

Tree Survey

on behalf of

The City of London



Location: Woodford Green Avenue

Ref: ITS/TS/EPPFOR16

Report by: GAC
Date: 22/02/16

Islington Tree Service
1 Cottage Road, London, N7 8TP
Email: treeservice@Islington.gov.uk

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1 Introduction

1.1 Client Brief - Instruction

- 1.1.1 Islington Tree Service has been commissioned by Gavin Bodenham, Senior Conservation Officer, Open Spaces Department, Epping Forest, City of London to undertake a tree survey for the existing tree population comprising the Woodford Green Avenue.

1.2 Documents Supplied

- 1.2.1 Mr Bodenham, supplied the following documents:
1. Excerpt from 'The Report of the Superintendent of Epping Forest' dated 02 September 1966
 2. Excerpt from 'The Report of the Superintendent of Epping Forest' dated 07 October 1966
 3. Public Note entitled 'IN A MANNER OF SPEAKING' issued by the Superintendent of Epping Forest (undated)

1.3 The Author

- 1.3.1 This report has been compiled by Geoff Clack, Tree Inspector for Islington Council. Full details of relevant qualifications and experience are located in Appendix 8.2.

2 Tree Survey

2.1 Site visit

- 2.1.1 The site was visited on the 22nd January 2016 to record the relevant tree data.
- 2.1.2 The weather at the time of the survey was raining, but with reasonable visibility.
- 2.1.3 Location plans can be found in section 3 of this report and in section 9 of the Appendices. The plans are for illustrative purposes only and should not be used for direct scaling of measurements.

2.2 Scope of the Tree Survey

- 2.2.1 The objective of the report is to survey the subject trees in order to assess their general condition; to record defects and to make recommendations for safety and maintenance works, where necessary.

2.3 Tree Survey Method

- 2.3.1 All observations were from ground level with the aid of binoculars. The height of each subject tree was measured using a clinometer, unless otherwise indicated.
- 2.3.2 The trees were inspected on the basis of the Visual Tree Assessment method expounded by Mattheck and Broeler (1994) and hazard assessment to Lonsdale D. (1999).
- 2.3.3 All data was recorded on Epping Forest's *Arbortrack* software management system.

3 Site Overview

- 3.1.1 The Woodford Green Avenue is a double avenue containing a total number of 91 avenue trees and a number of small understorey trees, located on the East side of Woodford Green, Greater London, IG8. It commences approximately 20m to the north of the Winston Churchill Statue at the Junction of High Rd (A1199) and Broomhill Walk and extends northeast in parallel with Broomhill Walk for 480m until it meets the A1009. It is bordered at its Northwest end for 115m by Woodford Green Cricket Club Ground.



- 3.1.2 The Churchill Statue was awarded grade II listed status in January 2016. The Woodford Green Avenue is located within a conservation area.

4 History of The Avenue

4.1 1880 Black Poplar Avenue

- 4.1.1 A double avenue of 79 Black Poplars was originally planted at this location in 1880⁽¹⁾. However, in 1966, after a reported incident whereby a live branch from one of the poplars fell close to a child, the trees were assessed to be hazardous due to *'that brittleness associated with the age of the tree'*⁽²⁾ and a decision was made by the Superintendent of Epping Forest to fell and replant the avenue. The alternative options to prune the heavier branches or to top the trees were dismissed as it was considered they *'would disfigure the trees'*⁽²⁾.



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- 4.1.2 Efforts were made by the Superintendent to ‘forestall public criticism of any complete felling of the trees’ by ‘the placing of appropriate notices before felling’ and by issuing a press statement ‘in explanation of the steps which the committee are obliged to take in the circumstances’⁽¹⁾.
- 4.1.3 Despite these precautions, upon commencement of the felling works ‘much local interest was aroused and the several editions of the local papers gave the matter wide publicity when they appeared on 30 September. The Guardian newspapers headline was “MP Leads Tree Felling Uproar” and quoted Mr Patrick Jenkin MP as saying “There is going to be a frightful row. In fact, I’m starting it.”’⁽¹⁾.

