



Level 2 - Tree Survey, Condition and Management Report

SITE:

The Priory
Church Lane
London
N17 7AA

PREPARED FOR:

Mr Daniel Warner
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36 Causton Street
London
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PREPARED BY:

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BARTLETT PROJECT REFERENCE:

GD/230516/TCP

SITE VISIT DATE:

Tuesday 10th October 2023



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1.0 SCOPE OF REPORT

1.1.1 Assignment

1.1.0 Bartlett Consulting were instructed by Mr Dan Warner working on behalf of the Diocese of London on 20th September 2023 to:

1.2.0 Perform a Level 2 Basic survey of the principal trees located within the grounds of The Priory, Church Lane, London, N17 7AA following the visual tree assessment (VTA) techniques developed by Mattheck & Breloer (1994).

1.3.0 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.

1.4.0 After review and discussion with the client, the tree risk assessment will be conducted for the following target(s): Persons & property both private and public including: the Priory building and grounds, neighbouring All Hallows Church burial site, the adjacent public footpath and highway and Risley Avenue Primary School.

1.5.0 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

1.2.0 Mr Daniel Warner, Interim Head of Housing has commissioned a tree survey and inventory to fully understand the health and condition of their tree stock, to know what risks (if any) their trees pose, and to be advised on what management to complete.

1.3 Report References

1.3.0 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

- 1.4.0 This report is restricted to the principal trees and groups of trees detailed in the Assignment above.
- 1.4.1 My Level 2 survey and qualified risk assessment of trees surveyed at The Priory, Church Lane, London, N17 7AA is based on a single site visit on 10th October 2023. All photographs, samples, and readings, if applicable, were taken at the time the assessment was performed.
- 1.4.2 There were no limitations affecting either tree inspection.
- 1.4.3 *Targets and Occupancy Rates* considered in the tree risk assessment were determined based on a conversation and agreement with the Targets considered in this tree risk assessment are Persons & property both private and public within and adjacent to the site. The *time frame* for the risk assessment is 3 years.
- 1.4.4 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 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.
- 1.4.5 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.
- 1.4.6 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.
- 1.4.7 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.
- 1.4.8 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 TDC600 hand-held unit. This combination of technology has resulted in the production of the Tree Location Plan found at the end of this report.
- 1.4.9 The tree dimensions are accurate as captured on the day.
- 1.4.10 The surveyed trees were individually tagged with tags numbered 546-595.

1.5 Assessment of Ecological Status of Tree & Potential Constraints

- 1.5.0 Following the site visit and tree survey and assessment, I believe that there is a MODERATE potential for wildlife and ecological associations with the tree subject to this report. Ecological associations are considered to include nesting birds within tree crowns. Evidence of borrowing mammals was present during the visit.
- 1.5.1 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 to confirm the consideration of Bartlett Consulting and to check if any such constraints apply to this site and its trees.
- 1.5.2 All trees must be thoroughly assessed for nesting birds prior to any recommended tree works.

2.0 TREE PROTECTION STATUS

2.0.0 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.

2.0.1 I conducted an online enquiry on 13th October 2023 via accessing the Haringey Councils interactive mapping website:

2.0.2 <https://www.haringey.gov.uk/environment-and-waste/nature-and-conservation/trees/tree-preservation-orders/map-tree-preservation-orders-tpos-haringey>

