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Title: **Trees and views of St Paul's from Waterlow Park arboricultural impact assessment – update (v2)**

1. Issue

1.1. The purpose of the report is to conduct an Arboricultural Impact Assessment (AIA) against the new tree maintenance suggested in an additional report to “The view of St. Paul’s from Waterlow Park” by the Trees and Views group on behalf of the Trust Advisory Group (TAG) called: Sight lines of St Paul’s and London from Waterlow Park.

2. Background

2.1. A report produced on behalf of TAG by the Trees and Views group has been presented to Green spaces with the aim of overriding the established Council tree policy¹ on felling/pruning trees to retain a view.

2.2. An AIA was carried out on the maintenance suggested in that report, which recommended refusing the work presented in the report.

2.3. A new report has been presented by the Trees and Views group with an alternative proposal. They suggest moving the viewing point 11m metres East along the path before the junction of a path leading South down the hill. This places the point behind a different group of trees and moves the view away from the Dawn redwood (*Metasequoia gylpstroboies*).

2.4. They suggest the following work to the trees that now block the view:

Tree	Work	Cycle
Downy Birch	Removal of lowest branches.	Work may need repeating if branches above start to dip and block view.
Lime	Top tree to below level of the horizon.	Repeated every 3 years

Table 1 Proposed work

3. Location

3.1. The location of the trees implicated in blocking the view can be seen on the map below.

¹ <https://www.camden.gov.uk/documents/20142/5268201/Camden+trees+policy.pdf/ac911622-85ff-1d4c-a622-53e7ae71bcc2>

