

Arboricultural Assessment of Vanbrugh House, Hedge End, SO30 2AF

Carried out by Matthew Rowden on behalf of HRG Tree Surgeons for Mike Netley, contracts manager and correspondent for the above address.

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3. Instruction

This report is to survey all trees on the site (>75mm DBH) for the potential to cause damage and/or harm for insurance and liability. I refer to the current guidance set out within NTSG Common sense risk management of trees 2011 to enable the occupier of the property to have discharged their duty of care.

The risks that I have assessed are: Likelihood of damage to property (indirect or contact), tree failure through structures, and personal harm or injury. I have been instructed by Mike Netley from HRG Tree Surgeons, on behalf of Scandor Landscapes who represent the management company, Glidefern Property Management Ltd.

4. Limitations

This survey is valid for 5 years (adhering to the guidance set out in NTSG 2011). I must be kept in direct supervision of the site at all times in regards to all arboricultural matters in order for the findings in this report to remain valid.

The site was inspected using the VTA method as outlined in Mattheck and Breloer 1994. No detailed decay detection has been carried out.

No soil analysis has been carried out: assumptions have been made based on data from the BGS, and the species that grow in that area.

5. Site details

The site is a 4Ha plot of land with one main structure on it. The car park is to the S aspect of the structure and is overhung by offsite trees. The area is densely wooded to the West aspect of the structure, with a large proportion of big trees around the site. The trees surveyed are trees within the boundaries of the site and those that overhang the car park that could constitute a safety concern.

6. Legal restrictions

The entire footprint of the site is covered by a blanket TPO, ref 114:E.

7. Proposals

This report aims to establish whether the trees require work within the next 5 years, 1 year, critically (as soon as reasonably practicable), or no work whatsoever. It aims to discharge the duty of care that the landowner has to ensure that their trees are as safe as reasonably practicable, and to instil a cyclic formal re-inspection schedule every 5 years in line with NTSG common sense risk management of trees 2011. Based on the target area of the site, the records of this report must be kept with the site manager, and the next date for a formal inspection is May 2029.

Informal observations may be taken annually by site managers, visiting arboriculturists, and onsite staff.

8. Drawings and documents

The client has not provided drawings and documents for the purposes of this assessment. I have obtained one from Ordnance survey and have annotated the trees on the map.

9. Summary

The majority of the trees on the site are high amenity, good quality specimens. They do, in places, constitute a safety concern, and some remedial work is necessary to bring these trees up to a standard where threats are mitigated to a level that is as low as reasonably practicable. The majority of the recommendations are pruning and deadwood removal, with two trees and 1 tree group recommended for felling.

10. Findings (please see appendix 1 for specific details)

Trees for removal:

- i. Trees G4, 5, and 9 require felling, and T10 requires pollarding at 6m.

- ii. G4 is a Leyland cypress group that is causing contact damage to both structures on E and W aspects from the canopy growing into the gutters and shading the buildings as a whole.
- iii. The group is a lapsed conifer hedge group that provides little in the way of amenity, and due to the nature of the species, cannot be pruned to substantially mitigate the shading impacts it currently poses.
- iv. As a minimum, the trees should be reduced away from both structures to allow a 3m clearance of them: however, this is likely to result in canopy death on both sides due to the species' response to heavy pruning. I would suggest that the amenity of the site can be improved as a whole if the trees are felled, and replaced with a pleached hornbeam hedge to mark the boundary and the footpath between both buildings.
- v. Tree 5 is a mature common ash tree with a strong canopy bias over the North aspect of Vanbrugh house, and early signs and symptoms of *Hymenocyphus fraxineus*.
- vi. This is characterised by dieback from the tips, little in the way of inner canopy or adventitious shoots, and brown lesions beneath the unions that is indicative of ash dieback disease.
 - ii. This disease may be regarded as highly significant when found on common ash, due to the poor immunity that these trees have to the disease. It is highly likely that all amenity will be lost within the next 5 years.
 - iii. The tree also exhibits a cavity to the North aspect that is 200 x 200mm in circumference, and 450mm deep.
 - iv. Although this might be regarded as only moderately significant on a healthy tree if referring to Mattheck's t/R ratio or the Bartlett formula, in conjunction with ADB, it may be considered highly significant. It may be replaced with an 8-10 standard *Fraxinus mandschurica*.
 - v. T9 is a silver birch which has been heavily reduced within the last 5 years.
 - vi. It exhibits a litany of structural defects, the most significant of which is the decay at the base on the S aspect of the stem, revealing a cavity 600mm deep beneath the buttresses, entailing a loss of anchorage in the direction of the canopy bias. Given the usage of the area (as a common ground for employees to enjoy during the summer months), its retention is not viable. It may be replaced with a species less susceptible to water-logging within that area: I suggest *Taxodium distichum*.
- vii. T10 is a crack willow with significant included bark unions around ground level.
- viii. Research by Kane et al. 2008, Smiley et al. 2003, and Slater & Harbinson 2010 has shown that included bark unions can entail a strength loss of >50%. Given the brittle nature of the species, and the usage of the site, a pollard is necessary to ensure the retention of the tree.

