



ARBORICULTURAL REPORT

Kendrick School
41 London Road
Reading
Berkshire
RG1 5BN



Sarah Duckworth
DipArb(RFS), TechCert(ArborA), M. Arbor.A, BA (Hons)

www.duckworthsarboriculture.co.uk
Email: trees@duckworthsarboriculture.co.uk
Phone: 0118 327 9775



WORKING WITH

Big Heart Tree Care



1 CONTENTS

1	CONTENTS	2
2	INTRODUCTION	3
2.1	INSTRUCTION	3
2.2	QUALIFICATION	3
2.3	CAVEATS AND LIMITATIONS	3
2.4	SUMMARY	3
3	TREE INSPECTION REPORT	4
4	SUMMARY OF IDENTIFIED TREE WORKS	12
5	SOIL IMPROVEMENT	13
6	INFORMATIVES	14
7	GALLERY	15
8	SITE PLAN	19



2 INTRODUCTION

2.1 INSTRUCTION

Client Contact: Mr. Ray Clark

Site: Kendrick School, 41 London Road, Reading, Berkshire RG1 5BN

The instruction is received via telephone on Thursday 18th June 2015 from Jon Smith of Big Heart Tree Care to undertake a Level 2 Tree Health and safety Inspection on seven trees within the campus of Kendrick School. An additional tree was identified for inspection at the time of my site visit.

The ground level inspection will identify any significant defects and consider their significance to the long term health and structural stability of the trees. The report will include an assessment of the overall health, condition and risk from the trees and make any recommendations for their immediate and future management to address any health and safety concerns.

2.2 QUALIFICATION

I hold the Royal Forestry Society's Professional Diploma, the Arboricultural Association's Technicians Certificate with distinction and am a LANTRA qualified Professional Tree Inspector.

2.3 CAVEATS AND LIMITATIONS

The tree has been inspected from ground level only. Non invasive inspection equipment (mallet and metal probe) were used to make an assessment of the structural integrity at the base and trunk of the trees. Should further more detailed (Level 3) inspection be deemed appropriate this will be mentioned in the recommendations section of the attached schedule of works.

Trees are dynamic living organisms subject to change, whose health and condition can be subject to significant change influenced by internal and external factors. The assessment, conclusions and recommendations from the report are based on the condition of the tree at the time of inspection and are valid for 24 months. If the condition of the trees evidently changes or the trees are subject to extreme weather conditions before this date; further inspection may be required. No tree is ever absolutely safe due to the unpredictable laws and forces of nature.

The report is for the sole use of the client and its reproduction or use by anyone else is forbidden unless written consent is given by the author.

This is an arboricultural report and as such no reference is made relating to buildings, engineering or soil.

For the purposes of this survey all dimensions of trees and their associated parts are based on estimation unless otherwise stated.

2.4 SUMMARY

Surveyed by: Sarah Duckworth

Survey date: Wednesday 1st July 2015

Weather conditions: Dry, Clear

Visibility: Good

Trees viewed from ground level only.

3 TREE INSPECTION REPORT

TREE 1

T1 – Sycamore (*Acer pseudoplatanus*)

Diameter at 1.5m = 620mm

Visual Estimate Height = 12m

SITUATION – Tree is growing in a compacted lawn area 1.9 metres from the boundary wall beyond which is the London Road.

BASE – The base is sound with no fruiting bodies or cavities evident. Hammer test is even and satisfactory. Some bark flaking around the lower trunk however there are no associated defects and it is likely to be caused by children.

TRUNK – Epicormic growth at 2 metres. The main stem forks at 4 metres. The branch union is open and satisfactory.

CANOPY – The canopy is broad and extends beyond the site boundary over the public highway. The foliage is chlorotic and sparse with windows through the canopy. Lower branch tips touching the perimeter fence. Mature epicormics sprouting on inner canopy. Aphids throughout canopy as usual for species.



SUMMARY – This is a significant tree in the local area growing adjacent to the public highway. The tree is structurally sound however it is showing signs of stress, nutrient deficiency and low vigour. In such a condition any major pruning works should be avoided and the epicormic growth retained to optimise tree health.

