



Tree Survey & Condition and Management Report

SITE:

Elmcroft
2 Stanhope Road
London
N6 5LP

PREPARED FOR:

Elmcroft Management Ltd
C/O A Dandy Wren
13a Building 2
Canonbury Yard
190 New North Road
London
N1 7BJ

PREPARED BY:

Mr G Davies
Arboricultural Consultant

BARTLETT PROJECT REFERENCE:

GD/220403

SITE VISIT DATE:

19th October 2022



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Submitted on 28th October 2022

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1.0 SCOPE OF REPORT

1.1 Assignment

Bartlett Consulting were instructed by Ms Tara Nash on behalf of the property management agency, A Dandy Wren, on 6th September 2022 to:

1. Perform a Level 2 Basic survey of the principal trees located within the grounds of the Elmcroft following the visual tree assessment (VTA) techniques developed by Mattheck & Breloer (1994).
2. Undertake a qualified tree risk assessment in accordance with the International Society of Arboriculture's (ISA's) Best Management Practices (BMP) *Tree Risk Assessment* and *Tree Risk Assessment Manual* of the trees detailed in Assignment Item 1 above.

After review and discussion with the client, the tree risk assessment will be conducted for the following *target(s)*: Persons and property.

3. Provide a written report summarising the tree stock subject to the survey; providing a schedule of trees and the level of associated tree risk based on the likelihood of failure and impact to the identified targets detailed above; and including fully informed management recommendations in accordance with current Arboricultural practice and tree health care techniques so that the tree owner (risk manager) can determine their tolerability of risk and take reasonable and proportionate action.

1.2 Background

As part of their obligation as a responsible property manager and to gain an up-to-date knowledge indication as to the condition of their tree stock, the agent, A Dandy Wren, have instructed Bartlett Consulting to carry out a survey of the trees located within the boundary of Elmcroft.

1.3 Report References

Specific tree survey references applied by Bartlett Consulting for this project include:

- Dunstar, J.A, Smiley. T, Matheny. N, Lilly. S. (2017) *Tree Risk Assessment Manual, Second Edition*. International Society of Arboriculture. Champaign, IL.
- Fay, N. Dowson, D. Helliwell, R (2016) *Tree Surveys: A Guide to Good Practice* Arboricultural Association, The Malthouse, Gloucestershire
- Health & Safety Executive (2001) *Reducing Risk, Protecting People: HSE's Decision-Making Process*
- Lonsdale, D. (1999) *The Principles of Tree Hazard Assessment & Management* Department of the Environment. London.
- Mattheck, C., et. al. (2015) *The Body Language of Trees – Encyclopaedia of Visual Tree Assessment* Karlsruhe Institute of Technology Campus North.
- Slater, Dr. D (2016) *Assessment of Tree Forks – Assessment of Junctions for Risk Management* Arboricultural Association, The Malthouse, Gloucestershire.

1.0 SCOPE OF REPORT (continued...)

1.4 Report Limitations & Methodologies

This report is restricted to the prominent trees within and, where deemed appropriate, directly adjacent to the site as detailed in the Assignment above.

Our Level 2 survey and qualified risk assessment of trees surveyed at Elmcroft is based on a single site visit on 19th October 2022. All photographs, samples, and readings, if applicable, were taken at the time the assessment was performed.

This assessment of third-party trees was limited by the inability to access and therefore gain a full and proper visual inspection around the base of these trees.

Targets and *Occupancy Rates* considered in the tree risk assessment were determined based on observations made during the visit. Targets considered in this tree risk assessment are persons and property including the buildings, residents, and members of the public as well as vehicles both parked privately within the site and upon the adjacent public highway. The *time frame* for the risk assessment is 3 years.

This information is solely for the use of the tree owner and manager to assist in the decision-making process regarding the management of their trees. Tree risk assessments are simply tools which should be used in conjunction with the owner or tree manager's knowledge, other information and observations related to the specific tree or trees discussed, and sound decision making.

The statements, findings and recommendations made within the report do not take into account any effects of extreme climate and weather incidences, vandalism, changes in the natural and/or built environment around the trees after the date of this report, nor any damage whether physical, chemical or otherwise.

Tree risk ratings are derived from a combination of three factors: the likelihood of failure, the likelihood of the failed tree part impacting a target, and the consequences of the target being struck. These factors are then used to categorize tree risk as extreme, high, moderate or low. The factors used to define your risk rating are identified in this report.

Tools used in the assessment included: a nylon hammer to 'sound' the tree and tree parts; a probe to measure the depth of cavities and open wounds, as well as explore soil conditions; and binoculars to observe upper portions of the tree. Tree dimensions were recorded using hand tools such as a laser range finder; diameter tape and measuring tape.

All tree information and data were captured using Pear Technology tree management software; the trees were plotted by GPS on an Ordnance Survey base map, using a Trimble Geo 7X hand-held unit. This combination of technology has resulted in the production of the Tree Location Plan found at the end of this report.

The tree dimensions are accurate as captured on the day. The surveyed trees were individually tagged with tags numbered 101 - 135.

1.0 SCOPE OF REPORT (continued...)

1.5 Assessment of Ecological Status of Tree & Potential Constraints

Following the site visit and tree survey and assessment, we believe that there is a moderate potential for wildlife and ecological associations with the trees subject to this report. Ecological associations are considered to be predominantly limited to nesting birds.

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000, provides statutory protection to birds, bats, insects and other species that inhabit trees, hedgerows, or other associated vegetation. It is the recommendation of Bartlett Consulting that professional, detailed, advice from an ecologist is sought (if not done-so already) to confirm the consideration of Bartlett Consulting and to check if any such constraints apply to this site and its development proposals.

All trees must be thoroughly assessed for nesting birds prior to any recommended tree works.

2.0 TREE PRESERVATION ORDER & CONSERVATION AREA PROTECTION STATUS

The Town & Country Planning Act (Tree Preservation) (England) Regulations 2012 and the Town & Country Planning Act 1990 (as amended) provides legislative protection for trees within England.

