ARBORICULTURAL CONSULTANTS

REPORT ON THE HEALTH AND SAFETY INSPECTION OF TREES

AT

FROGNAL LANE GARDENS

BY

ARBORICULTURAL SOLUTIONS LLP

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REPORT ON TREE INSPECTION AT FROGNAL LANE GARDENS

1. Introduction

1.1. Instructions

1.1.1. We are instructed by Robin Wilson of Ground Floor Flat, 26 Frognal Lane, London NW3 7DT to visit the above site to inspect and report on the condition of a number of mature trees within the gardens. We are to make recommendations for their management where considered necessary.

1.2 Drawings and Documents

1.2.1. A site plan indicating the approximate position of the trees was provided.

2. Report on site visit

2.1. General

2.1.1. The site was inspected by Fiona Critchley B. Sc. (Sp. Hons), Ad Dip. F. Arbor. A, Tech Cert. (AA), R.F.S Cert Arb. on 17th October 2016. All arboricultural data contained in this report was recorded at that time.

2.1.2. Weather conditions were sunny with light winds and good visibility.

3. Tree inspection and methodology

3.1. Inspection

3.1.1. The trees surveyed were identified and inspected from ground level only and were not climbed. No invasive examination technique (such as increment boring, or internal decay detection) was carried out. As the inspection was visual only, no guarantee, either expressed or implied, of the internal condition of the wood of these trees can be given.

3.2. Marking

3.2.1. Trees surveyed were plotted and data recorded on the survey table.

3.3. Data

- Tree reference number
- Species - Common name
- Height in metres
- Number of stems
- Trunk diameter (d.b.h) in millimetres at 1.5 metres above ground level unless stated otherwise in the Tree Schedule
- Crown radius (on the compass rose)
- Age-class (young, early mature, mature, over-mature, veteran)
- Estimated remaining contribution in years (less than 10, 10-20, 20-40, more than 40)
- General observations, particularly of structural and/or physiological condition
- Management recommendations

Survey sheet entries are shown at Appendix A of this report.

4. Tree Preservation Orders and Conservation Areas

4.1.1. The Town and Country Planning (Tree Preservation) (England) Regulations 2012 allows for trees either as groups, or individuals, or as woodlands, to be protected by Tree Preservation Orders (TPO). These have the effect of preventing the cutting down, topping, lopping, uprooting, wilful damage or wilful destruction of trees except in certain circumstances, other than with the consent of the local planning authority.

4.2.2. A Conservation Area is an area designated by the Local Planning Authority as one of "special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance". Special controls exist with regard to demolition and alteration of buildings; Listed Building Consent must also be obtained for any demolition, even if the building is not itself listed. Similarly, trees are given some protection with the requirement for the local authority to be given six weeks written notice before carrying out any work on trees; this gives the authority time to decide if a TPO is necessary.

4.2.3. Online enquiries with London Borough of Camden Planning Services have confirmed that the gardens lie within the Redington Frognal Conservation Area. It was not possible to check the TPO status of the trees surveyed and this must be confirmed before any tree works are undertaken.

5. Management recommendations

5.1. Risk Management

5.1.1. The main question in assessing the need for remedial action is whether failure to carry out such action would leave an unacceptable risk to persons or property. Topping or complete removal of a tree would remove all possibility of injury or damage, however, the concept of risk management is gaining acceptance on the part of tree owners and managers. If the risk is quantified as far as can be achieved with available methods appropriate decisions about remedial action can be taken. As with the assessment of hazards and risks, the decision whether or not to take remedial action must be made in the knowledge that there can never be an absolute guarantee of safety for trees or any other structures exposed to extremes of weather.

5.1.2. The choice of remedial action must be determined primarily by the need to remove or mitigate a hazard. Most forms of remedial action are directed towards defects in trees, the type and severity of treatment required can usually be determined by the nature of the defect and its estimated influence on the safety factor of the tree or the affected part of the tree.

5.1.3. Most types of hazard involve the potential failure of a tree or part of a tree under its own weight or as a result of movement in the wind. In many sure cases the likelihood of failure can be lessened by cutting back branches so the load placed on the defective zone by weight or wind pressure is reduced. This can be achieved effectively by shortening the 'lever arm' of the structure, for example, by reducing the height of the tree or the length of an individual hazardous branch, and by repeating such treatment if subsequent growth re-creates the hazard. Another way of reducing the 'sail area' would be to thin the crown of the tree. This practice can be combined with crown reduction, and the combination tends to produce smaller wounds than reduction alone and fewer wounds than thinning alone.

