

# TREE SAFETY APPRAISAL

Land opposite 1-8 Royal Victoria Court, Royal Victoria Place,  
Bristol BS10 6TL.

Clients; BPDML Admin Centre, on behalf of Brentry Park Development  
Management Company Ltd Issue date: 15/03/2024



Viewed facing North-Northeast towards tree T1, with Charton Road out of view behind the hedge and young tree plantation to the right of the picture. The two fallen dead stumps (Yellow arrow) have no live growth, they fractured out from the principle trunk fork, light-colored breakage position (Blue arrow). For maximum net biodiversity gain, the wood and brush chippings are best left on site, close to T1. Note the proposed pruning cut positions, (yellow dash lines) and x3 possible long-term planting locations, (Blue ovals) needed to provide continuity of tree cover in this part of the conservation area.

UNDERTAKEN BY

*Alan J Engley*

M.Arb. (R.F.S), F.Arbor.A. MCI.Hort. M.I.C.For. RCarborA

Registered Consultant of the Arboricultural Association and Chartered Forester

Telephone: 01225 851200

Guidott House, 205 Bailbrook Lane, Bath BA1 7AB

Email: [alan@engleytrees.co.uk](mailto:alan@engleytrees.co.uk)

[www.engleytrees.co.uk](http://www.engleytrees.co.uk)

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AJE/29526 Rev1

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**Appendix 1** Tree Location Plan AJE/29527Rev1

**TREE SAFETY APPRAISAL**  
**Land opposite Royal Victoria Court, Royal Victoria Place,**  
**Bristol BS10 6TL.**

**Clients; BPDML Admin Centre, (Gordon Lindsay) on behalf of Brentry Park Development Management Company Ltd.**

**Issue date: 15/03/2024**

**1. Summary**

- 1.1 This report is requested by the clients following tree safety and maintenance correspondence concerning a Hornbeam, *Carpinus betulas* (T1 of the tree location plan TLP) growing within the landscaped grounds above; it is a large decaying specimen that recently shed a dead, forked 45cm diameter limb, **(Page 1 picture)** of significance to safety and is increasingly vulnerable to further collapse. The tree safety appraisal and maintenance recommendations are below.
- 1.2 In compiling this report, I have considered best practice tree care advice.
- 1.3 A search of the Bristol City Council Interactive Map confirms T1 grows within Conservation Area No29, Brentry 1980 and protected by that status. It forms part of a landscape design by Humphrey Repton (1752-1818) and is of historical interest.
- 1.4 T1 has features such as quantities of deadwood, decay of roots, trunk, and limbs, that are *excellent* wildlife habitats, it has developed healthy low maturing shoots that are natural 'retrenchment crown development' and therefore, it could be heavily pruned and retained as a wildlife habitat stump, and interesting landscape feature, whilst planting, say x3 trees nearby, for continuity of sustainable tree cover. The surgery proposals would result in a very low risk of tree failure, and the crown managed at that size, say on 4-year return visits.
- 1.5 T1 grows within falling range of the main drive, public footpaths, and in a green open space, should it fail in any way, it could cause serious damage; it is a High Category 2 failure risk specimen.

## **2. Site Inspection Date – 7 March 2024, carried out in part with Simon Adams**

2.1 Weather- Fine, Visibility – Good, dry underfoot

*Tree Location Plan (TLP)*

2.2 The approximated tree position is shown on the TLP titled 'Tree Location Plan AJE/29527Rev1, **Appendix 1** to this report.

## **3. Instruction/Limitations/Scope and Tools Used**

3.1 I have been instructed by the clients to prepare a Tree Safety and Maintenance Report regarding T1 of the TLP. The work scope objectives, limitations and budgetary considerations are with the agreement of the client.

3.2 When I thought necessary, I used a nylon tipped 'tapping' mallet as an acoustic sounding tool, Tape measure, Nikon Forester Pro hypsometer, Bosh DLE 40 Distometer, a compass, Binoculars, and a fine chisel.

*Tree Safety and the VTA (Visual Tree Assessment)*

3.3 The VTA is a basic level inspection of a tree, its surrounding site, and a combination of the full data collection; it is guided by the principles and methodology found within <sup>1</sup>The Body Language of Trees Paragraph 14 'A' Practical Guide for Tree Inspection by Mattheck and Breloer, 'A handbook of failure analysis', and <sup>2</sup>Applied Tree Biology Hiron and Thomas.