WORKS RECOMMENDATION

- **No tree pruning works identified at this time**
- **See Section 5 'Soil Improvement' for steps that can be taken to improve the overall health and condition of the tree.**

REINSPECTION DUE: within 2 years

TREE 2

T2 – Sycamore (*Acer pseudoplatanus*)

Diameter at 1.5m = 570mm

Visual Estimate Height = 14m

SITUATION – Tree is growing in a shrub border adjacent to a compacted lawn area 1.6 metres from the boundary wall beyond which is the London Road.

BASE – The base is sound with no fruiting bodies or cavities evident. Hammer test is even and satisfactory. There is epicormic growth at the base of the tree and again at 2 metres up the main trunk.

TRUNK –Epicormic growth at 2 metres. Pruning cuts on main stem fully occluded. The main stem forks at 4 metres. The branch union is open and satisfactory.

CANOPY – The canopy is broad and extends beyond the site boundary over the public highway. The foliage is chlorotic and sparse with windows through the canopy. There is minor deadwood throughout the canopy with some apical dieback. There is a small dead hanging branch over the public highway – well lodged. Aphids throughout canopy as usual for species.

SUMMARY – This is a significant tree in the local area growing adjacent to the public highway. The tree is structurally sound however it is showing signs of declining health and low vigour caused by environmental stress and nutrient deficiency.

WORKS RECOMMENDATION

- **No tree pruning works identified at this time**
- **See Section 5 'Soil Improvement' for steps that can be taken to improve the overall health and condition of the tree.**

REINSPECTION DUE: within 2 years



TREE 3

T3 – Red Horse Chestnut (*Aesculus x carnea* ‘*Briotii*’)

Diameter at 1.5m = 670mm

Visual Estimate Height = 13m

SITUATION – Tree is growing in a compacted lawn area regularly used for sports and games.

BASE – The base is sound with no fruiting bodies or cavities evident. Hammer test is even and satisfactory. Warty boles on the lower trunk are a feature of the species and are not a concern.

TRUNK – Main stem divides into 3 with two large side branches at 3 metres and again into 3 similar sized large branches at 6 metres. The lower branch union is open; some bark inclusion, condition satisfactory. The upper union has lost a small area of bark associated with the branch fork which is worth further investigation.

CANOPY – The canopy is low and broad with slightly lower leaf density in the upper canopy. Several lower branches have been cut back in the past and grown on. One lower lateral extending north west has a bud proliferation (witches broom) on the upper side of the branch near the reduction point and a small cavity associated with an earlier pruning cut nearer the trunk. This limb also has dense terminal growth. There are numerous small splits in the bark, on the trunk and main branches in the upper canopy, not unusual for the species and indicative of growth and good vigour.

SUMMARY – This is a significant tree for the school growing in the well-used lawn area. The tree condition is satisfactory but the defects on the lower lateral branch with its profuse end growth is a cause for concern and work should be undertaken to reduce the load of the branch.

WORKS RECOMMENDATION – within 3 months

- **Crown lift lower branches to give 2.5 metres clearance.**
- **Reduce extended lower lateral (growing towards T5 (northwest) and with ‘witches’ broom’) by 2 metres. Selectively thin reduced terminal branches on this limb by 25-30% to reduce end weight.**
- **Inspect upper branch form during the course of these works where a small area of bark is missing from the union at 6m.**

REINSPECTION DUE: within 2 years



TREE 4

T4 – Sycamore (*Acer pseudoplatanus*)

Visual Estimate Height = 13m

SITUATION – Tree is growing in the centre of a compacted lawn area regularly used for sports and games, 9 metres from T3.

BASE – The base is sound with no fruiting bodies or cavities evident. Hammer test is even and satisfactory. Surface lawnmower damage to large root (600 long and 150 wide) 250mm from base of tree.

TRUNK – Main stem has no notable defects, all historic pruning cuts fully occluded, branch forks all satisfactory.

CANOPY – Various pruning cuts on branches in canopy partially occluded with some cavities within. Foliage is sparse and chlorotic with windows through the canopy. Apical (tip) dieback throughout canopy. Some vertical epicormic growth on larger branches. Moderate sized dead limb on south west size of canopy towards T3.

SUMMARY – This is a significant tree for the school growing in the well-used lawn area. The tree is structurally sound however it is showing signs of stress, nutrient deficiency and low vigour. In such a condition any major pruning works should be avoided and the epicormic growth retained to optimise tree health.



