid of *Platanus occidentalis* (American sycamore) and *Platanus orientalis* (Oriental Plane). In its natural habitat, the Platanus genus us often found in wet areas alongside trees like alder, willow, and poplar.

2.3 Across the estate, there are currently 87 in total 'mature' trees which are surveyed annually, made up of 24 different genera. Please note this does not include newly planted trees or those that are more akin to a large shrub such as multi-stemmed *Amelanchier.*

2.4 There is a noticeable lack of mature evergreen tree species both in the Garden and wider Inner Temple Estate. Currently, evergreen species are almost solely represented by the large *Cedrus atlanica '*Glauca Group' to the north east of the Garden, and a small to medium tree in the form of a *Lyonothamnus floribundud subsp asplenifolius* to the north west.

2.5 It has been commented there could be a historic element to the lack of evergreen trees in the Garden as when the Garden Committee requested advice from famous plantsman, William Robinson following works in the Garden in 1889, he advised against planting evergreens. Though it can be assumed that this recommendation was due to the likely ill health of evergreen species due to the pollution levels of the city at the time rather than an aesthetic choice. Historically, Plane trees were selected due to their ability to cope with the high pollution levels. Pollution levels are much lower now which gives a wider range of planting options. The lack of evergreen species across the estate does create a weak point in the collection.

2.6 The Plane trees provide the majority of canopy cover, with only two full size *Liriodendron tulipifera* and a *Juglans x mandshurica* in the Garden providing a significant canopy cover that is in any comparison.

2.7 The dependence on Plane trees across the estate (and much wider in London) creates further weakness, for instance if they were to suffer from something akin to Ash Dieback. As the Inn is largely dependent on them for canopy cover, in addition to having extremely

high historic and aesthetic contributions, it can be argued that the Inn's Plane trees are of greater significance than others, and so an elevated management strategy for them is appropriate.

2.8 Of note, though not recent, a CAVAT (Capital Asset Value for Amenity Trees) in 2015 for one of the historic 1770s Plane trees in the lawn was a value of £627,383.

2.9 Plane Trees across London have been suffering from Massaria disease since first being recorded in London in 2007 (see fig.3) . It was confirmed in the Garden from 2014 (though may have been present before). Massaria disease causes large lesions on the upper surfaces of major branches and branch dieback, and can cause branches to break off the tree and fall. It is believed to be caused, at least partly, by the fungus *Splanchnonema platani*, (previously known as *Massaria platani)*.[1] It does not kills the tree but over time will weaken the tree, and alongside other stresses this may reduce the lifespan of the tree significantly.

2.10 In summer 2024, the forestry commission identified Plane Lace Bug (see fig.4) in the Garden, a relatively new bug that feeds sap from the leaves causing early defoliation in the summer (in addition to the existing summer leaf drop). Again this does not kill the tree, but alongside other stresses is likely the tree and reduce its life span.

2.11 If there is suspected internal decay within a tree (possible due to a fungal bracket on the exterior of the tree), the tree officer will recommend carrying out a PiCUS scan which shows the internal structure of the tree and any decay.

2.12 Picus scans (see fig. 5) have been carried out on the Plane tree, T64 in the north east corner of the car park outside 3 Kings Bench Walk for which there was suspected damage to the tree roots when a repair was made to the gas lamp beside it. This was first carried out in 2012 and then again in 2017 when it did show significant internal decay. In order to manage its decline, we were advised to pollard the tree on a three year cycle and to continue to monitor the internal decay with a scan recommended within 3

[1] Forest Research, *Massaria Disease* (2025). Available online: https://www.forestresearch.gov.uk/tools-and-resources/fthr/pest-and-disease-resources/massaria-disease-splanchnonema-platani/ [Accessed 16/04/2025].

years. A PiCUS scan was last carried out in 2023 and showed little increase in the size of the internal decay, therefore the recommendation was to monitor with another within 3 years (Dec 2026).

