

# **Massaria Disease of Plane**

## ***Splanchnonema platani***

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# The biology of *Massaria Splanchnonema platani*

- Part of the natural fungal flora of plane trees
- A weak pathogenic - endophyte
- Linked to water regulation / natural pruning
- Normally unnoticed
- Branches not stem
- Change in expression - Larger limbs affected
- Massaria will not kill trees



# The biology of *Massaria*

Linked to water regulation:

Mannheim (SW Germany) irrigation study:

9 x mature planes irrigated

3000 L daily – irrigated April – November

9 x controls

2010 irrigated = 10% branches with symptoms

2010 un-irrigated = 30% branches with symptoms

Significant decrease in *Massaria* disease

The number of new incidents in pre-monitored sites has decreased this summer

Climate change – change in environment?

# The biology of Massaria and impact on London plane



## The biology of Massaria and impact on London plane





# **So what's the problem?**



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# The biology of Massaria and impact on London plane

**Impact on planes – insignificant**

**Response by humans – potentially significant**

*“Massaria while posing a variable level of risk to public safety, is not considered in itself a threat to the tree. However an inappropriate response may well result in the degradation and loss of trees and their benefits.”*

- Repeated removal of limbs
- Crown reduction works
- Felling

# Work by the LTOA

**Working Party setup in late 2011.**

**Working Party members:**

Jake Tibbetts - LTOA

Mike Turner and Neil Tailor - Royal Parks

Neville Fay - Treework Environmental Practice

Peter Holloway - Arboricultural Association


## Work by the LTOA

**1. The position statement** – Published 17/01/2012. This sets out the aims and the core principals of the LTOA Massaria Working Party. It can be found at: <http://www.ltoa.org.uk/resources/massaria-disease-of-Plane-mdp>

**2. Part A the Practical Management Guidance** - sets out to provide managers with guidance and the tools for implementing a reasonable, balanced and proportionate response to Massaria and a sustainable management approach.

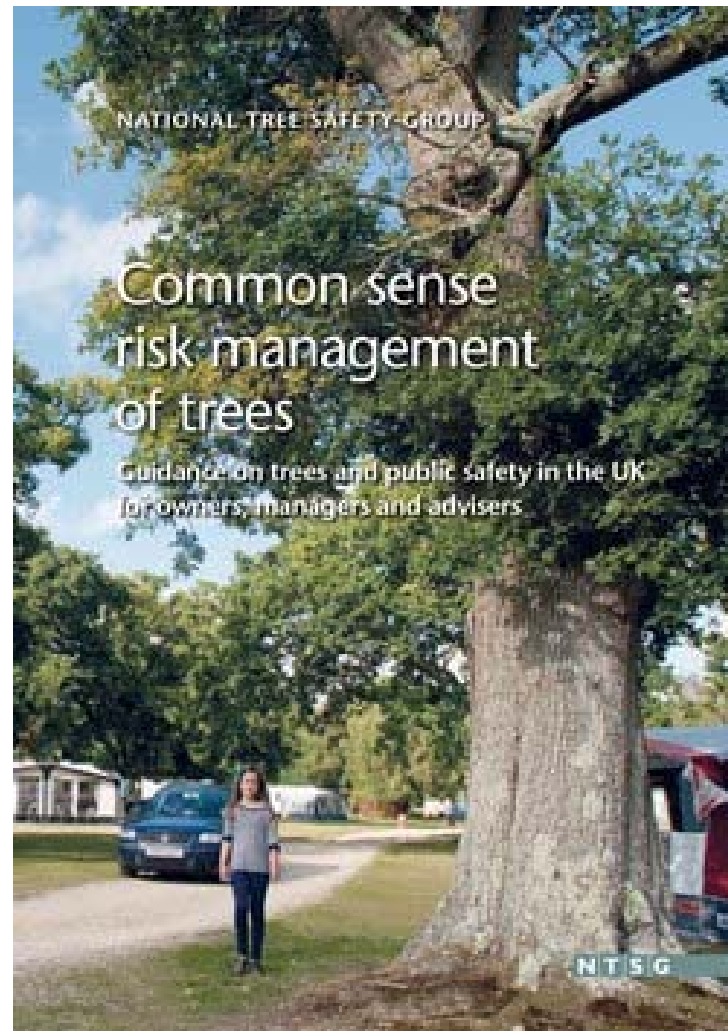
**3. Part B the Technical Information** – provides the background information that informs the theory behind and supports the approaches specified in Part A.