An enquiry was conducted by Bartlett Consulting on 21st October 2022 through the Haringey Council's interactive mapping website: <https://www.haringey.gov.uk/environment-and-waste/nature-and-conservation/trees/tree-preservation-orders/map-tree-preservation-orders-tpos-haringey>

2.1 Tree Preservation Order (TPO) Status

Yes

2.2 Conservation Area (CA) Status

The property is located just outside the Highgate Conservation Area

2.3 Tree Management Implications

It has been established via an online search that the majority of the surveyed trees are subject to a number of Tree Preservation Orders (TPOs) however, at time of writing no detailed information regarding the orders have been obtained.

Under the Town and Country Planning (Tree Preservation) (England) Regulations 2012, you cannot carry out any works to a protected tree before obtaining formal written permission as issued by the appropriate Local Planning Authority. This obligation requires the submission of a Tree Preservation Order planning application (TPO1APP) but cannot be acted upon until full Local Planning Authority permission is granted.

We would be happy to submit the TPO1APP application on your behalf should you wish to proceed with any works arising from this consultation.

Please note that the removal of dead trees and the pruning of dead wood from living trees are permitted and "excepted" works under the 2012 Regulation listed above. These works can be undertaken only after 5 working days' notice has been given to the local planning authority.

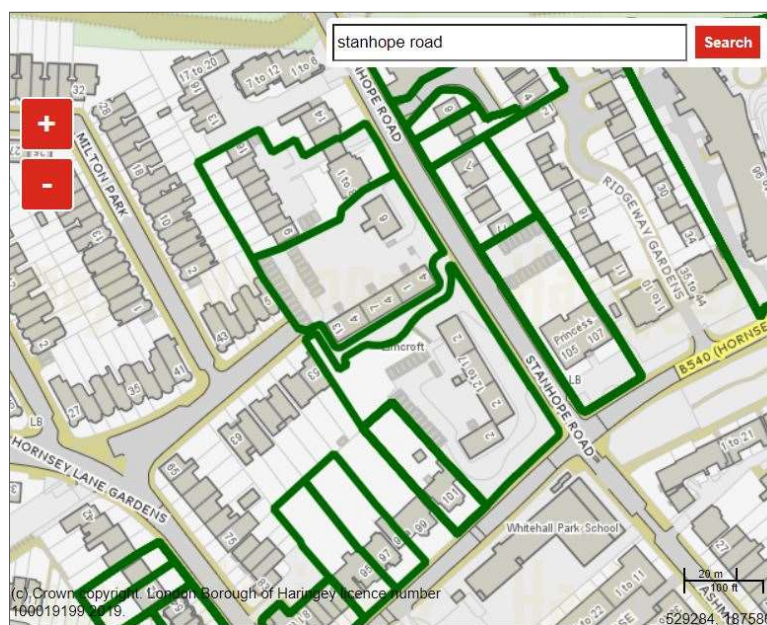


Figure 1: Snipped Image from Haringey Council website showing the site highlighted green indicating a tree preservation order

3.0 TREE POPULATION OVERVIEW

A total of 25 individual trees and 10 groups of trees were surveyed and inventoried during the survey.

The age range of the tree population is composed of:

- 7 mature trees
- 7 early mature
- 17 semi-mature trees
- 4 young trees

The Indian Horse Chestnut identified within the survey as T105 appeared to be in a state of decline, with significant dysfunction of the base and main stem leading to areas of decay. Due to the proximity of this tree to the adjacent public footpath and highway, we would recommend either the tree is removed or further testing is carried out to identify the current structural integrity of the tree.

A number of pruning works have been specified to provide or maintain clearance from buildings, lampposts and over roads and car parking areas.

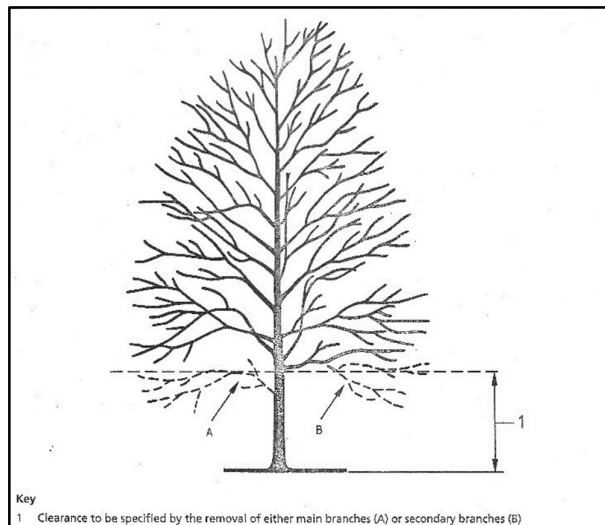
The report has identified a number of young and semi-mature trees that are currently growing in close proximity to structures. We would recommend that these trees are removed to prevent the occurrence of future damage to property and services.

4.0 RECOMMENDATIONS

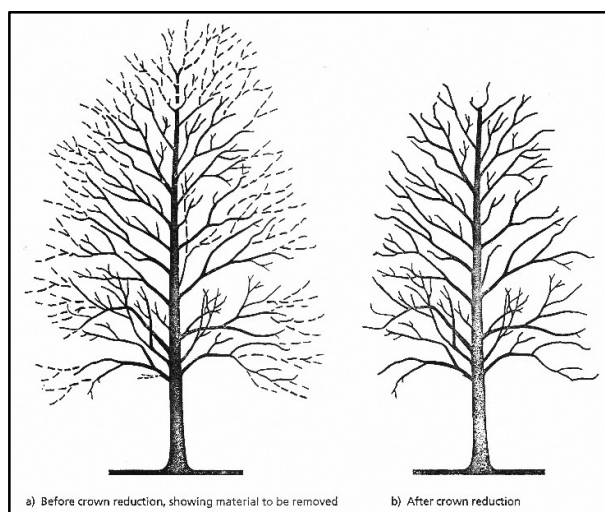
For reference and the benefit of the client, we have provided below detailed specifications and definitions of the various recommended tree work operations as well as tree health care practices.