5.2. Notes on Massaria Disease of Plane (MDP).

5.2.1. The London Plane (Platnus x hispanica) is commonly planted in London and is prized for both its amenity value and its tolerance to urban conditions including soil compaction, restricted rooting, drought, intensive pruning and air pollution.

5.2.2. This species of tree is however subject to infection by a species of fungus called *Splanchnonema platani*, more commonly referred to as Massaria Disease of Plane [MDP]. Historically this fungus was viewed as being common only in the 'warmer Mediterranean climates and southern United States' where it acted as a 'weak parasite … only capable of causing minor damage.' First discovered in England in 2003 it caused no significant problems until 2009 when it was associated with branch failures on Plane trees within the Royal Parks in London.

5.2.3. MDP is a fungus that occurs naturally in Plane trees which, capable of lying dormant until conditions are suitable, has the capacity to kill both the bark and cambium on twigs and branches. On smaller branches, up to 150mm diameter, the infected branch may be killed within a year whilst on larger branches infection may result in a strip of dead bark on its upper surface, something that is difficult to identify from the ground.

5.2.4. In some instances, MDP has been associated with the failure of infected branches. Branches can decay rapidly and failure may occur within as little as four months. Infected branches may therefore pose a risk to persons and property unless identified and dealt with accordingly.

5.2.5. Research into MDP is ongoing although it is known that it generally affects Plane trees over 40 years of age, occurs most frequently on shaded lower branches and is typically not seen on regularly pollarded specimens. Incidence of the disease is thought to be influenced by factors such as drought, soil rooting volume and tree health.

5.2.6. Should MDP be found on a Plane tree then expert professional advice should be sought. The disease will not kill the tree but may result in it shedding twigs or branches with obvious implications for health and safety. Infected trees should be assessed in relation to the risk that they pose, and appropriate steps taken to ensure that this is reduced to acceptable levels.

5.2.7. Where possible Plane trees should be managed in a manner that promotes health and vitality. Particular attention should be paid to reducing moisture stress through irrigation, environmental improvement and moisture retention.

5.2.8. It is, as yet, too early to determine the long-term implications of this disease for the London Plane. Trees should however be inspected frequently and, where branches are found that pose a risk to people or property then they should be dealt with in a manner that gives appropriate weight to both public safety and tree health.

5.2.9. Any pruning of infected trees should be carried out with due regard to bio-security. All tools and equipment should be disinfected on completion of the job and all arisings must be dealt with in a manner that avoids spreading any spores that may be present.

6. Arboricultural Standards

6.1.1 Implementation of works: Any tree works should be done in accordance with the British Standard Recommendations for Tree work, BS 3998 2010 or as modified by later research. Works should be undertaken by properly qualified and experienced tree contracting company as recommended by a local authority or one approved by the Arboricultural Association. A Register of Contractors is available from The Arboricultural Association The Malthouse, Stroud Green, Standish, Stonehouse,

Gloucestershire, GL10 3DL, England. Tel +44 (0) 1242 522152 Fax +44 (0) 1242 577766
Email: admin@trees.org.uk. Web: www.trees.org.uk

6.1.2. Climbing irons or spikes should only be used on trees that are being removed. They should not be used whilst pruning trees to be retained.

6.1.3. Statutory wildlife implications: Wildlife in this country is afforded protection under the Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000. Statutory protection is given to birds, bats and other species that inhabit trees. Tree work is governed by these statutes and advice should be sought from an ecologist before undertaking any works that may constitute an offence.

Report by Fiona Critchley B.Sc. (sp. Hons), RFS (Cert Arb), Arbor. A. Tech Cert., F. Arbor.A.

Checked by G. M. Causey B. Sc. (Hons), RFS (Cert. Arb), F. Arbor. A.