## Massaria Working Group Core Principles

- The MWG believes that there need be no loss of Plane trees as a result of MDP.
  - Inappropriate management of MDP affected trees could have serious social, economic, environmental and political impacts
  - London Planes are a key component of the Capital's urban forest making a vital contribution to the heritage, amenity, biodiversity and human health and wellbeing.
  - MDP involves a fungus-host relationship that requires biological understanding and monitoring
  - MDP presents a low risk to tree health – there is a greater threat to tree health and sustainability from misunderstanding the problem and inappropriate intervention**
  - Disproportionate management will result in tree loss and runs counter to the LTOA advised approach**
  - While MDP presents a public safety risk, this should be assessed and managed in a reasonably practicable way - management should therefore be based on knowledge of the real risks**
  - Tree management needs to be evidence based and take account of sustainability principles
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# Percieved V's Actual Risk



## **Work done in Islington – Initial Survey**

First identified at beginning of 2011

Identified all 7m, non-reduced, publically owned trees Planes.

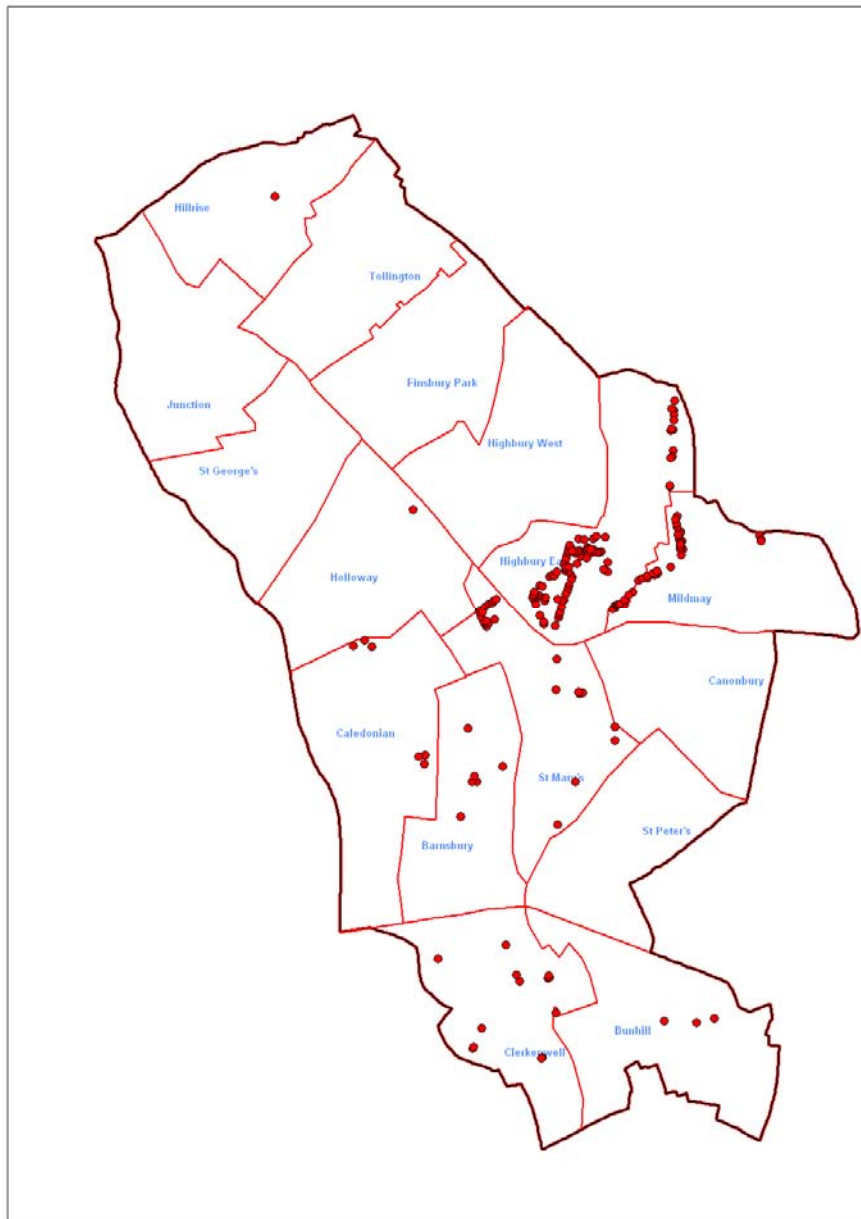
All 2000 trees on list surveyed from ground and any 'Possible Massaria'.