4.1 Pruning Specifications

Crown Raising: Will be carried out in accordance with Section 7.6 of British Standard 3998:2010 so to achieve a final clearance in height above ground level, as detailed in the tables below. Branch removal will be in accordance with Figure 3 of the British Standard and carried out by removing primary branches in the first instance and the secondary branches second instance, unless otherwise specified.



Crown Reduction: Will be carried out in accordance with Section 7.7 of BS3998:2010 by reducing the height and/or lateral branch spread, as detailed in the tables below. Pruning cuts will be made by using the selective pruning and 'drop-crotch' methodologies, as described in Section 7.7 and 7.8 of the British Standard and as per Figure 4 of the Standard.

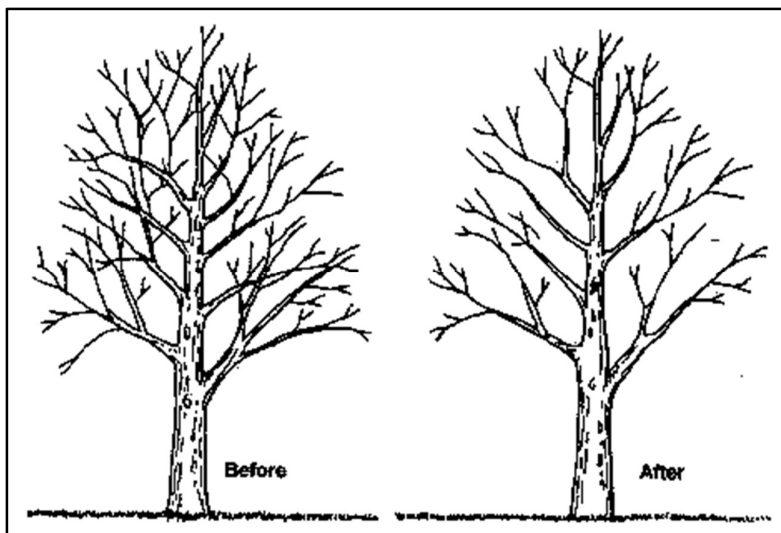


4.0 RECOMMENDATIONS (continued...)

4.1 Pruning Specifications (continued...)

Selective Pruning: Will be carried out in accordance with Section 7.7 and 7.8 of BS3998:2010 by shortening specified branching to achieve a desired distance of clearance or crown height and/or lateral spread, when undertaking the reduction works listed above. The amount of material to be removed and the diameters of the pruning cuts will be the minimum required for the purpose.

Crown Thinning: Will be carried out in accordance with Section 7.5 of British Standard 3998:2010 so to achieve an even density of foliage throughout the canopy as well as a well-spaced, balanced branching structure. Branching and leaf material should be removed systematically from throughout the entire canopy as opposed to from the internal branching only.



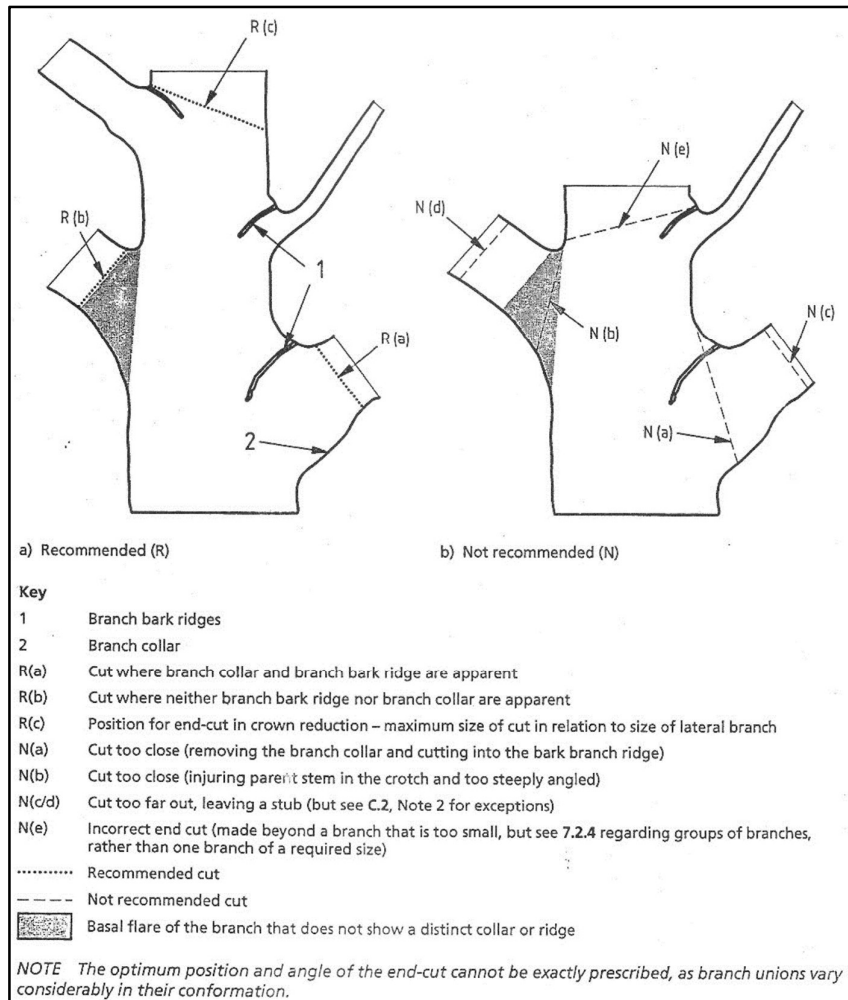
Crown Cleaning: The removal of deadwood (of all sizes) throughout the tree crown: broken and hanging branches to be removed and safely excised from the crown; stubs and ripped branches to be removed back to the branch bark collar or reduced back to substantial lateral growth; branches exhibiting any disease; branches with structural weakness such as vertical or horizontal cracking.

Formative or Structural Pruning: The removal of crossing and rubbing branches to prevent further damage; the removal of secondary branches with vertical growth; the removal of branches growing internally; a reduction in length of branches with included branch unions; a reduction back to lateral growth of branches competing for apical dominance; the removal of selective branches to improve and increase branch spacing. This does not include major crown reduction and reshaping works.