4.2 1967 Avenue Re-planting

- 4.2.1 The avenue was replanted in 1967 and a replacement species, the London Plane, was chosen ‘after prolonged consideration’⁽³⁾ due to its propensity to be very long-lived. The Superintendent stated that ‘longevity is of the utmost importance if only to avoid too soon in future history, a repetition of the present distress, which can be attributed to the unfortunate choice of tree that was made when the avenue was originally planted. The poplar is a tree which, whilst having a rapid growth rate for which reason it was no doubt selected, becomes over-mature (with the dangers inherent in such a state) in a relatively short period of time.’⁽³⁾.
- 4.2.2 The replacement avenue was replanted with London plane trees at 40ft intervals, and was re-oriented to be in line with the statue of Winston Churchill which had been erected to the South of the avenue in 1959. Poplars were also planted between the planes as a nurse crop in order that ‘(i) by filling the gaps they would encourage earlier height growth in the planes than at 40ft intervals would otherwise be the case and (ii) the poplars would assist in the more speedy re-creation of the avenue effect.’ It was then stated that ‘The poplars will be removed in due time, 20 years or thereabouts, whilst still relatively in the “pole” stage of growth.’⁽³⁾.
- 4.2.3 Unfortunately, the nurse crop of poplars was never felled as intended; they have subsequently grown to maturity and are now the dominant feature of the avenue. The London plane trees - in comparison - have not established well between the poplars. They are much smaller with many of poor form and a number have failed entirely. Two London plane trees being the furthest trees at the south end of the avenue have established to a similar size to the poplars, as have some extant planes at the far end of the north of the avenue. The avenue currently consists of a double row of 58 dominant mature poplars, with 51 of the original London planes remaining.

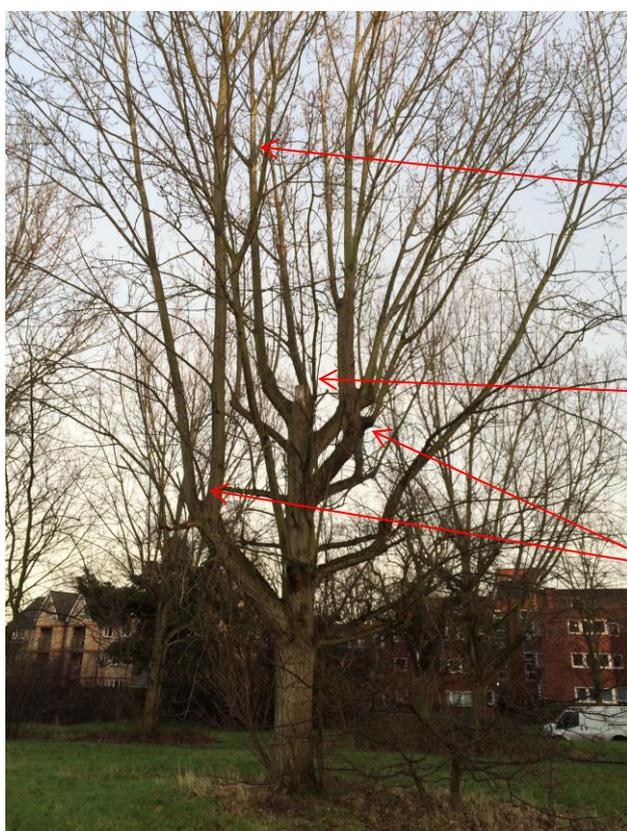
Sources:

- (1) - Excerpt from ‘The Report of the Superintendent of Epping Forest’ dated 02 September 1966
- (2) - Excerpt from ‘The Report of the Superintendent of Epping Forest’ dated 07 October 1966
- (3) - Public Note entitled ‘IN A MANNER OF SPEAKING’ issued by the Superintendent of Epping Forest (undated)

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4.3 Recent Management of the Poplar Trees

- 4.3.1 The poplar trees planted in 1967 have been subject to past management. They have been historically topped at 6m to form a high pollard, with cuts to the central stem of approximately 300mm diameter, and cuts to the primary limbs of approximately 150mm to 200mm diameter. Action of this type would most likely have been undertaken to reduce hazards associated with the mature pre-pollard crown. This is not a preferred management option for the trees because it creates large wounds which may then be at risk of decay or which may provide entry points for disease, particularly on the central stem where the tree has limited capacity of natural repair. In addition, due to the weaker re-growth that results from such management - particularly in poplars - further regular ongoing maintenance is then necessitated to keep the crown in a stable condition. It was for this reason, that poplars had been dismissed as being an inappropriate species for replanting the Avenue in 1967.
- 4.3.2 An additional tier of crown reduction has also subsequently been carried out, two thirds of the way up the re-grown pollard limbs of the poplars (approximately 5 years ago) evidently with the intention of alleviating the weight of the crown, without resorting to a complete re-pollard to the original 6m pollard form.
- 4.3.3 The poplars are of a uniform size with upright stems. There are no visible defects on any of the stems below crownbreak.



Second tier crown reduction at approx. 10m.