Results collated showing of the 2000 trees surveyed, 250 had possible signs of Massaria – 12.5%



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## Map of Islington showing Initial Distribution of Plane trees with Confirmed Massaria





# Work done in Islington – Inspection Form (Blank)

<b>Massaria Inspection Record</b>							
<b>Site Name:</b>				<b>Date:</b>			
<b>Borough:</b> ISLINGTON							
<b>ORDER CREATED BY:</b>							
<b>WORKS ORDER REF:</b>							
<b>UNIQUE TREE NUMBER (6-digits):</b>							
<b>NAME OF CLIMBER:</b>							
<b>Exact Works Undertaken:</b>							
<b>NUMBER OF INFECTED BRANCHES REMOVED:</b>							
Branch Number	% of Live Wood	Length of Branch (cm)	Diameter at thickest point (mm)	Diameter at thinnest point (mm)	Height from ground level (m)	Branch Orientation (Compass Point)	Branch Tier (Trunk (T), Primary (1°), Secondary (2°), Tertiary (3°))
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

**Glossary:**

**% of Live Wood** – look at the thickest part of the branch once removed and see how much uninfected wood is present.

**Length of Branch** – measure entire length of branch that was removed, not just the length of infection.

**Diameter at thickest point (mm)** – measure diameter at the point that branch has been removed closest to the stem/trunk. (If bud/twig at tip put 1mm)

**Diameter at thinnest point (mm)** – measure diameter at the point on the branch furthest from the stem/trunk. (If bud/twig at tip put 1mm)

**Height from ground level (m)** – this is the measured from the ground to the middle point of the wound left on the stem.

**Branch Orientation** – direction the branch extends from the trunk using points of the compass. (i.e. – NW)

**Branch Tier** – The type of branch that has been removed. (Trunk = main trunk removed; Primary = Large limb attached to trunk; Secondary = smaller limb attached to Primary branch; Tertiary = small branch attached to Secondary branch)

**P.T.O.**

Branch	1	2	3	4	5	6	7	8	9	10
<b>Crown Zone</b>										

For each branch listed in the table on Page 1, note the **Crown Zone (1-5)** using the image above as a guide.

**Recommendations for Future Action:**  
*(Detail any follow up works that may be necessary and any other appropriate information)*

**WORK COMPLETED (Sign & Date)**

Once completed, this form must be:

1. Passed back to the contract manager;
2. Scanned and saved as a PDF document;
3. E-mailed to the person who created the order.