4.0 RECOMMENDATIONS (continued...)

4.1 Pruning Specifications (continued...)

Pruning Cuts: All cuts will be made to significant lateral growth, and not back to a bud so that only a stubbed branch end remains – in accordance with Figure 02 of British Standard 3998:2010.



Pruning Cuts: All cuts will be made to significant lateral growth, and not back to a bud so that only a stubbed branch end remains, in accordance with Figure 02 of British Standard 3998:2010.

5.0 RISK ASSESSMENT & DUTY OF CARE

5.1 Limitations of Tree Risk Assessments

It is important for the tree owner or tree manager to know, and understand, that all trees pose some degree of risk from failure or other conditions, and as trees are living and dynamic organisms, it is not possible to maintain them free of risk. Some level of risk must be accepted to experience the full range of benefits that trees provide. As such, we reference the National Tree Safety Group (NTSG) publication *Common Sense Risk Management of Trees* (Forestry Commission 2011). This document provides guidance on trees and public safety in the UK for owners', managers, and advisors.

The information and recommendations within this report have been derived from the level of tree risk assessment identified in this report, using the information and practices outlined in the *International Society of Arboriculture's Best Management Practices for Tree Risk Assessment*, as well as the information available at the time of the inspection.

However, the *overall tree risk rating*, the mitigation recommendations, or any other conclusions do not preclude the possibility of failure from undetected conditions, weather events, or other acts and/or influences of human or nature on the tree(s). Trees can unpredictably fail even if no defects or other conditions are present. Tree failure can cause adjacent trees to fail resulting in a "domino effect" that impacts *targets* outside the foreseeable *target zone* of this tree. It is the responsibility of the tree owner or manager to schedule repeat or advanced assessments, determine actions, and implement follow up recommendations, monitoring and/or mitigation.

Bartlett Consulting and Bartlett Tree Experts can make no warranty or guarantee whatsoever regarding the safety of any tree, trees, or parts of trees, regardless of the level of tree risk assessment provided, the risk rating, or the residual risk rating after mitigation. Bartlett Consulting and Bartlett Tree Experts cannot accept any liability in connection with these factors, nor where recommended tree management is not carried out in accordance with modern tree health care techniques, within the timelines proposed and specification provided.

The information in this report should not be considered as making safety; legal; architectural; engineering; landscape architectural; nor land surveying advice, nor any other professional advice.

This information is solely for the use of the tree owner or tree manager to assist in the decision-making process regarding their duty of care, tolerability of risk, and management of their tree or trees. Tree risk assessments are simply tools which should be used in conjunction with the owner or tree manager's knowledge, other information and observations related to the specific tree or trees discussed, and sound decision making.

All recommendations made by Bartlett Tree Experts will be based on the defects that are present and detectable at the time of the inspection or assessment, and the commonly accepted industry practices for reducing or minimising the risks associated with the trees and are meant to assist the owner/client with the decision-making process regarding the trees. Tree conditions, though, can change, and some features/hazards may not be present or detectable through the inspection process. As such, Bartlett Tree Experts can make no guarantees or warranties of any kind that all features/hazards will be detected; nor can Bartlett Tree Experts accept any liability in any manner whatsoever for any damage caused by any tree on this property, whether the tree was assessed or not, or whether any recommendations to mitigate risk were followed or not.

Therefore, to the fullest extent permitted by law, the owner/client agrees to indemnify and hold harmless Bartlett Tree Experts from any third party law suits or claims based on the past, present, or future conditions of the owner/client's trees, or decisions made by the owner/client regarding the trees, or injuries or damages caused by any future tree or tree part failures, which are under the ownership and control of the owner/client, that Bartlett Tree Experts may suffer as the result of any negligent action, inaction, or decisions made by the owner/client regarding the trees. Such obligations shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

5.0 RISK ASSESSMENT & DUTY OF CARE continued...)

5.2 Tree Owner's Duty of Care

A tree owner has a duty of care to ensure that all visitors, guests, employees, etc. to their land shall be safe from harm, and that there is no exposure to risk for that visitor's health and safety. This duty of care means that reasonable care must be taken to avoid acts or omissions that could be reasonably foreseen, leading to harm.

This duty must also be reasonable, proportionate, and reasonably practicable when managing tree risk. Therefore, the tree owner can take a balanced approach to manage the risk, retain the many benefits trees provide, and not waste resources on unnecessary tree management.

5.3 Tolerability of Risk

Some level of risk must be accepted to experience the full range of benefits that trees provide, and an evaluation of what is reasonable to balance the benefit of trees and the risk they pose should be undertaken by the tree owner.

Risks which are considered tolerable are risks which the tree owner, visitors, guests, employees, and the wider public are prepared to accept to secure the associated tree benefits. However, tolerable risks come with expectations, such as the trees being accurately assessed; control measures being in place; residual risk as low as reasonably practical; and the risk rating is periodically reviewed.

6.0 TREE SURVEY & CONDITION AND MANAGEMENT SCHEDULE

Client:	Elmcroft Management Ltd C/O A Dandy Wren	Report No:	GD/220403
Site:	Elmcroft, 2 Stanhope Road, London N6 5LP	Weather:	Dry & Sunny
Trees Tagged:	Yes		
Completed by:	Mr G Davies	Date of Survey:	19 th October 2022

Timescale for Works

ASAP – 6 months	1 Year	2 Years	3 Years

Tree No.	Species	DBH (mm)	Ht (m)	Crown Spread (m)	Age	Vitality	Condition	Works Required	Time Scale	Risk Factor	Re-Survey
T101	London Plane	1390	24	10	Mature	Normal	•Girdling roots at base attributed to lack of space •Causing direct damage to low level boundary wall •Trifurcation at 3.0m •Previous lateral pruning most notably to eastern crown overhanging road •Western crown 2-3m from building	•Carry out selective pruning of western crown to maintain suitable clearance from building - Remove any major deadwood	Two years	Low	Three years
T102	Silver Birch	440	11	6.5	Mature	Normal	•Single stem specimen •Loss of apical leader at 8.0m resulting in suspected decay •Previous crown reduction	•No works currently required	N/A	Low	Three years
G103	Group of 2 conifers	240 & 280	9	2	Semi-mature	Normal	•1 Lawson Cypress & 1 yland Cypress •Forming combined crown	•No works currently required	N/A	Low	Three years
G104	Group of 5 Common Yew	150 to 300	5.5	3.5	Semi-mature	Normal	•Growing to boundary forming combined crown •Previous pruning of northern crown overhanging lawn and southern crown overhanging public footpath	•Maintain regular pruning to ensure clearance over path and lawn	One year	Low	Three years