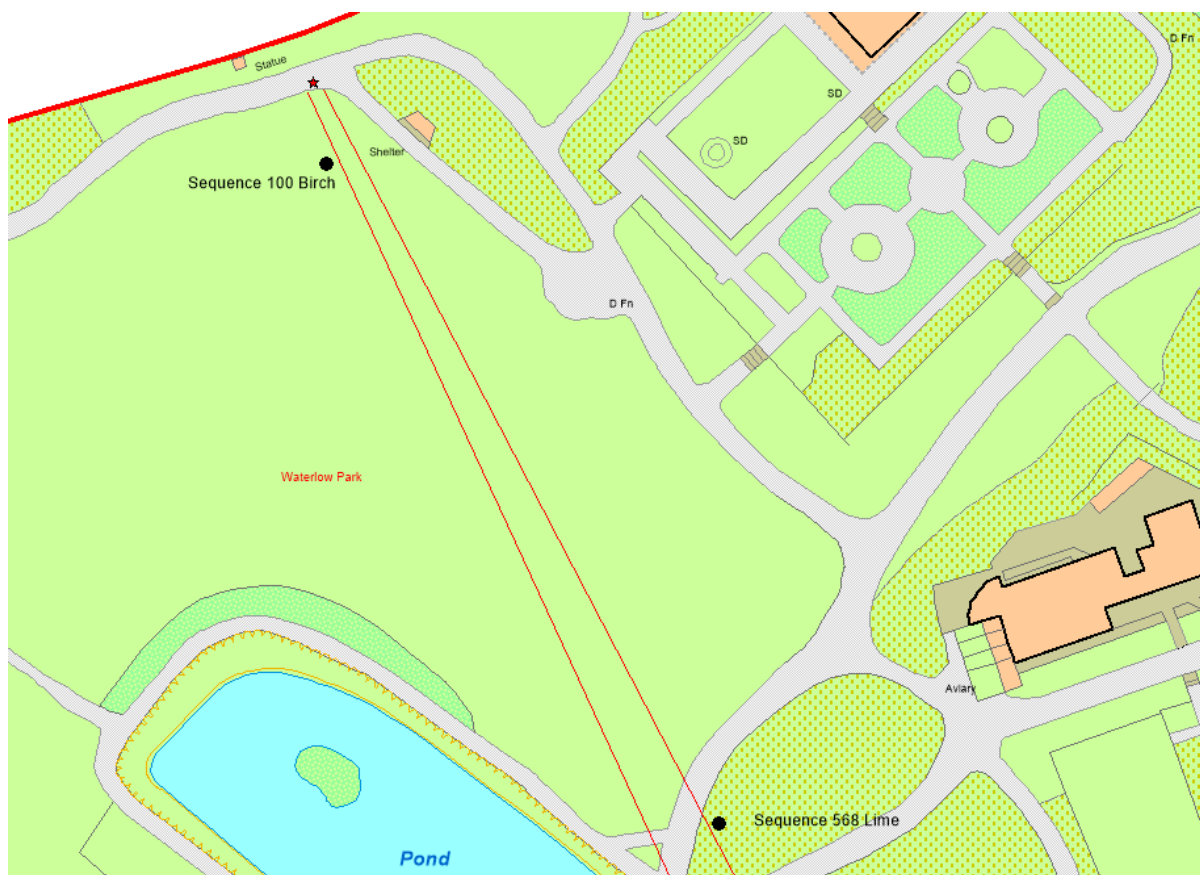


Figure 1 Estimated position of trees

4. Council managed trees

- 4.1. All Council managed trees are recorded in our asset maintenance database: Confirm Arboriculture. They are managed in accordance with the Council's agreed tree policy and are inspected on a 3 year cycle by highly qualified tree officers, who will assign work to the tree addressing any defects that are a health & safety concern.
- 4.2. The inspection records information about the height, spread, diameter of the trunk at breast height, maturity and physiological conditions of the tree. In addition to this we can calculate the Capital Asset Valuation of Amenity Trees² (CAVAT) value for them. This is the cost of replacing that tree like for like.
- 4.3. In 2017 we commissioned Treeconomics to carry out an i-tree eco inventory survey of our entire tree stock. This reported on the ecosystem services (benefits) our trees provide to the public, such as, carbon storage, carbon sequestration and pollution removal.

² <https://www.ltoa.org.uk/resources/cavat>

4.4. Details on the 2 trees implicated can be found in the table below.

Sequence number	Scientific Name	Common Name	Height (m)	Spread (m)	DBH (cm)	Maturity	Phys. Cond.	CAVAT	Total Carbon Storage (kg)	Gross Carbon Sequestration Per Year (kg)	Pollution Removal Per Year (g)
100	Betula pubescence	Downy Birch	17	8	44	Mature	Good	£49,729	465.5	14.1	203.8
568	Tilia europaea	Lime	24	8	62	Mature	Fair	£77,329	675.8	11.5	288.4
Total								127,058	1,141.3	25.6	492.2

Table 2 Details of implicated trees

5. Condition

5.1. The lime and downy birch are both in good health with no defects that required remedial work at their last inspection in 2019/20.

6. Future growth

6.1. The downy birch can reach a height of 25-28m on damp/moist ground, which are the conditions present in Waterlow Park. I would expect this tree to eventually reach 20+ metres in the future.

6.2. Common lime is a large tree and can reach 46m in ideal conditions. At present this tree is 24m in height and I would expect it to reach 30m in the future. Therefore, it is likely to become a more dominant feature of the skyline in the future.

7. Effect of proposed work on the downy birch.

7.1. To open the view will require the removal of the 4 lowest branches. The diameter of the branches is small, and some are being shaded out by the canopy above. Their removal is unlikely to have any long-lasting effect on the tree and the benefits it provides.

8. Effect of proposed work on Lime

8.1. The report would like the lime to brought down to below the level of the horizon and remove any regrowth on a 3 year cycle. This would require topping the tree, which goes against best practice as set out in the British Standard:3998: Tree work specifications.

8.2. I estimate to carry this out a 50% crown reduction would be needed. This work would leave large wounds, which will take many years to occlude. During this time the tree would be open to attack by pathogens, which will cause decay at this point and reduce structural integrity overtime.

8.3. The work would halve the value and benefits the tree currently provides, which can be seen in table 4. The reduction in carbon sequestration is equivalent to the carbon emitted by a 44 kilometre car journey³.

Benefit	Current values	Values after 50% crown reduction
CAVAT	£77,329	£38,664.50
Gross Carbon Sequestration Per Year (kg)	11.5	5.75
Pollution Removal Per Year (g)	288.4	144.2

Table 3 Effect of work on benefits - lime

9. Alternative pruning proposal for lime

9.1. The lime can be pruned to provide a view to St. Paul's that would avoid topping the tree. Through targeted pruning a view could be created that would blend into the leafy frame the tree canopy provides.