2.0.3 The information sourced, confirmed the following:

2.1 Tree Preservation Order (TPO) Status

2.1.0 None

2.2 Conservation Area (CA) Status

2.2.0 The site is located within the Bruce Castle & All Hallows Conservation Area: designated on 26th March 1976

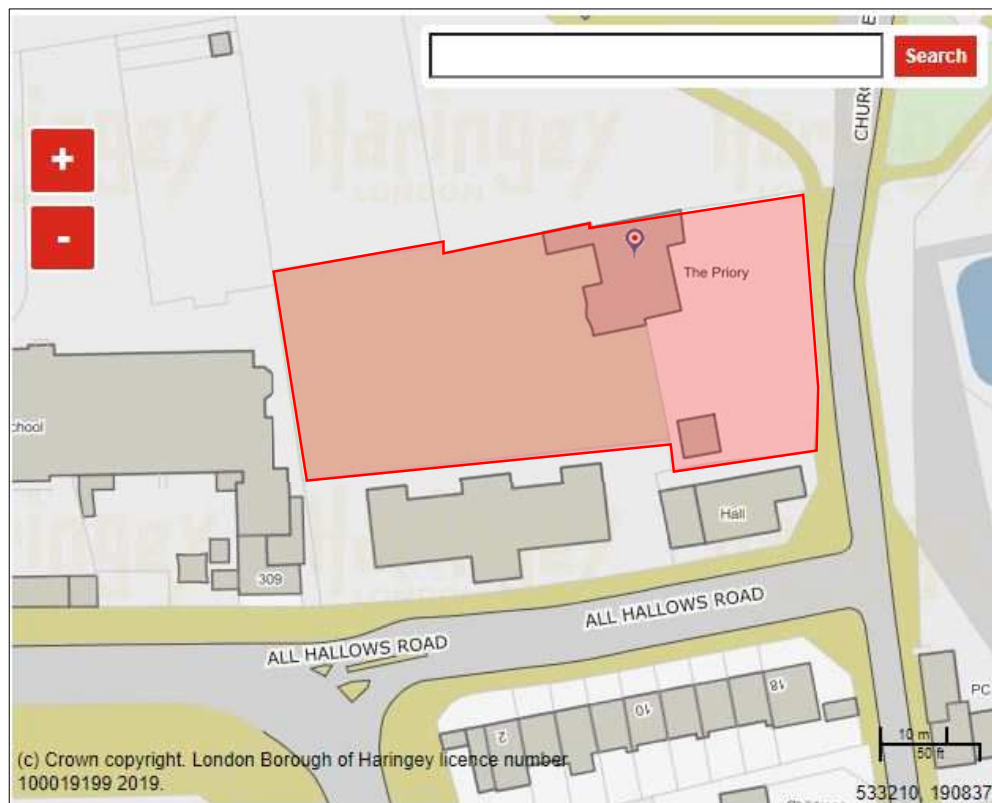


Figure 1: Annotated screenshot of TPO map, as obtained from LPA (Haringey Council), with site highlighted in red

2.0 TREE PROTECTION STATUS (Continued...)

2.3 Tree Management Implications

- 2.3.0 I have established via accessing the Haringey Council's interactive mapping website that all trees subject to this report are currently afforded statutory protection by virtue of them being located within a designated Conservation Area (CA), administered by the LPA.
- 2.3.1 This status affects all trees of a stem diameter greater than 75mm, when measured at 1.5m above ground level. Therefore, trees will be protected by virtue of their location in the designated CA.
- 3.3.2 Under the Town and Country Planning Act 1990 (as amended), a Section 211 Notice must be served upon the LPA, providing them with 6 weeks' notice of any intention to implement works to protected trees.
- 3.3.3 The purpose of this notice is to provide the LPA an opportunity to consider whether a TPO should be made in respect of the trees.
- 2.3.4 None of the trees on or adjacent to the site are current subject to a Tree Preservation Order (TPO).
- 2.3.5 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.

3.0 TREE POPULATION OVERVIEW

- 3.0.0 A total of 41 individual trees and 9 groups of trees were surveyed and inventoried within the boundaries of The Priory, Church Lane, London, N17 7AA. The age range of the tree population is composed of:
- 1x Veteran tree
 - 0x Over mature trees
 - 2x Mature trees
 - 10x Early mature trees
 - 26x Semi-mature trees
 - 11x Young trees
 - 0x Newly planted trees
- 3.0.1 A diverse variation in age and species within a tree stock is important for the continued ecological, environmental, and amenity benefits that trees provide now and into the future. It can also help develop resilience to outbreaks of pests and diseases, or aid regeneration after storm losses.
- 3.0.2 It is my recommendation that any additional trees that are lost or removed should continue to be replaced, and that every given opportunity to increase the tree stock is to be encouraged, in order that the amenity the site provides to the owners/users of the site and the wider community is not merely maintained but is actively improved where reasonable.
- 3.0.3 A total of 10 individual trees and 1 groups and individual trees were considered to be in a moderate and/or declining physiological condition. A decline in tree health can be due to any combination of factors revolving around their growing environment and conditions, as well as previous tree management. In some instances, the decline in health can be addressed, and potentially reversed, by tree health care and cultural practices.

3.0 TREE POPULATION OVERVIEW (Continued...)

3.1 Prescribed Tree Works

- 3.1.0 For your convenience, the following work schedule has been brought forward from the recommendations given in Section 7.0, providing all recommended tree works and plant health care programs representing the moderate and low priority works with the timescales being: 6 months and 1 year.
- 3.1.1 Section 7.0 contains additional information about the trees and should be read in conjunction with these extracted schedules of work.
- 3.1.2 All works are to be carried out in full compliance with *BS 3998:2010 Tree Works - Recommendations* (Section 7.0) and as modified by more recent research.

3.2 Table 3: Tree works to be carried out within 6 months.

Tree ID	Common Name	Tree Works
T550	Lawson Cypress	Remove to prevent future damage to the wall and possible wall instability
T554	Common Holly	Remove to ground level
T566	Common Ash	Remove to ground level
T573	Juniper	Remove to ground level
G577	English Elm	Remove specimens showing signs of die-back and dead specimens throughout group
T582	Sycamore	Remove to ground level
T587	Common Lime	Remove to ground level
T589	Common Pear	Remove to ground level
T592	Palmate Maple	Remove to ground level
T594	Juniper	Remove to ground level
T595	London Plane	Carry out crown lift and selective pruning to provide minimum 2.0m clearance from the roof and chimney