Tree No.	Species	DBH (mm)	Ht (m)	Crown Spread (m)	Age	Vitality	Condition	Works Required	Time Scale	Risk Factor	Re-Survey
T105	Indian Horse Chestnut	720	9	4	Early-mature	Low	•Cambial dysfunction to southern quadrant at base and at multiple points on main stem •Ivy within lower crown inhibiting full inspection of primary unions •Southern crown overhanging public footpath and road, previously reduced	•Consider removal •Or •Carry out level 3 inspection if retention is desired	Six months	Moderate	6 months
G106	Mixed Group	250 avg	8	5	Semi-mature	Normal	•Including Laurel, Yew, Holly, Sweet Chestnut •Forming a combined crown providing effective screening from road •Eastern crown overhanging public footpath previously managed to maintain suitable clearance	•Maintain regular pruning for clearance over public footpath	One year	Low	Three years
T107	Holm Oak	200	7	2.5	Semi-mature	Normal	•Single stem specimen •Growing 1.9m from neighbouring building (considered too close) •Asymmetrical crown bias to east	•Selective prune to maintain suitable clearance from neighbouring building •Consider removal to prevent future conflicts	One year	Low	Three years
T108	Bird Cherry	140 at base	5	2	Young	Normal	•Growing less than 500mm from neighbouring building (considered to close)	•Consider removal to prevent future conflict	One year	Low	N/A
G109	Group of 2 Common Yew	150 & 180	4	2.5	Young	Normal	•Western specimen growing less than 600mm from neighbouring building (considered to close) •Crown of eastern specimen overhanging access drive	•Consider removal of western specimen to prevent future conflict •Reduce eastern crown of eastern specimen to maintain suitable clearance from access drive	One year	Low	Three years
T110	Silver Birch	520	17	5.5	Mature	Normal	•Multiple co-dominant leaders forming beyond 2.5m •Previous pruning of lower western crown overhanging drive	•No works currently required	N/A	Low	Three years
G111	Group of Sycamore	500 avg	17	9	Early-mature	Normal	•Third party trees •Unable to access or visually inspect at base •Overhanging site •Previous crown lift to provide clearance over garages	•No works currently required	N/A	Low	Three years
T112	Lawson Cypress	330	10	2	Semi-mature	Normal	•Growing below crown of dominant tree	•No works currently required	N/A	Low	Three years
G113	Leyland Cypress	150 avg	8	2	Young	Normal	•Good structural condition	•No works currently required	N/A	Low	Three years
T114	Common Beech	700	22	7	Early-mature	Normal	•In proximity to neighbouring building •Recent installation of boundary fence and wall within immediate rooting zone •No sing of visible root damage •Single stem specimen •Regular pruning of western crown resulting in asymmetrical bias •Recent crown reduction resulting in dead stubs upper crown	•No works currently required	N/A	Low	Three years

Tree No.	Species	DBH (mm)	Ht (m)	Crown Spread (m)	Age	Vitality	Condition	Works Required	Time Scale	Risk Factor	Re-Survey
T115	Common Hawthorn	400 at base	8	4	Early-mature	Normal	• Multiple stem specimen • Historically topped at 2.0m • Growing in proximity to brick sheds	• Carry out selective pruning to maintain suitable clearance from lamp post and over brick sheds	One year	Low	Three years
T116	Silver Birch	490	14	6	Mature	Normal	• Single stem specimen • Lower southern crown previously pruned to provide suitable clearance over garage block	• No works currently required	N/A	Low	Three years
T117	Common Lime	480	13	5	Semi-mature	Normal	• Green waste dumped at base burying root collar • In proximity to garage block and neighbouring building • Previous removal of lower branch at 2.0m resulting in large pruning wound • Asymmetrical crown bias to south-west • Previous pruning to provide suitable clearance over garage	• Remove green waste dumped at base and expose rooting collar Maintain regular pruning to provide clearance over garage	One year	Low	Three years
T118	Common Horse Chestnut	490	12	6	Semi-mature	Normal	• Large pruning wound at 1.5m on main stem • Bifurcation of main stem at 2.0m • Asymmetrical crown bias to east	• No works currently required	N/A	Low	Three years
T119	Sycamore	210	9	4	Semi-mature	Normal	• Single stem specimen • Growing in proximity to neighbouring building • Asymmetrical crown bias to north-west in direct contact with building	• Carry out crown reduction to provide min 1.5m from building	One year	Low	Three years
T120	Common Lime	160 & 140	8	4	Young	Normal	• Two single stem specimen • Growing in proximity to neighbouring building • Asymmetrical crown bias north overhanging building	• Selective pruning and crown lift to provide min 1.5m from building	One year	Low	Three years
T121	Lombardy Poplar	510	10	3	Semi-mature	Normal	• Growing in proximity to neighbouring building • Multiple leaders forming from main stem at 4.0m recently topped at 8.0m with approx. 1.0m current regrowth	• Manage regrowth pruning back to previous pruning points	Two years	Low	Three years
T122	Bigleaf Magnolia	140-100	2.5	2	Semi-mature	Normal	• Bifurcation of main stem at base • Previous crown lift to provide clearance for lawn mower	• Crown lift to maintain suitable clearance	Two years	Low	Three years
G123	Mixed Group	150 avg	6	2	Semi-mature	Normal	• Elder, buddleia & Sycamore along with other small shrubs • Crowns in proximity to neighbouring building and residential block • Sycamore considered inappropriate location considering potential for growth	• Carry out selective pruning of group to maintain suitable clearance from buildings • Consider removal of young sycamore	One year	Low	Three years
T124	Sycamore	500-500	14	8	Early-mature	Normal	• Third party tree • Roots possibly attributed to cracks in driveway • Southern crown overhanging driveway previous crown lift to maintain suitable clearance	• Crown lift to maintain suitable clearance over driveway	Two years	Low	Three years