Poplars topped at 6m on main stem of approx. 300mm diameter.

Original lateral limb pollard points of approx. 150mm to 200mm diameter.

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4.4 Recent Tree Inspections of the Poplar Trees

- 4.4.1 A condition report on the avenue was produced in 2007 by Arboricultural Consultant Simon Pryce. He noted that *'a problem does loom with the poplars, the re-growth is becoming a hazard and my recommendation would be to re-pollard at the original points, just to make them safe'*.
- 4.4.2 On 4th December 2015, eight of the avenue poplars located by the Woodford Green cricket pitch boundary were assessed by tree inspectors from Islington Council as part of routine safety inspections of high use areas across Epping Forest. All eight poplars were recommended for re-pollarding due to the presence of poor lapsed re-growth over the cricket pitch and one showed evidence of a large historic limb rip-out failure at a pollard point.

5 Tree Condition survey

5.1 Quantity and Dimensions

5.1.1 There are 58 mature Poplars in the avenue of a generally uniform size, with stems of between 450mm to 600mm diameter, a canopy spread of 10 to 15m and a height of 15 to 20m. Some additional smaller multi-stemmed poplars are found and both ends of the avenue which are either self-set, or are re-growths from the stumps of previously felled trees.

5.2 Poplar Trees

5.2.1 The past management of the poplar trees that describes their high pollard form has been outlined in section 4.3. The defects associated with this form are described below.



Original lateral limb pollard points of approx. 150mm to 200mm diameter— displaying weak dog-legged unions, and vertical compression forks with included unions. Regrowth is now heavily end-weighted.

Decay of the central stem at the 6m pollard point is evident on 25 of the 58 poplars.

However, 33 poplars have produced good woundwood on the central stem with no external evidence of decay.





Two locations were observed where vertical pollard re-growth has historically failed causing branch drop.



5.3 London Plane Trees

- 5.3.1 In comparison to the poplars, the avenue of 51 London planes has established poorly and is of disparate size. Twenty are absent, having evidently failed; eighteen are of small and sparse stature with a stem of up to 150mm diameter and a height and spread of up to 5m. Four of these have a poor low forking structural form, one is leaning at an acute angle and another is very sparse and in poor condition. Fifteen of the planes have stems of 150 to 300mm diameter, a canopy spread of 5 to 10m and a height of 10 to 15m.



Poor Form London Planes:
Suppressed, Sparse, Forked, Leaning

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- 5.3.2 The growth rate of the London planes have been subject to suppression by the shading and competition of the faster growing adjacent poplars. However, the planes have grown slower than would be expected even under these circumstances. The two planes situated at the south end of the avenue have the most optimum position in the avenue, being of south facing aspect with little competition for shading and root space, yet these also have not grown to the size that could be expected of this species in 50 years in a similar location. Gavin Bodenham has communicated that this area of the Woodford Green is subject to waterlogging. This fact, coupled with some compaction from pedestrian use, are factors that would favour the shallower rooted poplars and which would be deleterious to the planes.



The two London Planes situated at the southern end of the avenue.

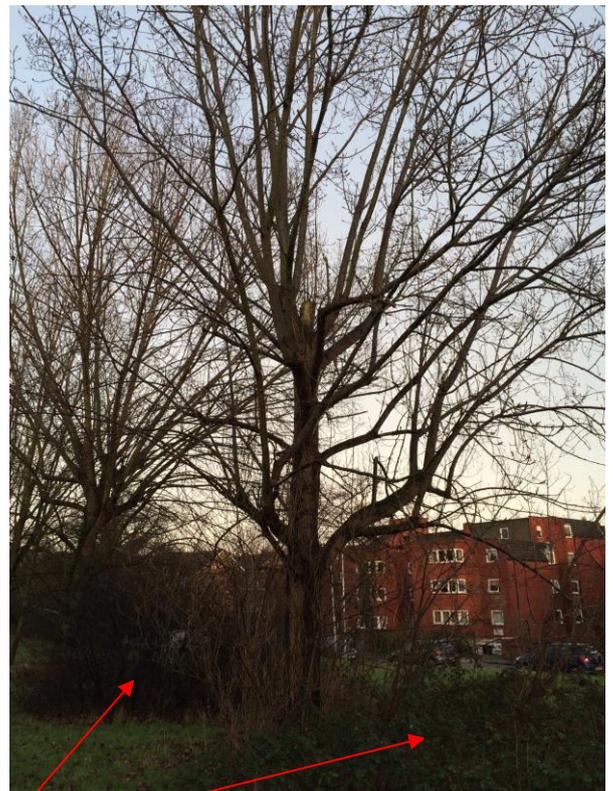
A number of London Plane trees are absent in the section of avenue by the cricket pitch.