WORKS RECOMMENDATION – within 3 months

- **Remove moderate sized dead limb on south west size of canopy towards T3**
- **See Section 5 ‘Soil Improvement’ for steps that can be taken to improve the overall health and condition of the tree.**

REINSPECTION DUE: within 2 years

TREE 5

T5 – Indian Bean Tree (*Catalpa bignonioides*)

Visual Estimate Height = 11m

SITUATION – Tree is growing a small area of lawn surrounded by paths and adjacent buildings. There is a circular bench around the base of the tree and high pedestrian occupancy.

BASE – The base is sound with no fruiting bodies or cavities evident.

TRUNK – Main stem has slight helical growth on the lower stem and leaning to the south west. Canopy is upright therefore the lean is not a concern at this time. The stem bifurcates at 2.5m with a close fork and some included bark. There is also a branch stub at this point which has been reduced and there is a tear on the lower part of the stub. This could be the tidying up of a broken branch? Regenerative growth on the upper side of the branch stub.

CANOPY – Minor deadwood throughout the central canopy. Foliage even density; slightly chlorotic. No major deadwood.



SUMMARY – This is a high amenity tree for the school growing in high occupancy area of the school. The tree is structurally sound however it is showing signs of nutrient deficiency.

WORKS RECOMMENDATION

- **No works identified**

REINSPECTION DUE: within 2 years

TREE 6

T6 – Pin Oak (*Quercus palustris*)

Diameter at 1.5m – approx. 1m

Visual Estimate Height = 11m

SITUATION – This interesting feature tree is growing in a particularly constricted area 1.78 wide and 4.8 long, surrounded by brick walls or buildings on all sides. The undeveloped area immediately to the base of the tree has been laid with tarmac and is used for storage. To the east of the tree beyond the school boundary is the carpark for the adjacent Dentist's surgery.

BASE – The base is visually sound with no fruiting bodies or cavities evident. Hammer test is even but difficult to interpret as the sound echoes in the confined space. Epicormics on the main trunk from 1m.

TRUNK – Epicormics on the main trunk from 1m. Stem leaning to the south and touching the capping bricks at the top of the wall which appear to have been repaired. The tree has been substantially reduced in the past and a new canopy formed from regenerative and epicormic growth. Branch fork obscured by vegetation.



CANOPY – Some chlorotic foliage but otherwise satisfactory. No major deadwood. Canopy touching the buildings on all sides. Foliage even density; slightly chlorotic. Reduction points obscured by vegetation.

SUMMARY – This is an interesting feature tree for the school which is growing and thriving in particularly inhospitable conditions. The tree is in a sheltered location but the canopy is coming into contact with property in many areas. The nearest undeveloped area is over 7m from the base of the tree within the school and 9.5 metres to the west within the adjacent property. The tree trunk is touching a wall and may already have caused damage and will become a greater concern as the trunk increases in diameter. An assessment of the structural integrity of the wall is outside of the remit of this tree report.

WORKS RECOMMENDATION: - Within 8 months

- **Reduce canopy by 2-3m back to pruning (or topping) points taking care not to damage any pollard knuckles.**
- **Selectively prune foliage elsewhere to give clearance to property where possible and remove epicormic growth from the underside of the large scaffold growing south over the stairwell.**
- **Inspect branch union during the course of these works.**

REINSPECTION DUE: within 2 years

TREE 7

T7 – London Plane (*Platanus x hispanica*)

Estimated diameter at 1.5m – approx. 1.3m

Visual Estimate Height = 20m+

SITUATION – Very large tree growing in a small grass strip at the front of the school between a parking area and the public highway.

BASE – There is dense ivy growth on the lower and main trunk which hampers a full inspection. In addition there are metal railings along the south side of the base. The gap between the railings and the Plane tree is blocked with litter, leaves and a shrubby Hawthorn. Where the base can be seen it is in a satisfactory condition with no obvious defects or cavities.

TRUNK – Deeply fluted in parts and densely covered in ivy. Branch union at approximately 3 metres obscured by ivy.