Tree No.	Species	DBH (mm)	Ht (m)	Crown Spread (m)	Age	Vitality	Condition	Works Required	Time Scale	Risk Factor	Re-Survey
T125	Norway Maple	690	14	8	Early-mature	Normal	• Mechanical damage to exposed roots • Bifurcation of main stem at 2.5m resulting in partially included union • Cavity at 2.5m solid when probed • Recent reduction resulting in spread crown	• No works currently required	N/A	Low	Three years
G126	Group of 2 Pissards Plum	500 avg at base	6	4	Mature	Normal	• Multiple stem specimens • Asymmetrical crown bias to north • Reactive vertical growth forming throughout crown • Southern crown in proximity to lamp post and building entrance	• Carry out selective pruning and crown lift to maintain suitable clearance from lamp post and building entrance	Two years	Low	Three years
T127	Silver Birch	370	12	6	Mature	Normal	• Single stem specimen • Asymmetrical crown bias to north • Crown in proximity to building	• Carry out selective pruning to maintain suitable clearance from building	One year	Low	Three years
G128	Mixed Group	200 avg	8	3	Semi-mature	Normal	• Cherry, Elm, cotoneaster, Yew Elder, Laurel • Single stem and multiple stem specimens • Previous crown lift to provide clearance over path and away from building	• selective pruning and crown lift to maintain suitable clearance over path and from building	One year	Low	Three years
T129	Goat Willow	400	8	6	Semi-mature	Normal	• Growing on slope • Significant development of exposed root structure and buttressing • Lean on main stem to north self-corrected at 3.0m • Crown overhanging car parking	• Carry out crown reduction by approx. 2.0m to re-shape • Crown lift to maintain suitable clearance over parking area	Two years	Low	Three years
G130	Enter details in comments box	200 avg	7-Mar	3	Semi-mature	Normal	• Group of mixed trees and shrubs growing on bank including elder, yew, cotoneaster Crown in proximity to lampost and overhanging carparking Suspected self set sycamores growing close to adjacent garage block likely to cause future damage to structure	• Crown lift to maintain suitable clearance over car parking and reduce to provide clearance from steep • Consider removal of self-set sycamores	One year	Low	Three years
T131	Leyland Cypress	250	8	2.5	Semi-mature	Normal	• Growing in proximity to raised drain and approx. 3.0m from building (considered to close)	• Either prune on regular basis to manage current reducing crown volume • Or • Alternatively remove to ground level to avoid risk of future conflict	One year	Low	N/A
G132	Mixed Group	200 avg	7	3	Semi-mature	Normal	• Trees and shrubs growing on slope adjacent to building consisting of Sycamore, Elm, Yew Cotoneaster and Laurel • A number of self-set Sycamores growing within proximity to building (considered to close) • 1x dead standing Laburnum stem	• Crown lift and selective pruning to provide suitable clearance over road, away from lamp post and building • Consider removal of self-set sycamores trees growing within close proximity to building to prevent future conflict	One year	Low	Three years

Tree No.	Species	DBH (mm)	Ht (m)	Crown Spread (m)	Age	Vitality	Condition	Works Required	Time Scale	Risk Factor	Re-Survey
T133	London Plane	1310	30	13	Mature	Normal	• In direct conflict with boundary wall • Trifurcation of main stem at 4.0m • Asymmetrical crown bias to north low level • Northern crown overhanging public footpath • Western crown in proximity to building	• Crown lift to achieve suitable clearance over public footpath • Selective pruning of lower western crown to provide min 1.5m from building	One year	Low	Three years
T134	Common Horse Chestnut	760	23	7	Early-mature	Normal	• Single stem specimen • Reactive growth forming on lower stem • Lean on main stem to west self-corrected at 6.0m • Western crown in proximity to building • Minor deadwood throughout crown	• Removal of epicormic regrowth on lower stem • Selective pruning of the western crown to provide suitable clearance from building	One year	Low	Three years
T135	English Elm	210-170-140	8	6	Semi-mature	Normal	• Raised roots causing suspected damage to wall 3x co-dominant stems forming from stool of a previously removed tree • Previous crown lift to provide suitable clearance over footpath entrance and parking area • Southern crown in proximity to lamp post	• Carry out selective pruning to provide suitable clearance from lamp post • Crown lift to maintain suitable clearance over path, entrance and parking area	Two years	Low	Three years

Tree Survey Schedule Key:

Tree No – tree reference on Tree Location Plan and/or tree tags where used. **Species** – tree species giving English common name. **DBH** – the individual stem diameters when typically measured at 1.5m above ground level unless otherwise stated. **Ht** – tree height recorded in metres. **Crown Spread** - crown spread in the four cardinal compass points, or as average using broadest radial spread. **Age Class** – recorded as **NP** (newly planted); **Y** (Y) up-to 1/5 of trees life-cycle; **SM** (semi-mature) up-to 2/5 of trees life-cycle; **EM** (early-mature) up-to 3/5 of trees life-cycle; **M** (mature) up-to 4/5 of trees life-cycle; **OM** (over-mature) up-to 5/5 of trees life-cycle; **Vet** (veteran) exceptional age for species with features such as cracks, cavities and decay which enhance biological associations and value of tree with senescence/re-trenchment. **Vitality** – an assessment of the physiological condition of the tree expressed as **NORM** (normal) no dieback no decline or **LOW** (low) exhibiting signs of dieback and reduced growth/vitality. **Condition** – is reference to physical and structural observations of the tree as a whole and individual parts. **Time Scale** – recommended priority and timeframe in which recommended actions should be completed, including **N/A** (not applicable as no priority). **Risk Factor** – as per Section 7.0 of report. **Re-inspection Frequency** – as expressed in assessment table.

Note on Time Scale: Where a program of coppicing has been recommended, the time scale is the recommended time in which the program should commence.

We trust that the contents and recommendations contained within this report were informative, easy to understand and helpful to you, with regards to managing your tree(s).