3.0 TREE POPULATION OVERVIEW (Continued...)

3.3 Table 4: Tree works to be carried out within 1 year.

Tree ID	Common Name	Tree Works
T547	Lawson Cypress	Carry out selective pruning of the western crown to provide minimum 1.0m clearance from house
G551	Common Ash	- Remove holly at base - Carry out a maximum 3.0m reduction focusing on the western crown overhanging public footpath and highway
T552	Common Holly	- Thin crown removing vertical reactive growth and deadwood throughout - Apply Phosphite drench at base - Installation of fresh mulch around base - Carry out soil sampling
G553	Leyland Cypress	- Crown lift removing branches up to 2-3 metres providing better clearance - Alternatively consider removal of the two trees allowing more light into the garden
T555	Common Hawthorn	Carry out an approximate 3.0m height and lateral reduction focusing on the overhanging eastern crown to rebalance and limit overhang
T558	Cherry Laurel	Trim lower crown and carry out crown reduction of the upper crown to reshape reducing in height if desired
T559	White Mulberry	Consider installation of fresh mulch around base
G560	Bay	Remove to ground level
T561	Common Yew	- Carry out a 1.5-2.0m crown reduction - Carry out additional selective pruning of the western crown where necessary to provide minimum 1.0m clearance from house - Remove deadwood within lower crown
T562	Common Ash	Remove to ground level
T563	Common Ash	- Severe vine growing throughout crown - Carry out a 2-3.0m lateral reduction of the western crown to rebalance and reduce encroachment over neighbouring property
T565	Common Beech	Remove major deadwood throughout lower and mid crown
G569	Pissards Plum	Carry out selective pruning to maintain min 1.0m clearance from neighbouring boundary fence
T578	Pissards Plum	Remove to ground level
T579	Robinia	- Carry out crown lift and selective pruning to reduce crown encroachment and provide suitable clearance from school building - Alternatively remove to ground level
G581	Sycamore	Crown lift and selective pruning to provide minimum 2.0m clearance from School building
G583	Sycamore	Carry out selective pruning and lift to provide minimum 2.0m clearance from school building
T584	Common Lime	- Remove epicormic regrowth at base and on main stem - Carry out selective pruning of the overhanging western crown to provide minimum 2.0m clearance from school building
T585	Common Lime	- Remove epicormic regrowth at base and on main stem - Carry out crown lift and selective pruning of the overhanging lower western crown pruning back to boundary - Remove major deadwood throughout crown
T588	Sycamore	Dismantle dead tree resting on main stem

4.0 FUNGAL, DISEASE OR INSECT PATHOGEN

4.1 Ash Dieback (*Hymenoscyphus fraxineus*)

4.1.0 A number of the Common Ash (*Fraxinus excelsior*) trees on site are currently exhibiting several symptoms of Ash Dieback (*Hymenoscyphus fraxineus*).

4.1.1 Ash Dieback is a highly destructive fungal disease affecting the United Kingdom's Ash trees. It causes leaf loss and crown decline and in some instances caused tree death.

4.1.2 Type: fungus

4.1.3 Appearance: Dieback starts within the leaves and quickly spreads to the current year's shoots. It then spreads to older twigs and branches in later years. When it reaches older branches, cankers form at the unions, which have a darkened, sunken appearance.

4.1.4 Type of Decay: The disease affects the vascular tissues of the tree, blocking the supply of water and nutrients.

4.1.5 Area affected: First observed within the leaves, then branches of affected trees.

4.1.6 Season & Persistence: Fruiting bodies are observed during July to October.

4.1.7 Principle Species: Various species of Ash, including; *F. excelsior*, *F. angustifolia*.

4.1.8 Consequence: Significant dieback throughout the crowns of affected trees, leading to brittle failures of branches and stem. Affected trees are also susceptible to secondary pathogens, such as Honey Fungus (*Armillaria mellea*) and subsequently prone to windthrow from root decay.



Figure 2: Example photograph of lesion caused by Ash Dieback.

4.0 FUNGAL, DISEASE OR INSECT PATHOGEN (Continued...)

4.2 Dutch Elm Disease (*Ophiostoma novo-ulmi*)

4.2.0 Many dead standing and declining English Elm specimens were found throughout the site. The death and decline are attributed to Dutch Elm Disease (*Ophiostoma novo-ulmi*).

4.2.1 Type: A fungal wilt disease that disrupts the water transport system of a tree. Spread by Elm Bark Beetles.

4.2.2 Appearance: Crown dieback subsequently leading to death.

4.2.3 Type of Decay: The beetles colonise the bark of host trees, carrying with them fungal spores. Infection leads to blockages of xylem (water transport vessels).

4.2.4 Area Affected: Initially wilting of leaves and tips of branches, then death of entire branches, with yellowing and shrivelling foliage. Normally starting within the upper crown and descending quickly.

4.2.5 Season & Persistence: Annually and constant if no measures of control are implemented.

4.2.6 Principal Species: Elm and Zelkova species.

4.2.7 Consequences: Death of infected trees.



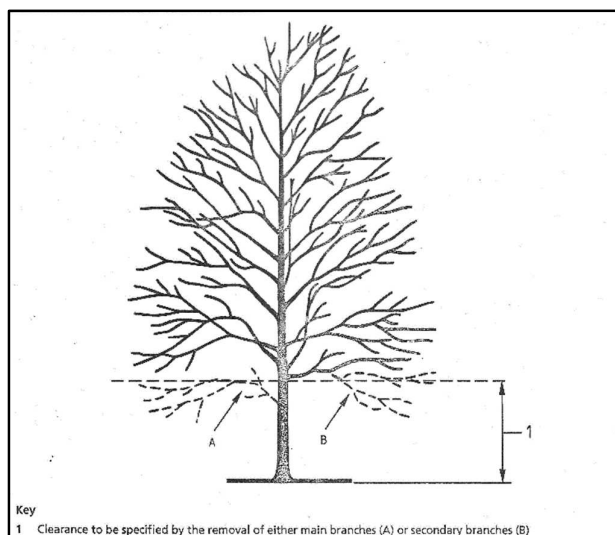
Figure 3: Example photograph of Elm Bark Beetle galleries within an Elm tree.