2.13 There is also some internal decay on the Plane tree T62 between 5 and 6 Kings Bench Walk in the Car Park. The first PiCUS was carried out in Jan 2022 and then again in Dec 2023. The second scan did show an increase in amount of internal decay though it does not warrant action at this stage other than continued monitoring within 3 years (Dec 2026) .

2.14 The Plane tree T63 also in the Car Park had PiCUS scans in Jan 2022 and Dec 2023 which did not show abnormal internal decay and so the recommendation was to carry out normal inspections going forward.

2.15 Likewise the Plane Tree T28 (the middle of the three oldest Plane Trees on the lawn) had been advised to have a PiCUS scan in Nov 2024 as a small fungal bracket on the exterior. The scan showed the interior of the tree to be healthy and so the recommendation is for the normal tree inspections to continue.

Fig 3: Massaria branch (centre of photo) with distinctive orange-coloured surface on Plane Tree[2]

Fig 4: Plane Lace Bug damage on Plane tree leaf[3]

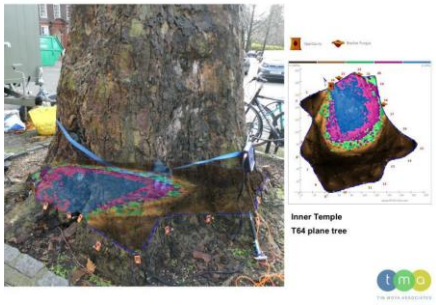

Fig 5: PiCUS scan on Plane Tree T64 with blue-pink areas showing internal decay

[2] Tree Tree, *Massaria disease of plane trees* (2012). Available online: https://www.treetree.co.uk/massaria-disease-of-planes.html [Accessed 16/04/2025].
[3] Observe a Tree, *Plane Lace Bug* (2025). Available online: https://www.observatree.org.uk/pests-and-diseases/priority-pests-and-diseases/plane-lace-bug/ [Accessed 16/04/2025].

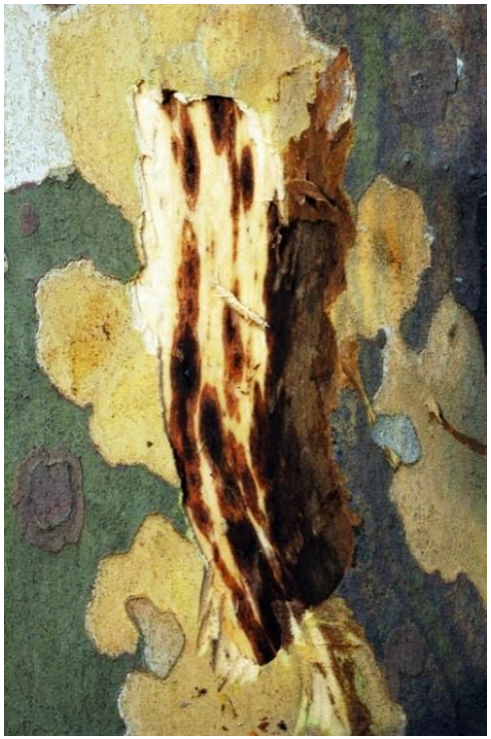

Fig 6 (left): Canker stain on Plane which causes staining of the xylem, severe wilting and yellowing of the leaves and tree death. [4] Thankfully not in the UK yet but present on the continent. Notifiable.

Fig 7 (middle): Pine processionary moth affects *Pinus sp* but also some *Cedrus sp* and *Larix sp.* Also not present yet in UK. Notifiable. [5]

[4] Forest Research, *Canker Stain of plane* (2025). Available online: https://www.forestresearch.gov.uk/tools-and-resources/fthr/pest-and-disease-resources/canker-stain-of-plane-ceratocystis-platani/ [Accessed 16/04/2025].

[5] Forest Research, *Pine processionary moth* (2025). Available online: https://www.forestresearch.gov.uk/tools-and-resources/fthr/pest-and-disease-resources/pine-processionary-moth-thaumetopoea-pityocampa/ [Accessed 16/04/2025].