Should you have any further questions or concerns, please do not hesitate to contact us again.

REPORT CLASSIFICATION: Tree Survey & Condition and Management Report

REPORT STATUS: Final

REPORT COMPLETED BY: Mr G DAVies *FdSc Arb*
Arboricultural Consultant

SIGNATURE:



DATE: 21/10/2022

REPORT REVIEWED BY: Ruth Le Poidevin
Consultancy Administrator

SIGNATURE:



DATE: 26/10/2022

APPENDIX 1 – Tree Risk Assessment Glossary

Bartlett Consulting uses the International Society of Arboriculture's (ISA) Tree Risk Assessment methodology, referred to as TRAQ. This is a 'qualitative' system which uses a matrix-based combination of ratings, to reach a conclusion of associated risk. The standard Bartlett Consulting time-line within the TRAQ system is three (03) years, unless otherwise stated within the report.

Risk is the combination of the 'likelihood' of an event: in this case the failure of a tree or part of a tree, and the severity of the potential consequences. A hazard is the likely source of harm. The two tables below define both the likelihood and risk levels as per the TRAQ system.

Tree risk assessment has a unique set of terms with specific meanings. Definitions of all specific terms may be found in the International Society of Arboriculture's *Best Management Practice for Tree Risk Assessment*. Definitions of some of these terms used in this report are as follows:

Classification	Description of Likelihood of Failure (As per Dunster, Smiley, Matheny, Lilly 2017)
Improbable	The tree or tree part is not likely to fail during normal weather conditions, and may not failure in extreme weather conditions, within the specified time frame.
Possible	Failure may be expected in extreme weather conditions, but it is unlikely during normal weather conditions, within the specified time frame.
Probable	Failure may be expected under normal weather conditions, within the specified time frame.
Imminent	Failure has started or is most likely to occur in the near future, even if there is no significant wind, weather, or increased load.

Targets are people, property, or activities that could be injured, damaged or disrupted by a tree failure.

Likelihood of Impact may be categorized as high meaning that a failed tree or tree part will most likely impact a target; medium meaning the failed tree or tree part is as likely to impact the target as not; low meaning that the failed tree or tree part is not likely to impact a target; and very low meaning that the likelihood of a failed tree or tree part impacting the specified target is remote.

Consequences of a known target being struck may be categorized as severe meaning that impact could involve serious personal injury or death, damage to high-value property, or disruption to important activities; significant meaning that the impact may involve property damage of moderate to high value, considerable disruption, or personal injury; minor meaning that impact could cause low to moderate property damage, small disruptions to traffic or a communication utility, or very minor injury; and negligible meaning that impact may involve low-value property damage or disruption that can be replaced or repaired, and do not involve personal injury.

Risk Level	Description of Risk (As per Dunster, Smiley, Matheny, Lilly 2017)
Extreme Risk	Failure is <i>imminent</i> , impact & failure is <i>very likely</i> , and the consequences of the failure are <i>severe</i> . Mitigation will be a high priority or targets must be temporarily controlled.
High Risk	Impact & Failure is <i>likely to very likely</i> with <i>significant</i> consequences; or consequences are <i>severe</i> and the Impact & Failure is <i>likely</i> . Mitigation measures should be taken.
Moderate Risk	Impact & Failure is <i>likely to very likely</i> with <i>minor</i> consequences; or consequences are <i>significant to severe</i> with a <i>somewhat likely</i> Impact & Failure. Mitigation will be determined by tolerance of risk.
Low Risk	Consequences are either negligible or minor, with corresponding Impact & Failure ratings of either unlikely or somewhat likely respectively. Mitigation may be desirable but not strictly necessary.

Overall Tree Risk is the highest individual risk identified for the tree.

Residual Risk is the level of risk the tree should pose after the recommended mitigation

APPENDIX 2 – Tree Survey & Assessment Glossary

The scientific study of tree hazard evaluation and assessment is not an exact science, and there is still much to learn with constantly developing technology, research and calculations. Most limitations of tree hazard evaluation arise from uncertainties with trees and the loads the trees are subjected to.

The three levels of tree evaluation and assessment employed by Bartlett Consulting are those defined in the International Society of Arboriculture's (ISA) *Best Management Practices for Tree Risk Assessment* and *ANSI A300 Tree Risk Assessment Standard*. All three levels are described below, along with the basic limitations of each.

I. Level 1 Limited Visual Assessment

A *Level 1 Limited Visual Assessment* (also referred to as a Hazard Survey or Negative Tree Survey) is a visual assessment from a specific perspective of an individual tree or a population of trees near specified targets. These assessments are conducted to identify obvious defects or specified tree conditions (such as dead trees) as agreed with the client and tree owner / manager.

A *Level 1 Limited Visual Assessment* is typically performed from a pre-defined and specified perspective (i.e. from the pavement, street, car parking area(s), woodland edge, etc.), and typically of one side of the tree from that specified perspective. The specified tree or trees are visually assessed to identify tree features, defects, or specific conditions constituting a hazard which result in a likelihood of failure of probable or imminent and would impact the specified target(s).

Level 1 Limited Visual Assessments are typically performed to quickly assess large populations of trees to identify trees with the highest likelihood of failure ratings in the population, or trees that are recommended for higher level of assessment.

A *Level 1 Limited Visual Assessment* typically includes:

1. Identifying the location and/or selection criteria of trees to be assessed.
2. Determining and documenting the most efficient route to be taken.
3. Determining and documenting the method of visual assessment (e.g. walk-by, drive-by).
4. Recording the location of, and assessing the condition of, tree(s) of concern from the defined perspective meeting the predefined criteria (e.g. dead trees, broken branches).
5. Evaluating the risk (a risk rating is optional).
6. Identifying trees needing a higher level of assessment (*Level 2 Basic* or *Level 3 Advanced*) and/or priority corrective action.
7. Submitting risk mitigation recommendations and/or report.

Limitations of Level 1 Limited Visual Assessments

As the least thorough means of assessment, tree features and/or conditions may not be visible as the inspection is from a particular viewpoint; not all tree features and observations may be visible or apparent at different times of the year; climbers, undergrowth, basal growth, etc. will not be removed inhibiting the inspection; and the inspection may not be adequate enough to make a risk mitigation recommendation. Residual risk designations for trees are not included.