5.0 RECOMMENDATIONS

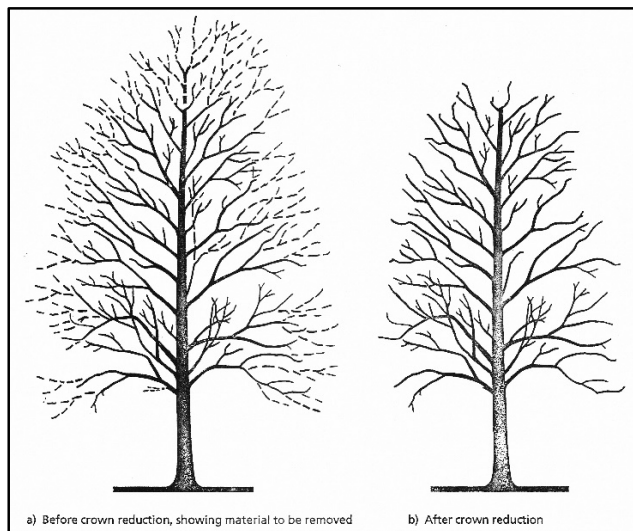
5.0.0 For reference and the benefit of the client, I have provided below detailed specifications and definitions of the various recommended tree work operations as well as tree health care practices.

5.1 Pruning Specifications

5.1.0 **Crown Lifting:** 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.



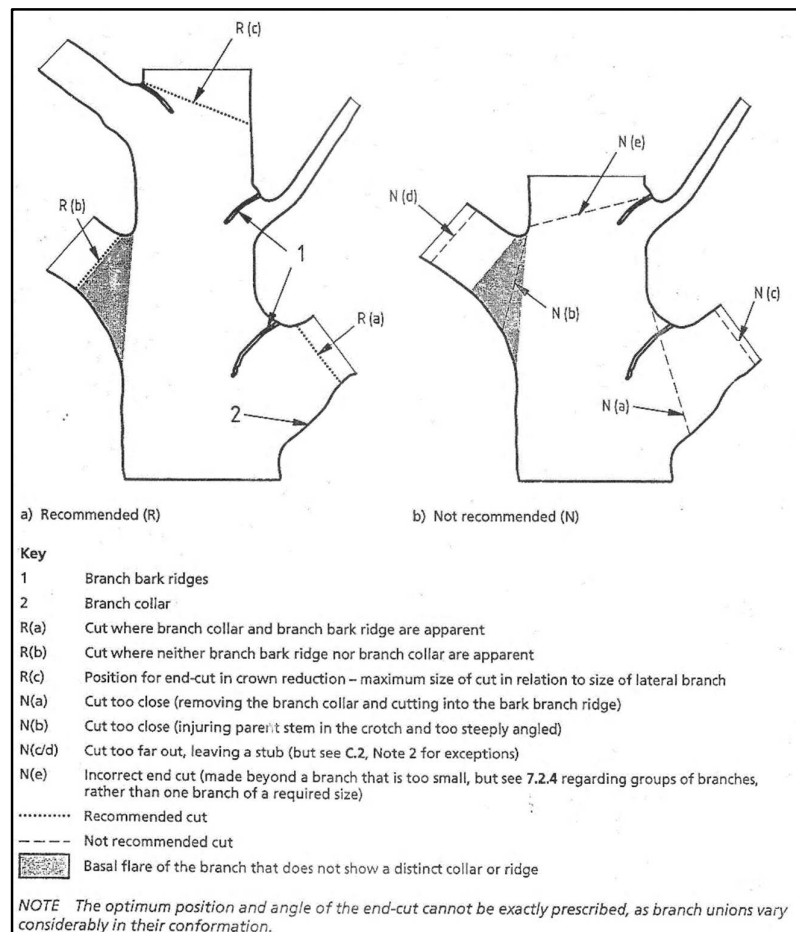
5.1.1 **Crown Reduction:** Will be carried out in accordance with Section 7.7 of BS3998:2010 by reducing the height and/or lateral branch spread, as detailed in the tables below. Pruning cuts will be made by using the selective pruning and 'drop-crotch' methodologies, as described in Section 7.7 and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



5.0 RECOMMENDATIONS (Continued...)

5.1 Pruning Specifications (Continued...)

- 5.1.2 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.
- 5.1.3 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 RECOMMENDATIONS (Continued...)

5.2 Tree Health Care

- 5.2.0 Healthy soil is critical to the health and longevity of trees, as soil provides trees with the essential nutrients and conditions required for their growth. Many secondary problems such as reduced vigour, inadequate growth, branch dieback, and pest or disease concerns are related to the primary stress of poor soil conditions.
- 5.2.1 In many cases, trees in a landscaped environment suffer from inadequate soil fertility, soil compaction, root zone competition with turf or other ornamental plants, and inadequate total soil volume. Soil care recommendations are intended to correct these concerns and improve or maintain overall plant health.
- 5.2.2 Bartlett Tree Experts offer several procedures and treatments that can address soil quality in a variety of different ways. Taking soil samples is perhaps the most important starting point, as proper tree care cannot be initiated unless it is known in what type of soil environment the trees are growing.
- 5.2.3 I recommend the following treatments within my prescribed tree works in section 7.0
- 5.2.4 Soil Sampling: Collecting soil samples and having them tested helps determine nutrients that may be lacking, unfavourable soil pH values and adequacy of soil organic matter, as well as soil compaction (bulk density). Laboratory tests and analyses can determine the need for soil amendments.
- 5.2.5 Potassium Phosphite: Phosphites stimulate tree vitality leading to root development and development of new tissue. Phosphite based fertilisers have been shown to enhance a tree's defence system which can improve disease resilience and response to fungal pathogens. Phosphites are easily absorbed and moved to all areas of the plant as they are usually formulated as a liquid.
- 5.2.6 Mulching: is a technique used to assist in alleviating soil compaction within the critical root zones of trees i.e., area under the canopy. Mulching is also a means of fertilising trees and encouraging soil biological activity. It can also reduce damage from excessive water by allowing necessary aeration during wet periods and sub-soil water penetration during dry periods. The technique also aids in promoting the formation of fine feeder roots.