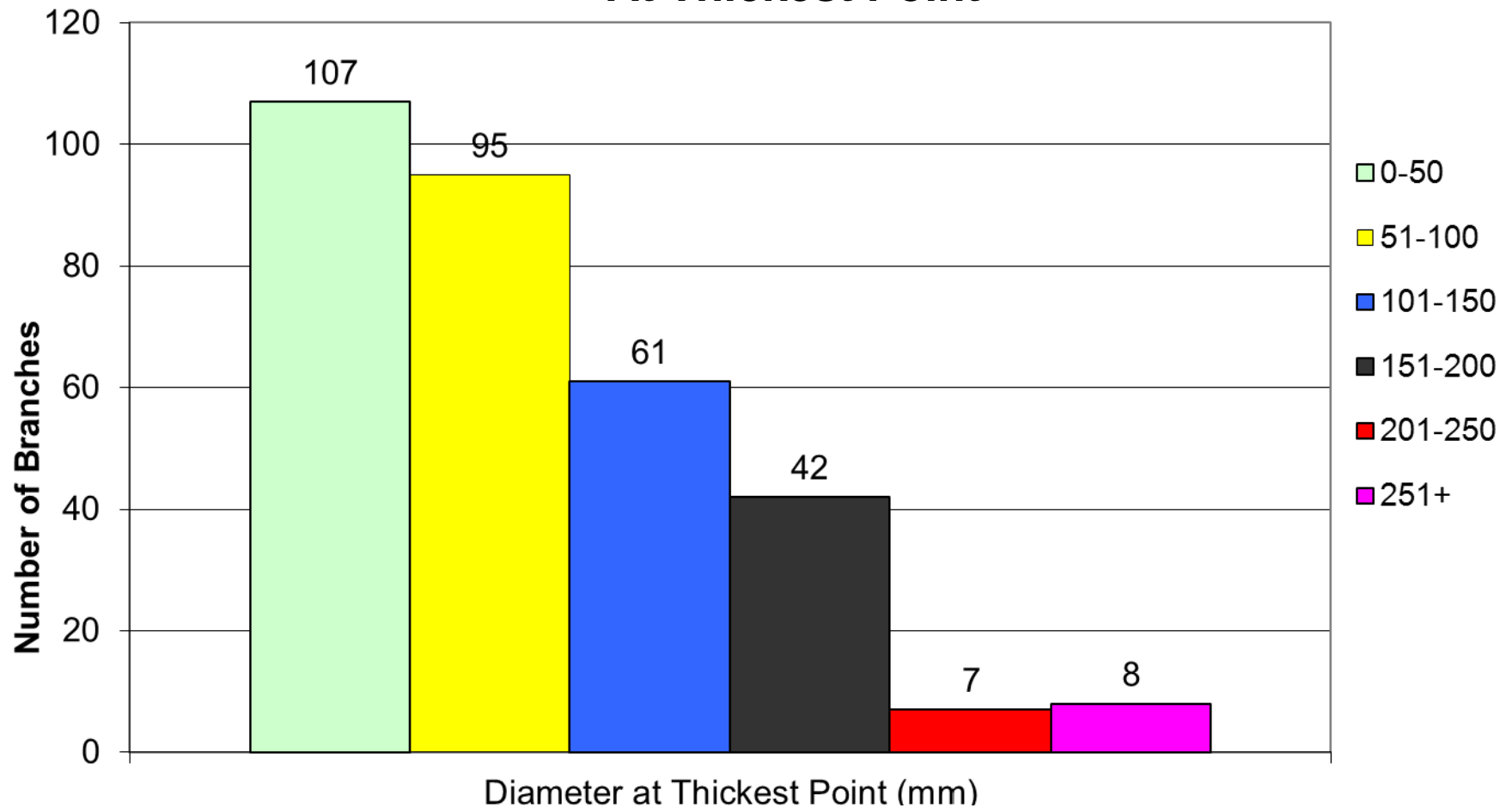
**All parts of the form must be completed.**

# Key Information Recorded

- How many branches per tree
- Where in the crown
- Branch Orientation
- Height of branch
- Length of branch
- Thickness of branch
- Branch Tier



## Data Interpretation – Massaria Branch Diameter At Thickest Point









# Impact on Islington + Proposals

## Impacts

Regular inspections – 3 times a year

Significant impact on tree work in first year

## Proposals

Training tree wardens

Letter drop to protected plane trees

More Trials + More Analysis = Better Knowledge + Understanding

# One Message to Take Away

Massaria is not considered in itself a threat to the tree

An inappropriate and disproportionate response may well result in a degradation and loss of trees and their benefits.