Tree No	Species	Height (m)	Stem Number	DBH (mm)	Crown radius north (M)	Crown radius East (M)	Crown radius South (M)	Crown radius West (M)	Age class	Est'd rem'ing cont'n (yrs)	Comments	Tree works	Priority (yrs)
1	London Plane	20	1	1010	9	9	7	10	M	40+	Normal vigour. Re-grown pollard. Rubbing branches causing physical damage. Light deadwood in crown. Previously crown reduced. Pollarded at 4m. Occluded wounds at pollard points. Well-furnished crown.	Reduce crown to previous pruning points.	3
2	Wild Cherry	11	2	450	4.5	7.5	5	4	M	10+	Low vitality. Suppressed tree. Leaning east. Exposed roots. Ivy on stem. Stem divides at ground level. Crown becoming sparse. Unbalanced crown shape. Crown distorted due to group pressure. Light deadwood in crown. Possible Honey Fungus.	Crown clean & reduce 20%.	5
4	Weeping Willow	4	1	270	5	3	3	4	EM	40+	Normal vigour. Average condition. Suppressed tree. Leaning North. Crown distorted due to group pressure. Rubbing branches causing physical damage. Light deadwood in crown.		

Tree No	Species	Height (m)	Stem Number	DBH (mm)	Crown radius north (M)	Crown radius East (M)	Crown radius South (M)	Crown radius West (M)	Age class	Est'd rem'ing cont'n (yrs)	Comments	Tree works	Priority (yrs)
5	London Plane	20	1	1050	8	5	4	5	M	40+	Normal vigour. Re-grown pollard. Ivy on stem. Light deadwood in crown. Previously crown reduced. Previously pollarded at 5m. Occluded wounds at pollard points.		
8	London Plane	9	1	1250	6	6	6	6	M	20+	Normal vigour. Re-grown pollard. Rubbing branches causing physical damage. Light deadwood in crown. Previously crown reduced. Previously pollarded at 5m. Occluded wounds at pollard points. Heavily crown reduced. Dense regrowth. Minor decay pockets at pollard points.		

Tree No	Species	Height (m)	Stem Number	DBH (mm)	Crown radius north (M)	Crown radius East (M)	Crown radius South (M)	Crown radius West (M)	Age class	Est'd rem'ing cont'n (yrs)	Comments	Tree works	Priority (yrs)
9	London Plane	15	1	930	7	4	3	3	M	20+	Normal vigour. Re-grown pollard. Exposed roots. Rubbing branches causing physical damage. Light deadwood in crown. Previously crown reduced. Previously pollarded at 4m. Occluded wounds at pollard points. Minor decay pockets at pollard points.		
10	London Plane	18	1	1090	9	11	7	7	M	40+	Normal vigour. Re-grown pollard. Exposed roots. Rubbing branches causing physical damage. Light deadwood in crown. Previously crown reduced. Previously pollarded at 5m. Occluded wounds at pollard points. Fungal bracket on partially occluded wound below pollard point on south side (possibly *Perenniapora*) Minor decay pockets at pollard points.		

Tree No	Species	Height (m)	Stem Number	DBH (mm)	Crown radius north (M)	Crown radius East (M)	Crown radius South (M)	Crown radius West (M)	Age class	Est'd rem'ing cont'n (yrs)	Comments	Tree works	Priority (yrs)
11	London Plane	18	1	1200	10	8	7	9	V	40+	Normal vigour. Re-grown pollard. Bark wounds present. Possible Massaria present. Crown distorted due to group pressure. Rubbing branches causing physical damage. Light deadwood in crown. Previously crown reduced. Previously pollarded at 4m. Occluded wounds at pollard points. Minor decay pockets at pollard points.	Massaria specification prune	1

Tree No	Species	Height (m)	Stem Number	DBH (mm)	Crown radius north (M)	Crown radius East (M)	Crown radius South (M)	Crown radius West (M)	Age class	Est'd rem'ing cont'n (yrs)	Comments	Tree works	Priority (yrs)
12	London Plane	16	1	1350	6	9	8	7	M	40+	Normal vigour. Re-grown pollard. Occluded wounds on trunk. Bark wounds present. Possible Massaria present. Crown distorted due to group pressure. Rubbing branches causing physical damage. Light deadwood in crown. Previously crown reduced. Previously pollarded at 4m. Occluded wounds at pollard points. Minor decay pockets at pollard points. Exudates from partially occluded pruning wound at 1 to 1.6m on north side. Decay extends approx 2m into trunk.	Massaria specification prune.	1

Tree No	Species	Height (m)	Stem Number	DBH (mm)	Crown radius north (M)	Crown radius East (M)	Crown radius South (M)	Crown radius West (M)	Age class	Est'd rem'ing cont'n (yrs)	Comments	Tree works	Priority (yrs)
13	London Plane	16	1	1000	8	8	8	8	M	40+	Diameter estimated. Normal vigour. Re-grown pollard. Occluded wounds on trunk. Bark wounds present. Crown distorted due to group pressure. Rubbing branches causing physical damage. Light deadwood in crown. Previously crown reduced. Previously pollarded at 5m. Occluded wounds at pollard points. Minor decay pockets at pollard points. Tumour/nodular outgrowth around base to approx 0.75m.		
14	Small-leaved Lime	12	1	390	6	6	6	6	EM	40+	Normal vigour. Occluded wounds on trunk. Well balanced full healthy crown. Rubbing branches causing physical damage. Light deadwood in crown. Decay pockets in pruning wounds. Base not seen.		