APPENDIX 2 – Tree Survey & Assessment Glossary (continued...)

II. Level 2 Basic Visual Assessment

A *Level 2 Basic Visual Assessment* is a more detailed visual inspection of a tree and its surrounding site, and a synthesis of the information collected. It requires complete inspection around a tree including the site and ground conditions / growing environment; visible buttress roots; main stem(s); and branches (as defined in the International Society of Arboriculture's (ISA) *Best Management Practices for Tree Risk Assessment* and *ANSI A300 Tree Risk Assessment Standard*).

A *Level 2 Basic Visual Assessment* allows for all aspects of the tree(s) to be surveyed and removal of climbers, undergrowth and basal growth. The crown, branches, stem(s), and buttress roots of the specified tree(s) are all assessed to look for notable features including any defect, decay, dysfunction or other structural weakness, as well as assessing the overall health and vitality of the tree(s). A *Level 2 Basic Visual Assessment* will include the use of hand-tools such as a sounding hammer; depth probe; binoculars; and measuring tapes / laser range finders to record tree dimensions; and possibly a trowel to uncover buttresses. Recommendations for trees that need a higher level of assessment are typically included.

A *Level 2 Basic Visual Assessment* typically includes:

1. Locating and identifying the tree or trees to be assessed.
2. Determining the *targets* and *target zone* for the tree or branches of concern.
3. Reviewing the site history and conditions, and species failure profile.
4. Assessing the potential load on the tree and its parts.
5. Visually assessing general tree health based on observable features at the time.
6. Completing the tree inspection and assessment using tools listed above.
7. Recording all details and observations.
8. Analysing all captured field data to determine the *likelihood of failure* and *consequences of failure* in order to complete a tree risk assessment.
9. Developing mitigation options, recommending a further Level 3 Advanced Assessment, if deemed necessary, and estimating *residual risk* for each mitigation option.
10. Producing and submitting the report, including when appropriate, advice on re-inspection intervals.

Limitations of Level 2 Basic Visual Assessments

This visual assessment will only include details and information on tree features and conditions that can be detected from a ground-based inspection on the day of the assessment, using the tools listed in the introduction above. The extent of some internal decay, as well as the type of wood decay, and below ground or high canopy features or conditions may be difficult to observe, determine or assess.

APPENDIX 2 – Tree Survey & Assessment Glossary (continued...)

III. Level 3 Advanced Assessment

A *Level 3 Advanced Assessment* is performed to provide detailed information about specific tree parts, conditions or features, targets, or site conditions. A *Level 3 Advanced Assessment* typically incorporates all aspects of a *Level 2 Basic Visual Assessment* and is usually conducted after a *Level 2 Basic Visual Assessment* with client approval.

Specialized equipment, data collection and analysis, and/or expertise are typically required for these advanced assessments to provide detailed and in-depth information about a specific tree parts, conditions or features, and the likelihood of failure, previously identified in a *Level 2 Basic Visual Assessment*.

A *Level 3 Advanced Assessment* typically includes:

1. Locating and identifying the tree or trees to be assessed.
2. Determining the *targets* and *target zone* for the tree part of concern.
3. Reviewing and updating the *Level 2 Basic Visual Assessment* data as necessary.
4. Completing the advanced assessment using methods and/or techniques as determined necessary and appropriate by the Arborist, and as defined in the Scope of Work.
5. Interpreting and analysing the advanced assessment data and information to update and revise the *likelihood of failure* and *consequences of failure* in order to complete a tree risk assessment.
6. Developing mitigation options and estimating *residual risk* for each mitigation option.
7. Producing and submitting the report, including when appropriate, advice on re-inspection intervals.

Limitations of Level 3 Advanced Assessments

Using technology, methodologies and equipment listed below always involves a degree of uncertainty as well as limitations in use. Furthermore, most data is not an accurate measure, but a qualified or quantified estimation.

Arborists employing advanced assessment equipment and technology must have an advanced knowledge of the application and use of the various equipment (e.g. when and where it is appropriate for use and which method); in-depth knowledge of decay fungi and host tree species relationships; training and experience in interpreting data; and likelihood of failure assessment.

APPENDIX 2 – Tree Survey & Assessment Glossary (continued...)

III. Level 3 Advanced Assessment (continued...)

Methods of Advanced Assessment

Procedure	Methodology
Aerial Tree Inspection (evaluation of tree structure within crown)	- visual inspection from within the tree crown or from a lift - unmanned aerial vehicle (UAV) photographic inspection - decay testing of branches
Detailed Target Analysis	- property value - use and occupancy statistics - potential disruption of activities
Detailed Site Evaluation	- history evaluation - soil profile inspection to determine root depth - soil mineral and structural testing
Decay Testing	- increment boring - drilling with small-diameter bit - resistance-recording drilling - single path sonic (stress) wave - sonic / impulse tomography - electrical impedance tomography - radiation (radar, X-ray) - advanced analysis for pathogen identification
Tree Health Evaluation	- tree ring analysis (in temperate zone trees) - shoot length measurement - detailed health/vigour analysis - starch assessment
Root Inspection and Evaluation	- root and root collar excavation - root decay evaluation - ground-penetrating radar - sonic / impulse tomography
Storm / Wind Load Analysis	- detailed assessment of tree exposure and protection - computer-based estimations according to engineering models - wind reaction monitoring over a defined interval
Measuring & Assessing the Change in Tree Lean	- visual documentation - plumb line - digital spirit level
Load Testing	- hand pull - measured static pull - measured tree dynamics

Note: All levels of tree inspection, evaluation and assessment consider visible, and detectable, tree observation, conditions and features in proximity to the known and/or assigned targets of the tree or trees being assessed. Regardless of the level selected, any tree risk assessment will be limited to the tree or trees selected, and the detectable conditions at the time of the defined and assigned assessment. The client should also recognize that not all defects will be detectable, and not all failures can be predictable

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TREE LOCATION PLAN

SCALE :
1 : 750

@ A4

DATE :
10/21/2022

N



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