Trees requiring pruning

- ix. Trees 2, 3, 7 and G13 require reducing away from adjacent structures to allow a 2m clearance, or crown lifting over the car park area to allow adequate clearance for high sided vehicles.

Trees requiring deadwood/ hanging limb removal

- x. Trees 1, 2, 3 and G13 require deadwood or hanging limb removal.
- xi. Deadwood can have a considerably weakened tensile and compressive strength (over 70%), and can fail in light winds. The pieces of deadwood in these trees are big enough for dead limb failure to pose a significant risk.

Woodland management

- xii. WG 11 is a woodland group that presents no immediate safety concerns, but the management of it could be improved to allow a greater species diversity and encourage habitat niches.
- xiii. With this in mins, I propose felling/ thinning the bird cherries and hollies within the group to create open niches for the woodland floor, and sowing the area with rye grass and mustard as a green manure to promote natural regeneration and encourage spaces for the local fauna to congregate.

11. Conclusion:

The majority of trees on the site are high amenity trees. The removal of the aforementioned trees is essential for the ongoing safety and longevity of the site.

The remainder of the work is really just ongoing maintenance for what is a high target area with the potential for significant collateral damage to allow clearance for vehicles and ensure the risks of falling deadwood are kept to a level that is as reasonably low as practicable.

12. Recommendations

1. Follow the recommendations paragraph within appendix 1.
2. Formal re-inspection by May 2029 of all trees. Annual informal inspections by your arboricultural contractor are advised to monitor the condition of the trees (any loss of canopy, vitality, or structural damage). The records of this inspection and the annual informal inspections (these may be verbal) are to be kept within the site office. The responsibility of storing these records rests with the estate manager.

A handwritten signature in black ink, appearing to read 'M. Rowden', is positioned above a solid orange horizontal line.

Matthew Rowden *ABC ProfDipArb L6, BTEC NatDipArb L3*

14. References

- a. Cutler & Richardson 1981, Kew root survey.
- b. BS3998:2010
- c. Structural Features Related to Tree Crotch Strength by Robert W. Farrell
- d. Tree Pulling Tests of Large Shade Trees in the Genus Acer, Brian Kane and Peggi Clouston
- e. Modern Arboriculture, Alex Shigo
- f. The body language of trees, Dr Claus Mattheck
- g. Failure mode and the prediction of the strength of branch attachments, Kane et al. 2008
- h. Does included bark reduce the strength of co-dominant stems? Smiley 2003
- i. Towards a new model of branch attachment Slater D. and Harbinson C. 2010
- j. De mystifying tree forks, vices and virtues of forks in arboriculture. Slater D. 2020
- k. Determining the mechanical properties of hazel forks by testing their component parts, Slater D. 2013.
- l. Plant Biomechanics, Karl Niklas
- a. NTSG Common sense risk management of trees 2011.
- b. BS8454: 2014

Appendix 1 - Tree survey schedule (separate document)

Appendix 2: Tree location plan (separate document)