Tree No	Species	Height (m)	Stem Number	DBH (mm)	Crown radius north (M)	Crown radius East (M)	Crown radius South (M)	Crown radius West (M)	Age class	Est'd rem'ing cont'n (yrs)	Comments	Tree works	Priority (yrs)
17	London Plane	16	1	1290	9	10	7	9	M	20+	Normal vigour. Re-grown pollard. Occluded wounds on trunk. Unbalanced crown shape. Crown distorted due to group pressure. Rubbing branches causing physical damage. Light deadwood in crown. Previously pollarded at 5m. Occluded wounds at pollard points. Decay pockets at pollard points. Limb shed at pollard point in past.	Reduce crown 25%.	1
20	London Plane	17	1	1240	10	9	7	7	M	20+	Normal vigour. Re-grown pollard. Occluded wounds on trunk. Ivy on stem. Possible Massaria present. Unbalanced crown shape. Crown distorted due to group pressure. Rubbing branches causing physical damage. Light deadwood in crown. Previously pollarded at 5m. Occluded wounds at pollard points. Minor decay pockets at pollard points.	Massaria specification prune.	1

Tree No	Species	Height (m)	Stem Number	DBH (mm)	Crown radius north (M)	Crown radius East (M)	Crown radius South (M)	Crown radius West (M)	Age class	Est'd rem'ing cont'n (yrs)	Comments	Tree works	Priority (yrs)
21	London Plane	20	1	820	7	8	7	8	M	40+	Normal vigour. Re-grown pollard. Leaning east. Occluded wounds on trunk. Ivy on stem. Unbalanced crown shape. Crown distorted due to group pressure. Previously crown reduced. Previously pollarded at 6m. Occluded wounds at pollard points.		
22	Purple-leaf Plum	8	3	310	4	4	4	6	M	10+	Normal vigour. Average condition. Leaning west. Basal decay present. Bark wounds on surface roots. Trunk decay present. Multiple stems at ground level. Included bark present in main fork. Rubbing branches causing physical damage. Light deadwood in crown. Has lost stem at base in past.	Reduce crown 20%.	3
23	London Plane	14	1	1060	4	4	4	4	M	40+	Normal vigour. Re-grown pollard. Previously pollarded at 5m. Minor decay pocket at pollard point. Recently crown reduced.		

Tree No	Species	Height (m)	Stem Number	DBH (mm)	Crown radius north (M)	Crown radius East (M)	Crown radius South (M)	Crown radius West (M)	Age class	Est'd rem'ing cont'n (yrs)	Comments	Tree works	Priority (yrs)
24	London Plane	16	1	930	6	4	4	4	M	40+	Normal vigour. Re-grown pollard. Stem divides above 1.5m. Crown distorted due to group pressure. Rubbing branches causing physical damage. Previously crown reduced. Previously pollarded at 5m. Minor decay pocket at pollard point.		
25	London Plane	20	1	740	5	7	6	6	M	40+	Normal vigour. Re-grown pollard. Stem divides above 1.5m. Crown distorted due to group pressure. Rubbing branches causing physical damage. Previously crown reduced. Previously pollarded at 5m. Decay pockets at pollard point. Potential decay column at pollard point.	Reduce crown 30%.	3

Tree No	Species	Height (m)	Stem Number	DBH (mm)	Crown radius north (M)	Crown radius East (M)	Crown radius South (M)	Crown radius West (M)	Age class	Est'd rem'ing cont'n (yrs)	Comments	Tree works	Priority (yrs)
26	London Plane	26	1	860	7	8	8	8	M	40+	Normal vigour. Re-grown pollard. Occluded wounds on trunk. Decay present on stem. Possible Massaria present. Crown distorted due to group pressure. Rubbing branches causing physical damage. Light deadwood in crown. Previously pollarded at 5m. Minor decay pockets at pollard point.	Massaria specification prune.	1
27	London Plane	16	1	730	8	5	9	0	M	20+	Normal vigour. Re-grown pollard. Occluded wounds on trunk. Decay present on stem. Stem divides above 1.5m. Possible Massaria present. Unbalanced crown shape. Crown distorted due to group pressure. Rubbing branches causing physical damage. Light deadwood in crown. Previously pollarded at 5m. Minor decay pockets at pollard point.	Massaria specification prune.	1