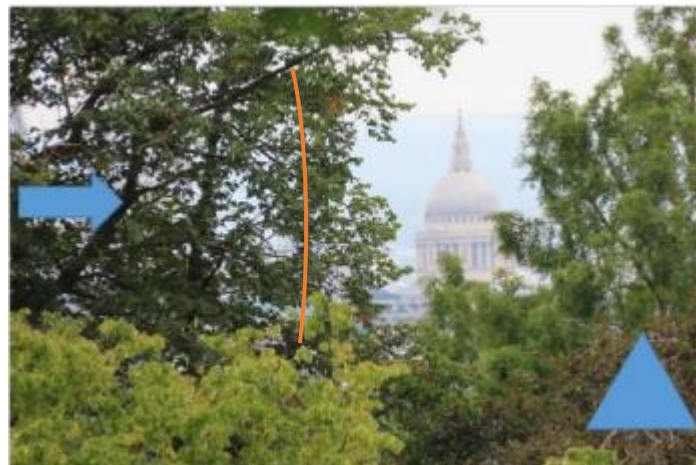


Figure 2 Alternative targeted pruning to clear view of St. Paul's Cathedral. Photograph taken from Sight-lines of St Paul's and London from Waterlow Park. The arrow shows the lime and the triangle the dawn redwood. The orange line is the alternative proposed area of pruning.

9.2. This pruning will be in line with industry best practice and have a negligible effect on the benefits the tree provides.

9.3. The view created would be temporary in terms of the lime growing back and the dawn redwood becoming taller and wider. The former can be managed by pruning back as part of our 3 year cycle of programme maintenance, but the latter cannot be stopped without ruining the shape of the tree. I estimate 10-15 years before the dawn redwood covers the view from this point.

9.4. Estimated cost for the TAG proposed work and the alternative proposal are set out below.

³Based on the average CO2 emissions of 127.9g for cars in 2019 -

<https://www.theguardian.com/business/2020/jan/06/uk-car-sales-brexit-diesel-electric-vehicles-emissions>

Year	TAG Proposal		Alternative Proposal	
	Tree	Cost	Tree	Cost
1	Downy Birch & Lime	£350.87	Downy Birch	£33.87
2	No	-	No	-
3	No	-	No	-
4	Lime	149.03*	Lime	£308*
5	No	-	No	-
6	No	-	No	-
7	Lime	149.03*	Lime	£308*
8	No	-	No	-
9	No	-	No	-
10	Lime	149.03*	Lime	£308*
	Total	797.09	Total	£1,237.87

*A new contract should have been procured by this point and I have assumed an increase in costs of 10% to account for the current contract not receiving inflationary uplift for its term. This is dependent on CPI.

9.5. The TAG proposal will be cheaper over 10 years but will need to be continued for the rest of the tree's life. Therefore, the cost will exceed that of the alternative proposal, which will only carry on for 10-15 years.

10. Landscape effect

10.1. The general landscape effect set out in the first AIA is still relevant and will not be repeated here. See section 10 of the AIA on 16th June 2021 for more details.

10.2. Topping the lime will have a less noticeable impact on the leafy frame the trees of the park provide than the original proposal. However, it is not good arboricultural practice (see 8.1).

11. Local Views and Policy and Strategy

11.1. The information on Local Views and Policy and Strategy set out in the AIA on 16th June 2021 have not changed. See section 11 and 12 of that document.

12. Conclusions

12.1. The new proposal differs from the original as it deals with creating a view through pruning as opposed to preserving one. However, many of the sections in the first AIA, including general conclusions, are still relevant.

- 12.2. The proposed work to the downy birch is unlikely to cause long term harm to the tree or the level of benefits it provides. However, the work to the lime is against arboricultural best practice and will not be considered further.
- 12.3. The alternative proposal for the lime will clear the view to St. Paul's and is unlikely to cause long term harm to the tree or the level of benefits provided. This view can be maintained for approximately 10-15 years, after which the dawn redwood may block it.
- 12.4. In both cases repeat pruning may be needed to maintain the view, which could be included with in our 3 year cyclical maintenance programme. The financial burden for this will be low as the view could be blocked in 10-15 years, at which point the work would stop.
- 12.5. Suggested pruning for both trees still goes against Policy 6 of the Council's agreed Tree Policy, which sets out grounds that do not constitute the pruning or removal of a tree. Overruling the policy sets a precedent and makes it harder for tree officers to refuse similar requests in the future.
- 12.6. The view of St. Paul's can still be seen from the original viewpoint without the need for pruning. This view is more open and may remain so longer than the new location.

13. Recommendation

- 13.1. The new proposal is refused based on the reasons set out in section 12.

BRIEFING ENDS