(view = looking south)



5.4 Understorey Trees

- 5.4.1 Areas of scrub and bramble and a number of young stunted multi-stemmed trees of poor form, principally oak, have established around the base of the avenue trees.



Understorey scrub and young multi-stemmed trees.

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6 Management Options

6.1 Option 1 - No Action

- 6.1.1 The pollard re-growth of the poplar trees in the avenue has attained a large size with limbs of elongated form that are heavily end weighted and with poor attachments. If left to continue to grow without any management, the trees would pose a high risk of crown failure and constitute a significant hazard to pedestrian use of the avenue path.

6.2 Option 2 – Pollard Crown Reduction of all Avenue Trees

- 6.2.1 The large diameter size of the poplar's re-growth points from the historical 6m high pollard necessitates that any crown reduction of these trees be cut back to the original pollard points. A higher tier reduction would provide only minimal and temporary alleviation of the hazards associated with their present form. The evident vigour and wound healing capacity of the majority of the poplars in response to the historical pollard suggests that the trees would respond favourably to a re-pollard. The resultant re-growth would require continued re-pollarding on a cyclical basis of approximately 5 years (depending on the rate of re-growth) in order to maintain a low hazard stable crown.
- 6.2.2 The level of decay or dieback of the central stems of the poplars would be subject to a climbing inspection during the works at each pollard cycle.
- 6.2.3 In order to maintain the uniformity of the avenue, and to ensure that some of the larger planes do not start to outcompete the pollarded poplars, the remnant London planes would be brought into a pollard rotation in tandem with the poplars. The exception to this could be the two planes at the south end of the avenue, and those at the north end which have better form, and whose retention in natural form would serve to frame the avenue at either end without particular detriment to re-growth of the rest of the avenue.
- 6.2.4 A cyclical pollard regime would ensure that the avenue can be maintained with low hazards for as long as there is minimal advancement of any decay at the pollard points, which could potentially be for several cycles. However, the stature of the avenue will be permanently reduced from its present size to fluctuate between 6m and approximately 12m every 5 years or so, and so will not achieve the stature or longevity that was originally intended for the avenue.

6.3 Option 3 – Pollard Crown Reduction of all Poplars and Fell all Intermediary London Planes

- 6.3.1 The uniformity of the avenue may best be retained by managing the poplars as pollards as described in option 2 (in section 6.2), and by removing the remnant intermediary planes entirely. Eighteen planes are already missing and the remainder are of disparate quality of form and vigour. If they were to be maintained as pollards adjacent to the poplars, they may grow at a different rate, and the planes would be likely to continue to perform poorly alongside the faster growing poplars.

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6.4 Option 4 – Fell and Replant Entire Avenue

- 6.4.1 The current dominant trees in the avenue, the poplars, were planted purely as a 20 year nursery crop to aid the establishment of the London planes. They are not a suitable avenue species in their present state, and will continue to pose a hazard if not subject to regular management. The avenue's chosen species - the London planes - have performed poorly in this location, with many missing and of poor form, meaning that re-establishment of a London Plane avenue would be problematic. The option to fell the entire avenue would provide the opportunity to replant a species more suitable to the location that would establish a mature avenue of trees as was originally intended. However, the impact of such an option would mean that a number of years would pass with the complete absence of an avenue effect, until the new trees became established. The few London Plane trees that have established well and that are of good form at either end of the avenue could be retained without detriment to the establishment of the new avenue. The two planes at the southern end of the avenue, if retained, would maintain a suitable backdrop to the Churchill Statue.

6.5 Option 5 – Fell and Replant Entire Avenue in Stages

- 6.5.1 In order to lessen the visual impact of removing and replanting the entire avenue at the same time (section 6.4 - option 4), the felling and replanting process could be carried out in stages. The feasibility of such a process would have to be fully investigated and carefully planned. The first new planting would need to be free from shading and competition from the trees not yet removed, and the interval between the stages should be close enough that the final uniformity of the avenue can still be achieved.

6.6 Option 6 – Establish New Avenue Alongside the Existing Avenue

- 6.6.1 A new avenue of trees of a suitable species for the location could be planted adjacent to the existing avenue with the intention of replacing it once the new avenue had matured sufficiently. This option would mitigate the impact of the loss of the poplar avenue when it is felled. Various considerations as to the location for planting a new avenue would need to be considered due to a lack of space and competition with other trees to the east of the existing avenue, and by the cricket pitch boundary. Planting either side of the existing avenue would result in a wider avenue. A new avenue orientation could therefore potentially be considered with a north-westerly aspect from the Churchill statue towards the cricket pavilion.