Tree No	Species	Height (m)	Stem Number	DBH (mm)	Crown radius north (M)	Crown radius East (M)	Crown radius South (M)	Crown radius West (M)	Age class	Est'd rem'ing cont'n (yrs)	Comments	Tree works	Priority (yrs)
28	London Plane	16	1	730	5	5	4	2	M	20+	Declining. Re-grown pollard. Exposed roots. Occluded wounds on trunk. Decay present on stem. Bark wounds present. Possible Massaria present. Crown distorted due to group pressure. Rubbing branches causing physical damage. Light deadwood in crown. Previously pollarded at 4m. Decay pockets at pollard point. Decay column from pollard into trunk. Advanced basal decay.	Fell	1
30	London Plane	13	1	930	5	5	5	5	M	40+	Normal vigour. Re-grown pollard. Exposed roots. Decay present on stem. Previously pollarded at 5m. Minor decay pocket at pollard point. Recently crown reduced.		

Tree No	Species	Height (m)	Stem Number	DBH (mm)	Crown radius north (M)	Crown radius East (M)	Crown radius South (M)	Crown radius West (M)	Age class	Est'd rem'ing cont'n (yrs)	Comments	Tree works	Priority (yrs)
31	London Plane	15	1	900	4	5	5	3	M	40+	Normal vigour. Re-grown pollard. Exposed roots. Stem divides above 1.5m. Unbalanced crown shape. Previously pollarded at 5m. Minor decay pocket at pollard point. Decay in upper side of south stem. Recently crown reduced.		
32	Ash	22	2	410	6	6	6	6	M	20+	Normal vigour. Average condition. Bark wounds present. Stem divides at ground level. Included bark present in main fork. Well balanced full healthy crown. Light deadwood in crown. Previously crown reduced. Minor exudates at base.	Crown reduce to previous pruning points.	5
34	London Plane	9	1	1200	4	4	3	3	M	40+	Normal vigour. Re-grown pollard. Stem divides above 1.5m. Unbalanced crown shape. Previously pollarded at 5m. Minor decay pocket at pollard point. Decay in upper side of east stem. Recently crown reduced.		

Tree No	Species	Height (m)	Stem Number	DBH (mm)	Crown radius north (M)	Crown radius East (M)	Crown radius South (M)	Crown radius West (M)	Age class	Est'd rem'ing cont'n (yrs)	Comments	Tree works	Priority (yrs)
35	London Plane	9	1	860	5	5	5	5	M	40+	Normal vigour. Re-grown pollard. Stem divides above 1.5m. Unbalanced crown shape. Previously pollarded at 5m. Minor decay pocket at pollard point. Decay in upper side of west stem. Recently crown reduced.		
36	London Plane	9	1	1050	4	4	4	4	M	40+	Normal vigour. Re-grown pollard. Stem divides above 1.5m. Unbalanced crown shape. Previously pollarded at 5m. Minor decay pocket at pollard point. Decay in upper side of west stem. Recently crown reduced.		
37	London Plane	15	1	1030	5	4	5	5	M	40+	Normal vigour. Re-grown pollard. Occluded wounds on trunk. Decay present on stem. Stem divides above 1.5m. Unbalanced crown shape. Previously pollarded at 5m. Minor decay pocket at pollard point. Decay in upper side of west stem. Recently crown reduced.		

Tree No	Species	Height (m)	Stem Number	DBH (mm)	Crown radius north (M)	Crown radius East (M)	Crown radius South (M)	Crown radius West (M)	Age class	Est'd rem'ing cont'n (yrs)	Comments	Tree works	Priority (yrs)
38	London Plane	11	1	940	0	2	4	4	M	20+	Re-grown pollard. Decay present on stem. Stem divides above 1.5m. Unbalanced crown shape. Previously pollarded at 5m. Decay pocket at pollard point. Has had stem removed at pollard point with potential decay column into trunk. Recently crown reduced.		


plane
ash
oak
FROGNAL LANE
83.6m
BM 83.83m
BM 72.06m
68.8m
LIME
WILLOW
CHERRY
PRUNUS
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2
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