6.0 RISK ASSESSMENT & DUTY OF CARE

6.1 Limitations of Tree Risk Assessments

- 6.1.0 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, I 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.
- 6.1.1 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.
- 6.1.2 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 humans 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.
- 6.1.3 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.
- 6.1.4 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.
- 6.1.5 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.
- 6.1.6 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.
- 6.1.7 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.

6.0 RISK ASSESSMENT & DUTY OF CARE (Continued...)

6.2 Tree Owner's Duty of Care

6.2.0 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 risks to 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.

6.2.1 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.

6.3 Tolerability of Risk

6.3.0 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.

6.3.1 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.

7.0 TREE SURVEY & CONDITION AND MANAGEMENT SCHEDULE

Client:	Mr Daniel Warner, London Diocesan House, 36 Causton Street, London, SW1P 4AU	Report No:	GD/230516/TCP
Site:	The Priory, Church Lane, London, N17 7AA	Weather:	Clear & Dry
Completed by:	Mr G Davies, Senior Arboricultural Consultant	Trees Tagged:	546-595
Contact Details:	Bartlett Consulting, Unit 22-25 Cross Lane Farm, Cross Lanes, Pill, Somerset, Bristol BS20 0JJ T: +44 (0)1275 371 000 Option 2 / E: Consultancy@Bartlett.com / W: www.bartlett.com	Date of Survey:	10 th October 2023

Timescale for Works

ASAP	6 Months	1 Year	2 Years	3 Years
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Tree No.	Species	DBH (mm)	Height (m)	Crown Spread (m)	Age	Vitality	Condition	Works Required	Time Scale	Risk Factor	Re-Survey
T546	Common Juniper	130	4.5	2	SM	Norm	• Growing in very close proximity to house • Previous pruning to provide minimum clearance • Asymmetrical crowns	• Remove to ground level	Two years	Low	N/A
T547	Lawson Cypress	430	8	5	EM	Norm Low	• Single stem specimen • Growing in proximity to boundary wall • Trifurcated at 2.0m • Previous crown lift to maintain clearance • Western crown in proximity to house • Asymmetrical crown bias to south • Die-back expressed throughout crown	• Carry out selective pruning of the western crown to provide minimum 1.0m clearance from house	One year	Low	Three years
G548	Group of 4 Lawson Cypress	50 avg at base	2.5	1	SM	Norm	• Multiple stem specimens forming low habit & combined crown	• Trim to maintain current size	Two years	Low	Three years
T549	Common Laburnum	110	4	2	Y	Norm	• Mechanical Wounding and cambial dysfunction on main stem • Poor structure, suppressed by dominant neighbouring tree	• Remove to ground level	Two years	Low	N/A

Tree No.	Species	DBH (mm)	Height (m)	Crown Spread (m)	Age	Vitality	Condition	Works Required	Time Scale	Risk Factor	Re-Survey
T550	Lawson Cypress	120	3.5	1.5	Y	Norm	Growing within the boundary wall buttress causing suspected damage to wall	Remove to prevent future damage to the wall and possible wall instability	Six months	Moderate	N/A
G551	Group of 2 Common Ash	280 & 250	12	5	SM	Norm	- Single stem specimens - Small Holly establishing at base - Lean and crown bias to the east overhanging boundary wall and public footpath and highway, in proximity to lamppost - Forming a combined crown	- Remove Holly at base - Carry out a maximum 3.0 metres reduction focusing on the western crown overhanging public footpath and highway	One year	Low	Three years
T552	Variegated Holly	290	6	4	EM	Norm	- Single stem specimen - Establishing vertical regrowth from a previous crown reduction and possibly signs of stress - Die-back expressed within crown - Suppression from two dominant neighbouring trees to east - Previous crown lift to maintain suitable clearance	- Thin crown removing vertical reactive growth and deadwood throughout - Apply Phosphite drench at base - Consider installation of fresh mulch around base - Carry out soil sampling	One year	Low	Three years
G553	Group of 2 Leyland Cypress	560 & 420	15	8	EM	Norm	- Single stem specimens - Previous pruning of lower branches to maintain suitable clearance from entrance - Suppressing neighbouring trees - Eastern crowns overhanging entrance gate and public footpath - Die-back expressed within upper crown	- Crown lift removing branches up to 2.0-3.0 metres providing better clearance - Alternatively consider removal of the two trees allowing more light into the garden	One year	Low	Three years
T554	Common Holly	230 120 140 110	5	1	SM	Low	- Significant die-back expressed throughout - Multiple stem specimen within falling distance of entrance and public footpath	Remove to ground level	Six months	Moderate	N/A
T555	Common Hawthorn	220	6	3	SM	Norm	- Single stem specimen bifurcating at 1.8m - Ivy recently severed at base - Significant asymmetrical crown bias to east overhanging boundary wall and public footpath - Ivy at base on main stem and throughout crown	Carry out an approximate 3.0 metres height and lateral reduction focusing on the overhanging eastern crown to rebalance and limit overhang	One year	Low	Three years