CANOPY – Tree has been managed as a pollard in the past with the formation of good pollard knuckles. Regeneration from these points is up to 8 metres long. No major deadwood. Small broken branch at ground level. Foliage good and evenly distributed with some Anthracnose (*Apoignomonina veneta*) evident on the leaves. Canopy growing over the highway and public footpath.



SUMMARY – This is a very large significant tree growing adjacent to the highway. It is healthy and sound and with no obvious structural defects. The tree has been managed as a pollard in the past and will need to be pollarded in the future on a regular basis to maintain the tree and prevent major branch failure.

WORKS RECOMMENDATION: - Within 12 months

- **Sever ivy with hand tools and remove around stem to a height of 1m.**
- **Reduce canopy back to previous pruning cuts taking care not to damage any pollard knuckles (approximately 6-8m).**
- **Reduce epicormic growth on main stem back to trunk.**

REINSPECTION DUE: within 2 years

TREE 8

**T8 – Weeping Silver Lime (*Tilia tomentosa*
'Petiolaris')**

Estimated diameter at 1.5m – approx. 800mm

Visual Estimate Height = 16m

SITUATION – Large tree growing in a small grass strip at the front of the school between parking areas and the public highway.

BASE – Prolific epicormic growth at the base hampers a full inspection. In addition there are metal railings along the south side of the base. Where the base can be seen it is in a satisfactory condition with no obvious defects or cavities.

TRUNK – Twin stem from 4 metres with a tight fork and some included bark. This is not unusual for the species and not a concern at this time. Tree has been pollarded in the past and also topped at 10-11 metres creating large wounds.

CANOPY – Tree has been managed as a pollard in the past with the formation of some pollard knuckles. Regeneration is between 6-8 metres long. No major deadwood. Aphids on leaves and Horse Chestnut scale (*Pulvinaria regalis*) on younger branches, both insects very common on Lime.



SUMMARY – This is a very large significant tree growing adjacent to the highway. It is healthy and sound. The tree has been managed as a pollard in the past and has been topped, therefore the canopy will need to be reduced on a regular basis in the future to maintain a compact canopy and prevent major branch failure.

WORKS RECOMMENDATION: - Within 12 months

- **Reduce epicormic growth at the base and lower trunk of the tree with hand tools.**
- **Reduce canopy back to previous pruning cuts taking care not to damage any pollard knuckles (approximately 6-8m).**

REINSPECTION DUE: within 2 years

4 SUMMARY OF IDENTIFIED TREE WORKS



DUCKWORTH'S ARBORICULTURE

Reference	Tree Species	Works Identified	Timescales
T3	Red Horse Chestnut (<i>Aesculus x carnea</i> 'Briotii')	Crown lift outer branches to 2.5 metres. Reduce extended lower lateral (growing towards T5 and with 'witches broom') by 2 metres and thin out terminal branches on this limb by 25-30% to reduce end weight. Inspect upper branch form during the course of these works where a small area of bark is missing from the union at 6m.	Within 3 months
T4	Sycamore (<i>Acer pseudoplatanoides</i>)	Remove dead limb growing towards T3.	Within 3 months
T6	Pin Oak (<i>Quercus palustris</i>)	Reduce canopy by 2-3 metres back to previous pruning cuts taking care not to damage any pollard knuckles. Check branch fork union. Selectively prune remaining secondary (small) branches where necessary to prevent direct contact with property and remove the epicormic growth on the underside of the large scaffold growing south over the stairway and building.	Works should be undertaken within 8 months at optimum time to reduce impact on vitality of tree. The preferred dates are either between July – September 2015 or November – February 2016.
T7	London Plane (<i>Platanus x hispanica</i>)	Sever ivy and remove around stem to a height of 1m. Reduce canopy back to previous pruning cuts taking care not to damage any pollard knuckles (approximately 6-8m). Reduce epicormic growth on main stem back to trunk.	Within 12 months. Works should be scheduled to reduce impact on vitality of tree. The preferred dates are either between June – September or November – February.
T8	Weeping Silver Lime (<i>Tilia tomentosa</i> 'Petiolaris')	Remove epicormic growth on lower trunk and base with hand tools. Re-pollard, reducing canopy back to previous pruning cuts taking care not to damage any pollard knuckles (approximately 6-7m).	Within 12 months. Works should be scheduled to reduce impact on vitality of tree. The preferred dates are either between June – September or November – February.