*Site, surroundings, and visual amenity value*

3.4 The tree grows within the former hospital grounds and were retained during the development of the residential estate, about 20 years ago, when the landscape planting was bolstered by further tree planting, altogether, they have significant visual and wildlife amenity values and are important for these reasons.

#### 4. The Tree, inspection, and recommendations.

- 4.1 The overmature/near veteran T1 has a height of circa 12m, crown radial spread of 5m, trunk diameter of 78cm. The trunk buttressing is decayed for about 1.8m of the trunk circumference, with a southerly facing 25 cm diameter sporophore within the southerly indent, next to functioning, upward spiraling, live woundwood development, overlaying a hollowing trunk, up to a group of near-horizontal, healthy, ascending branches, growing around the recent fracture point at about 3m above ground level **(Page one picture)**.
- 4.2 On the northerly side of the trunk at about 1.4m height, are two old 3.5cm diameter rounded sporophores, above which are four, fully mature, blackened 'hoof' shaped' 50cm diameter sporophore brackets of *Ganoderma adspersum/applanatum* a serious wood decay fungus, adjacent to the recent breakage position, where the wood supports the upper trunk and a very sparse higher crown.
- 4.3 Combined with my binocular inspection, and mallet trunk sounding, I expect the trunk heartwood to be extensively decayed and the upper branches weakly attached to the trunk.

#### *Retrenchment development and planting for sustainable long term tree cover*

- 4.4 Effectively, trees do not 'heal', but the healthy, spiraling upwards trunk growth is 'retrenchment development', where the tree will form a new lower canopy supported by thick, solid wood growth, around the hollowing trunk, providing pillar-like support; the low new crown, could then be cut back to the original pruning points, **(Page one picture)**, with consent from the Council, on say 5-year return visits.

*Recommendations, note tree work to be carried out to <sup>3</sup>BS: 3998 2010*

- Reduce the upper trunk to just above the secondary fork divide, cuts about 70cm diameters, shorten the healthy southerly branches in vertical alignment with the footpath join with the laurel hedge, cuts 2-12cm diameters, shorten the easterly outer low foliage by 2.5m, cuts at 1-3cm diameters.
- Plant x3 Hornbeam in the grassed area close to T1, the precise species, planting positions and sizes could be the subject of agreement between the client and Council.

## **5 Mitigation Tree planting/suitable species**

- 5.1 Suitable trees for planting as mitigation for the visual amenity loss, could be x3 Hornbeam, this is as a consideration of the present arboricultural features, character of the local landscape with links to other tree species and as wildlife habitats. Other tree species could be equally effective and suitable sustainable tree cover.

### *Trees/plant size/condition*

- 5.2 Trees to be planted at light standard size 1.8-2.4m heights as container grown stock of good quality and pest and disease free. The planting must be carried out to best industry standards and conform to the <sup>4</sup>BS: 8454 2014, 'Trees: From Nursery to Independence in the Landscape: Recommendations'

### *Legal Requirements*

- 5.3 The Occupiers Liability Acts 1957 and 1984 require that premises, including trees, are kept safe for residents, employers, guests, and visitors.

- 5.4 A prudent approach to this issue can be demonstrated by routine inspections of all significant trees, carrying out all recommendations made relating to safety of people and property. The Health and Safety at Work Act 1974 also places a duty on employers to take all reasonable steps to ensure that employees and visitors are not exposed to unacceptable risk to their health and safety.
- 5.5 Unless otherwise stated, at least an annual inspection of the tree should be carried out, or sooner following exceptional weather conditions such as high winds. No liability can be assumed to rest with A J Engley & Associates should conditions alter after the tree assessments.
- 5.6 This report and the tree work recommendations made have been produced for the sole use and benefit of the client. It is not a specification for tree work. Any liability of A J Engley & Associates shall not be extended to any third party.

## **6. Site Specific Tree Risk Assessment Systems and Targets**

- 6.1 The risk is the likelihood of failure, the likelihood of impacting a target, the targets, and the severity of the consequences. The target zone may contain a single or many trees and targets such as people/events/vehicles or static targets, such as roads and buildings.
- 6.2 There are several different and variable risk assessment systems available to manage tree risk; all seek to achieve acceptable safety levels by using calculated assessments including <sup>5</sup>ISA that has 3 levels; limited, basic, and advanced.
- 6.3 With guidance from <sup>6</sup>Quantified Tree Risk Assessment (*QTRA*) at an advanced level, the approach used considers the land on which the trees stand (*Target*) which will inform the process of assessing the trees. *QTRA* has numerical advisory risk thresholds, regarding the acceptability of the risk and the prescribed action to control the risk, with assessed costs.