Tree No.	Species	DBH (mm)	Height (m)	Crown Spread (m)	Age	Vitality	Condition	Works Required	Time Scale	Risk Factor	Re-Survey
T556	Common Ash	370	13	6	SM	Norm	• Single stem specimen • Lean on main stem to west • Bifurcation of main stem at 3.0 • Asymmetrical crown bias to west • Minor deadwood throughout crown	• No works currently required	N/A	Low	Three years
T557	Common Holly	240-180-180	7	5	EM	Norm	• Trifurcated at base resulting in 3 co-dominant leaders • Regrowth forming from historical pruning within crown	• No works currently required	N/A	Low	Three years
T558	Cherry Laurel	120 avg	4.5	2.5	SM	Norm	• Multiple stem specimen • Open grown within lawn • Previous trimming of the lower crown to limit spread	• Trim lower crown and • Carry out crown reduction of the upper crown to reshape reducing in height if desired	One year	Low	Three years
T559	White Mulberry	560 at 1.0m	7	6	V	Norm	• Multiple co-dominant leaders forming from main stem at 1.5m • Eastern leader propped • Wounding decay and burrowing on main stem and leaders typical for age • Deadwood throughout crown • Low target area	• Consider installation of fresh mulch around base	One year	Low	Three years
G560	Group of 2 Bay	120-80 & 70-50	6	1	Y	Norm	• Twin stem specimens • Growing in proximity to house • Drawn up form due to competition from neighbouring tree • Northern crowns in direct contact with building	• Remove to ground level	One year	Low	N/A
T561	Common Yew	590	10	4	EM	Norm	• Single stem specimen • Multiple leaders forming from 2.0m • Previous pruning of lower crown to maintain suitable clearance • Northern crown in direct contact with house • Deadwood within lower crown	• Carry out a 1.5-2.0m crown reduction • Carry out additional selective pruning of the western crown where necessary to provide minimum 1.0m clearance from house • Remove deadwood within lower crown	One year	Low	Three years

Tree No.	Species	DBH (mm)	Height (m)	Crown Spread (m)	Age	Vitality	Condition	Works Required	Time Scale	Risk Factor	Re-Survey
T562	Common Ash	560	16	8	SM	Low	• Single stem specimen • Large historical wounding at base resulting in exposed heartwood, good resonance when sounded • Ivy on main stem and throughout lower crown previously severed • Die-back expressed throughout crown attributed to ash die-back resulting in major deadwood and broken branches	• Remove to ground level	One year	Low	N/A
T563	Common Ash	330	7	6	SM	Norm	• Growing between garage and boundary wall • Single stem specimen bifurcated at 3.0m • Asymmetrical crown bias to west overhanging neighbouring boundary (school playground) • Vine growing throughout crown	• Severe vine growing throughout crown • Carry out a 2.0-3.0 metre lateral reduction of the western crown to rebalance and reduce encroachment over neighbouring property	One year	Low	Three years
T564	Bay	140	4	2	Y	Norm	• Single stem specimen • Asymmetrical crown bias to east • Ash saplings establishing at base	• No works currently required	N/A	Low	Three years
T565	Copper Beech	660	18	8	EM	Norm	• Single stem specimen • Yew establishing at base • Ivy establishing at base • Sweep on main stem • Bifurcation of main stem at 5.0m • Asymmetrical crown bias to north • Major deadwood within lower and mid crown	• Remove major deadwood throughout lower and mid crown	One year	Low	Three years
T566	Common Ash	810	18	9	EM	Norm	• Ivy establishing at base • Regrowth forming on lower stem and on the second lateral branch at 6.0m overhanging neighbouring property (school building) to south • Previous large branch failure 7.0m east resulting in tear and exposed heartwood (attributed to possible Ash-Dieback)	• Remove to ground level	Six months	Moderate	Three years
T567	Common Holly	150-160	6	3	SM	Norm	• Twin stem from base • Asymmetrical crown bias to north • Previous crown lift to provide suitable clearance	• No works currently required	N/A	Low	Three years

Tree No.	Species	DBH (mm)	Height (m)	Crown Spread (m)	Age	Vitality	Condition	Works Required	Time Scale	Risk Factor	Re-Survey
T568	Himalayan Tree-Cotoneaster	110-110-110	2.5	4	EM	Norm	- Trifurcated at base forming 3 co-dominant leaders - Low habit and asymmetrical crown bias to north	No works currently required	N/A	Low	Three years
G569	Group of 2 Pissards Plum	200 & 140-150-80	6	3	SM	Norm	- Single and multiple stem specimens - Suppression from dominant neighbouring trees - Southern crown of multiple stem specimen in direct contact with neighbouring boundary fence	Carry out selective pruning to maintain min 1.0 metre clearance from neighbouring boundary fence	One year	Low	Three years
T570	Robinia	320	12	5	SM	Norm	- Single stem specimen - Bifurcation at 2.5m - Lean and asymmetrical crown bias to north	No works currently required	N/A	Low	Three years
T571	Whitebeam	130	5	1.5	Y	Norm	- Single stem specimen - Drawn up form asymmetrical crown bias to west	No works currently required	N/A	Low	Three years
T572	Norway Spruce	300	13	3	SM	Norm	- Single stem specimen - Drawn up form - Minor deadwood within lower crown	No works currently required	N/A	Low	Three years
T573	Juniper	180 at base	3.5	0.5	SM	Low	Dead standing specimen	Remove to ground level	Six months	Low	N/A
T574	Robinia	390-240	12	8	SM	Norm	- Bifurcation at base resulting in two co-dominant leaders - Lean and asymmetrical crown bias to east - Minor deadwood throughout crown	No works currently required	N/A	Low	Three years
T575	Wild Cherry	270 below graft line	3	3.5	EM	Norm	- Single stem with graft at 1.5m - Multiple co-dominant leaders forming beyond graft - Asymmetrical crown bias to north-east	Crown lift to maintain suitable clearance over lawn	Two years	Low	Three years
T576	Robinia	140	7	2.5	Y	Norm	- Single stem specimen - Self-set - Drawn up form	No works currently required	N/A	Low	Three years