Many of the trees and shrubs at Kendrick School and in particular trees 1, 2 and 4 of my inspection are showing signs of stress and nutrient deficiency. This will be caused by the soil conditions and exacerbated by ground compaction around the base of the trees. The symptoms noted include stunted foliage size, chlorotic (pale) foliage and reduced annual extension growth.

The following steps could be taken to improve the conditions and growing environment for these trees and will improve their longevity.

STEPS TO IMPROVE OVERALL HEALTH AND VITALITY

- Chemicals used on the lawn area around the trees such as 'lawn weed and feed' can be toxic to trees and should not be used under the canopy area of these trees.
- Turf can be removed around the base of the tree (as great a distance as can be provided). The ground in this area should be then decompacted with a garden fork or more specialist equipment such as the 'Terravent' ground decompactor or 'Airspade'.
- Slow release granular fertiliser should be added to the exposed soil or a well-rotted manure (or both) to improve the nutrient and organic matter content of the soil.
- The ground can then be covered with a bark mulch around 10cm deep – taking care not to allow the mulch or mature to build up around the root flare.



Fig.1 An example of appropriate turf clearance and mulching.

6 INFORMATIVES

1. **TIMING OF TREE WORK** - It is best to undertake work to mature trees at a time when it will have the minimum impact on the overall health and vitality of the tree. During the summer months the tree is able to 'compartmentalise' (block off) the pruning cuts and replenish stored energy following the pruning work. If working in the summer months is not possible then work can be undertaken in winter when the tree is dormant. In all cases work to significant mature trees should be avoided immediately prior to or after leaf-break.

2. **LIMITATIONS** - The findings of this report are valid for 24 months. The Tree Inspection takes into consideration predictable seasonal variation of weather but does not predict the response of the trees in the event of unpredictable (extreme) weather conditions. If the condition of the trees evidently changes or the trees are subject to extreme weather conditions before this date; further inspection may be required.

3. **LEGAL PROTETCTION** - Prior to undertaking any work to the tree, you are advised to contact your local Planning Authority (Reading Borough Council) to check whether the tree is protected by Tree Preservation Order, situated within a Conservation Area or subject to extant Planning Conditions that may require an application to be made to the Borough Council prior to any work being undertaken on the tree.

4. **PROTECTED SPECIES** - All birds, their nests and eggs are protected under UK law by the Wildlife and Countryside Act 1981. In Britain all bats are protected under European law (HM Government Habitat and Species Regulations 2010). Bats and birds can use cracks and cavities in old trees to nest, roost and hibernate. The proposed work recommendation seeks to retain the features in the tree which have habitat potential. However, your contractor should be aware of the legislation and ensure that protected species are not harmed or disturbed during the course of any tree work.

5. **EPICORMIC GROWTH** - Epicormic growth are new branches grown on the tree stem and branches from dormant or latent stem butts. They are a common feature on some trees such as Lime, but on others they can be a reaction to environmental stress or root damage. Epicormic growth provides the stressed tree with energy producing foliage often closer to the rooting areas than the canopy thus increasing the draw of water and nutrients up the tree. They can be, in effect a tree's retirement fund and in such cases (Trees 1, 2 and 6) it is important the epicormic growth is retained where possible.

6. **SCHEDULING OF FUTURE INSPECTIONS** - It is appropriate to vary the seasons when trees are inspected so that seasonal features such as deadwood, fungal fruiting bodies and nutrient deficiency will may not be evident all year round can be picked up.



A. T3 - Close up of lower branch fork.



B. T3 - Other side of lower branch fork.



C. T3 - View of witches' broom on lower branch.



D. T3 - View of witches' broom on lower branch.



E. T3 - Upper branch union close up



F. T3 – Upper branch union



G. T3 – Small cavity on main trunk



H. T4 – Lawnmower damage to surface roots



I. T4 – Occluded wound on lower trunk



J. T4 – Partially occluded pruning cuts in canopy



K. T6 - Lower trunk



L. T6- touching adjacent brick wall.



M. T6 – Lower trunk



N. T8 – Epicormic growth at base.



O. T7 – Ivy clad base and adjacent railings.