6.4 The tree safety assessment system I use has similarities to the above methods, in my experience of such work; it is suitable for this site.

**Tabulated Priority Risk Categories to Determine Timing of Work, Tree Part of interest and Overall, Tree Failure Risk Rating for T1.**

<b>Likelihood of failure</b>	<b>Definition and tree part of particular interest</b>	<b>Time scale</b> The 'time scale' for this system assesses the likelihood of failure over a time frame of days, months or years as considered by the surveyor.
Imminent	Failure has started or is most likely to occur soon, even if there is no significant wind or increased loading	<b>*High priority (*H), *Category 1</b> , work to be carried out without delay on safety grounds; failure has started or is most likely to occur soon, even if there is no significant wind or increased loading. The surveyor is to report the danger to the client immediately on the day of inspection or as soon as reasonably practical.
Probable	Failure may be expected under normal weather conditions within the specified time period	<b>High priority (H), Category 2</b> , Work should be carried out within 12 months from the date of inspection.
Plausible	Failure could occur under normal weather conditions within the specified time	<b>Moderate priority (M) Category 3</b> , a possible risk but the work is non-essential, trees may need further inspections or pruning to reduce long term failure risks or used to reduce debris nuisance and crown lifting above roads, paths to permit safe under passage of vehicles and users in high usage areas; it could be carried out within 12-36 months from the date of inspection.
Improbable	The tree or branch is not likely to fail during normal weather conditions and may not fail in many severe weather conditions. within the specified time	<b>Low priority (L) Category 4</b> , improbable risk of tree failure and could be non-essential cyclical work, say on 36 monthly rotations and may be part of an existing grounds maintenance program.

**T1 Targets at Brentry Park Development. T1 is a High priority (H), Category 2 Risk Rating**

**TARGETS (TGTS)**

Road – (and parked cars, vehicles) paths  
Grounds - Neighbouring Property Services SVS

- **T1** The grounds and paths are in constant and frequent use during school terms.

Components covered by this basic tree risk assessment.

- 6.5 It identifies loading of tree features and potential for failing, it calculates the likelihood of failure, and any residual risks. The final complete tree risk assessment, as tabulated above, is found in the 'Category Priority' column, Appendix 11 of this report.
- 6.6 It assesses current & past site usage, calculates site factors, topography, soil and ground conditions, tree species, age, size, vitality, tolerance to proposed work, crown size, shape, dimensions, historical pruning, unions, included bark, previous damage, evidence of pests and diseases, deadwood quantity and locations, cavitation, and bark condition.



- 6.7 Trunk shape, lean, features, tolerance to possible remedial work, condition of roots/buttrressing, indents, signs of potential wind-heave, such as cracks in the soil around the rootball/root plate, history of soil compaction, level changes, and chemical spillage contamination.
- 6.8 It considers mitigation options, such as moving the targets.
- 6.9 It provides an overall priority and calculates tree risk rating category and return inspection timing program. When necessary, advice is provided concerning more advanced detailed inspections that may be indicated, say by climbing inspections and decay detection devices.
- 6.10 It calculates existing visual amenity values with consideration of assessed tree safety recommended work.

**Reference/Further Information:**

<sup>1</sup> VTA, found in 'DOE Research for Amenity Trees, No. 4 Mattheck and Breloer, The body language of trees. A handbook of failure analysis

<sup>2</sup> Applied Tree Biology Hirons and Thomas (Wiley Blackwell)

<sup>3</sup>BS :3998 'Tree Works Recommendations 2010'

<sup>4</sup>BS: 8454 2014 'Trees: From Nursery to Independence in the Landscape: Recommendations'

<sup>5</sup>Working with the ISA BMP on Tree Risk Assessment (Jerry Bond, Urban Forest Analytics LLC) American Society of Consulting Arborists

<sup>6</sup>Quantified Tree Risk Assessment (QTRA)

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*Alan J Engley*

**M.Arb. (R.F.S), F.Arbor.A. MCI.Hort. M.I.C.For. RCarborA**  
**Registered Consultant of the Arboricultural Association and Chartered Forester**  
Telephone: 01225 851200  
Guidott House, 205 Bailbrook Lane, Bath BA1 7AB  
Email: [alan@engleytrees.co.uk](mailto:alan@engleytrees.co.uk)  
[www.engleytrees.co.uk](http://www.engleytrees.co.uk)

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