Tree No.	Species	DBH (mm)	Height (m)	Crown Spread (m)	Age	Vitality	Condition	Works Required	Time Scale	Risk Factor	Re-Survey
G577	Mixed Group of Elm Ash Sycamore and Cherry	260 largest	10	3	Y	Low to Norm	- Group of self-set single stem specimens - Growing throughout the woodland area to the rear of the garden - Some dead Elm specimens and die-back expressed throughout crowns of other Elms attributed to Dutch Elm Disease.	Remove specimens showing signs of die-back and dead specimens throughout group	Six months	Moderate	Three years
T578	Pissards Plum	300 at base	3	5	SM	Low	- Root plate failure resulting in the formation of reactive vertical re-growth - Covered in ivy - Major die-back	Remove to ground level	One year	Low	N/A
T579	Robinia	120	5	2	Y	Norm	- Single stem specimen - Lean and asymmetrical crown bias to south overhanging neighbouring boundary (school building)	- Carry out crown lift and selective pruning to reduce crown encroachment and provide suitable clearance from school building - Alternatively remove to ground level	One year	Low	Three years
T580	Sycamore	270	12	3	SM	Norm	- Single stem specimen - Growing in proximity to neighbouring boundary - Previous loss of companion tree	No works currently required	N/A	Low	Three years
G581	Group of 2 Sycamore	280 & 280	13	4	SM	Norm	- Single stem specimens - Ivy establishing at base and on main stem - Previous loss of third tree - Western crown overhanging neighbouring boundary and in proximity to building	Crown lift and selective pruning to provide minimum 2.0 metre clearance from School building	One year	Low	Three years
T582	Sycamore	660	13	7	EM	Low	- Single stem specimen - Large cavity on lower stem partially occluded - Further cavity opening at 2.0m - Poor resonance when sounded on main stem indicating column of decay - Habit hole on main stem at 4.0m - Lean on main stem and to south east and asymmetrical crown bias to east - Die-back expressed throughout crown	Remove to ground level	Six months	Moderate	N/A

Tree No.	Species	DBH (mm)	Height (m)	Crown Spread (m)	Age	Vitality	Condition	Works Required	Time Scale	Risk Factor	Re-Survey
G583	Group of 2 Sycamore	380 & 210	12	5	SM	Norm	- Single stem specimens - Growing in proximity to boundary - Asymmetrical crown bias to west in direct contact with school building	Carry out selective pruning and lift to provide minimum 2.0 metre clearance from school building	One year	Low	Three years
T584	Common Lime	500	12	5	SM	Norm	- Single stem specimen with - Epicormic regrowth establishing at base typical of species - Historical topped at 4.0m resulting in multiple regrowth - Western crown overhanging boundary and in direct contact with school building	- Remove epicormic regrowth at base and on main stem - Carry out selective pruning of the overhanging western crown to provide minimum 2.0 metre clearance from school building	One year	Low	Three years
T585	Common Lime	450 - 300 - 280	11	5	SM	Norm	- Trifurcated at base resulting in 3 co-dominant leaders - Epicormic regrowth establishing at base and on main stem - Major deadwood within mid crown	- Remove epicormic regrowth at base and on main stem - Carry out crown lift and selective pruning of the overhanging lower western crown pruning back to boundary - Remove major deadwood throughout crown	One year	Low	Three years
G586	Group of 3 Sycamore	180 & 150 & 150	6	2	Y	Norm	- Self-set single stem specimens - Drawn up form - Forming a combined crown	No works currently required	N/A	Low	Three years
T587	Common Lime	600	2.5	0	M	Low	- Dead standing stem leaning on to boundary brick wall - Evidence of damage to wall	Remove to ground level	Six months	Moderate	N/A
T588	Sycamore	340	13	5	SM	Norm	- Single stem specimen - Significant lean on main stem to south-east self-corrected at 4.0m - Dead fallen tree leaning on main stem attributed to be lean	Dismantle dead tree resting on main stem	One year	Low	Three years
T589	Common Pear	170	7	3	SM	Low	Dead standing specimen	Remove to ground level	Six months	Low	N/A
T591	Sessile Oak	180	8	4	Y	Norm	- Single stem specimen - Sweep on main stem - Asymmetrical crown bias to west	No works currently required	N/A	Low	Three years

Tree No.	Species	DBH (mm)	Height (m)	Crown Spread (m)	Age	Vitality	Condition	Works Required	Time Scale	Risk Factor	Re-Survey
T592	Palmate Maple	140-130-120	5	1.5	SM	Low	• Multiple stem specimen from base • Significant die-back expressed throughout crown	• Remove to ground level	Six months	Low	N/A
T593	Common Hawthorn	70	3.5	1	Y	Norm	• Single stem specimen • Lean and asymmetrical crown bias to south-east • Multiple leaders forming beyond 1.5m	• No works currently required	N/A	Low	Three years
T590	Southern Magnolia	130-120	6	3	SM	Norm	• Bifurcation of main stem at base • Asymmetrical crown bias to east	• No works currently required	N/A	Low	Three years
T594	Juniper	300	8	2	SM	Low	• Dead standing stem • Lean to south	• Remove to ground level	Six months	Low	N/A
T595	London Plane	1200	21	10	M	Norm	• Third party tree • Southern crown overhanging site • Lower southern crown in direct conflict with roof and chimney of single story annex building	• Carry out crown lift and selective pruning to provide minimum 2.0 metre clearance from the roof and chimney	Six months	Moderate	Three years