7 Additional Management Options

7.1 Option 1 – Understorey Removal

- 7.1.1 The young multi-stemmed trees that have established to form an understorey around the base of the avenue trees may potentially grow to a size where they start to compete with the avenue trees. They are of poor form which at a larger size may also require ongoing management.
- 7.1.2 The effect of the understorey trees between the avenue trees could be considered contrary to the original intended aesthetic of the uniform avenue effect; as such they could be regarded as suitable for removal. This management option should be weighed against the beneficial ecological habitat provided by the understorey trees and scrub at this location.

8 Appendices

8.1 Contacts List

Name	Company	Role	Email	Phone
Gavin Bodenham	Open Spaces Department - Epping Forest, City of London	Client	gavin.bodenham@cityoflondon.gov.uk	0208 5321010
Geoff Clack	Islington Council (Tree Service)	Tree Inspector	geoffrey.clack@islington.gov.uk	07825 098290
Jake Tibbetts	Islington Council (Tree Service)	Tree Service Manager	Jake.tibbetts@islington.gov.uk	07826904840

8.2 Relevant Qualifications and Experience

- 8.2.1 Geoff Clack has 6 years' experience in the arboricultural sector, and a previous 10 years in the utilities mapping sector. He moved into the public sector in 2014 as the Tree Inspector for Islington Borough Council.
- 8.2.2 He keeps professionally up to date by regular attendance at seminars, conferences, membership of professional bodies and has a regular program of training.

Qualification	Date
BA Hons English	1997
National Diploma in Arboriculture	2011
Lantra Professional Tree Inspection	2011
N.P.T.C. Chainsaw certificates 30, 31 & 38	2012
N.P.T.C. Pesticides certificates PA1 & PA6	2012
Lantra Arboriculture and Bats – A guide for Practitioners	2014
Wildlife and Woodlands Ecology – Anglia Ecology	2015
BS5837 Tree Surveying and Categorisation	2015
Great Crested Newt Licence – Natural England	2015

Signed:



Dated: 22/02/16

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8.3 Implementation of Works

- 8.3.1 All tree works should be carried out to BS3998:2010 "Recommendations for Tree Work".
- 8.3.2 The client's attention is drawn to the responsibilities under the Wildlife and Countryside Act 1981 (as amended) and the legal requirement to consider nesting birds and bats when carrying out tree works.

8.4 Trees Subject to Statutory Controls

- 8.4.1 If any trees are covered by a tree preservation order or located in a conservation area, it will be necessary to consult with the local planning authority before any works can be carried out (other than statutory exemptions).

8.5 Limitations

- 8.5.1 This report has been prepared for use by the client in accordance with the terms of the contract. Third parties may not rely on the information within this report without the written consent of Islington Tree Service.
- 8.5.2 Information provided by the client or third parties used in the preparation of this report has not been verified by Islington Tree Service and is assumed to be correct.
- 8.5.3 The tree survey is valid for one year from the date of inspection but will become invalid if unforeseeable events or physical changes are made to the site. Extreme weather, construction or development including tree works or disturbance to the soil volume utilised by the tree will require partial or full re-survey. It is recommended that the trees are routinely inspected.

8.6 Distribution

- 8.6.1 This report is for the sole use of the above named client and refers to only those trees identified within; use by any other person(s) in attempting to apply its contents for any other purpose renders the report invalid for that purpose.
- 8.6.2 The Schedule of works included in the appendices may be provided to tree contractors for the benefit of obtaining a quote for the works and used in the application to the LPA in order to obtain the relevant permission.

8.7 Copyright

- 8.7.1 Islington Council retains the copyright of this report and its content is for the sole use of the client(s) named above. Copying of this document may only be undertaken in connection with the above instruction. Reproduction of the whole or any part of the document without written consent from Islington Council is forbidden.

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8.8 References

British Standards Institute (BSI). (2010). *BS 3998:2010 Recommendations for Tree Work*. BSI, London.

Tree Preservation Order, A Guide to the Law and Good Practice. Department for Communities and Local Government.

Lonsdale D. (1999). *Research for amenity Trees No.7: Principles of Tree Hazard Assessment and Management*. HMSO, London.

Mattheck and Breloer H. (1994). HMSO, London. *Research for Amenity Trees No.4: The Body Language of Trees*.

9 Site Plan with Tree Locations (as plotted on Arbortrack software system)



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