Tree Survey Schedule Key:

Tree No – tree reference on Tree Location Plan and/or tree tags where used. **Location** – description of trees location on site. **Species** – tree species giving English common name. **DBH** – the individual stem diameters when typically measured at 1.5m above ground level unless otherwise stated. **Height** – tree height recorded in metres. **Crown Spread** - crown spread in the four cardinal compass points, or as average using broadest radial spread, recorded in metres. **Age Class** – recorded as **NP** (newly planted); **Y** (young) 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/retenchment. **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. **Works Required** tree works prescribed to mitigate risk. **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 Appendix 1 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*
Senior Arboricultural Consultant

SIGNATURE:



DATE: 17th October 2023

REPORT REVIEWED BY: Mr James Percy-Lancaster *CertArb TechArborA*
Senior Arboricultural Consultant

SIGNATURE:



DATE: 23rd October 2023

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.

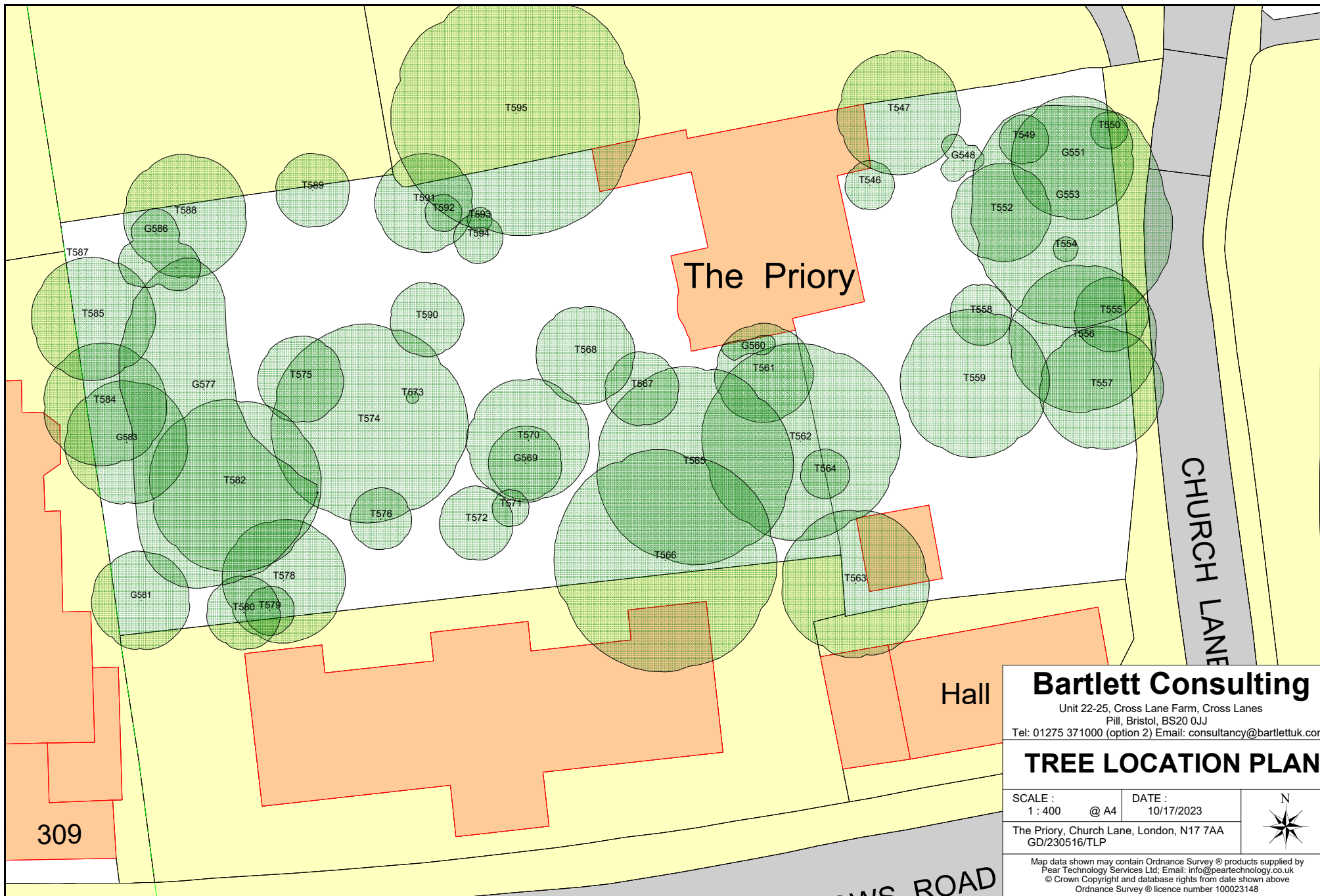
APPENDIX 2 – Tree Survey & Assessment Glossary (Continued...)

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 : 400 @ A4

DATE :
10/17/2023

The Priory, Church Lane, London, N17 7AA
GD/230516/TLP

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