TGB TREE CONSULTING

BS 5837:2012 Tree Report

Initial Tree Survey

&

Arboricultural Impact Assessment

Site Address:

13 Byfled Gardens, London, Richmond Upon Thames, SW13 9HP

Client:

Mr Benjamin Barber

Ref No:

TGB322.V1.0-TS.AIA

Survey Date:

3rd of December 2024

Prepared by:

Tom Butterfield BSc(Hons), DipArb L4, TechArbor A

4th of December 2024

REPORTS	INCLUDED
~Initial Tree Survey~	✓
~Tree Survey Schedule~	✓
~Tree Constraints Plan~	✓
~Arboricultural Impact Assessment~	✓
~Tree Survey Schedule + Required Works For The Proposal~	✓
~Tree Protection Plan (AIA)~	✓
~Arboricultural Method Statement~	✗

Issue No	Author	Issue Date	Additions/alterations	Notes
TGB322.V1.0	TB	06/12/2024	NA	

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BIBLIOGRAPHY

- BS5837:2012. "Trees in relation to design, demolition and construction – Recommendations".
- Mattheck, C., Breloer, H. (2006). "The body language of trees a handbook for the failure analysis". London: TSO.
- www.mapapps.bgs.ac.uk/geologyofbritain/home.html

INTRODUCTION

1.0 Terms And Abbreviations

TPO	Tree Preservation Order	***LPA***	Local Planning Authority
CA	Conservation Area	***TPF***	Tree Protective Fencing
AIA	Arboricultural Impact Assessment	***DBH***	Diameter of the stem at breast height (1.5 meters)
AMS	Arboricultural Method Statement	***TSS***	Tree Survey Schedule
BS5837	British Standard 5837:2012 – Trees in Relation to Design, Demolition and Construction - Recommendations	***CEZ***	Construction Exclusion Zone
RPA	Root Protection Area	***SUDS***	Sustainable Urban Drainage System
RPR	Root Protection Radius	***CCS***	Cellular Confinement System
GP	Ground Protection	***GP***	Ground Protection

2.0 Contact Details

Contact	Name	Company	Contact details	Issued
Client	Mr Benjamin Barber	/	benjaminbarber30@gmail.com	✓
Arboricultural Consultant	Mr Tom Butterfield	TGB Tree Consulting	Tom@tgbtrees.co.uk	
LPA Tree Officer	/	London Borough of Richmond Upon Thames	trees&parks@richmond.gov.uk	
Architect	/	More Space	Drawings@ineedmorespace.co.uk	✓

3.0 Brief And Purpose

3.1 This Arboricultural report was commissioned by Mr Benjamin Barber in November 2024.
3.2 To survey trees likely to be affected by the development in accordance with BS5837.
3.3 To make preliminary management recommendations where necessary.
3.4 To offer recommendations for effective tree protection strategies throughout the development process.
3.5 To prepare an Arboricultural Impact Assessment and Tree Protection Plan for the proposal.
3.6 To supply the required Arboricultural information to meet the planning requirements of the LPA (London Borough of Richmond Upon Thames).

4.0 Planning Information

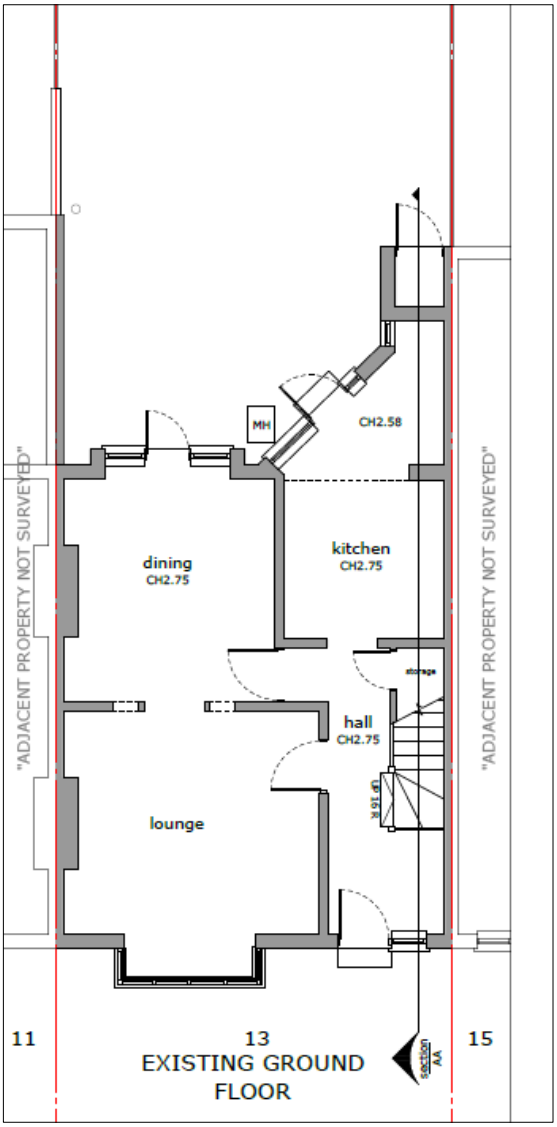
4.1 The site falls under the jurisdiction of the London Borough of Richmond Upon Thames, the LPA for this area.
4.2 A planning application has not yet been submitted to the London Borough of Richmond Upon Thames (LPA) as of the 4th of December 2024.
4.3 This report aims to address the Arboricultural aspect of the planning application so that planning permission may be granted by using appropriate Arboricultural methodologies.

5.0 Document Source

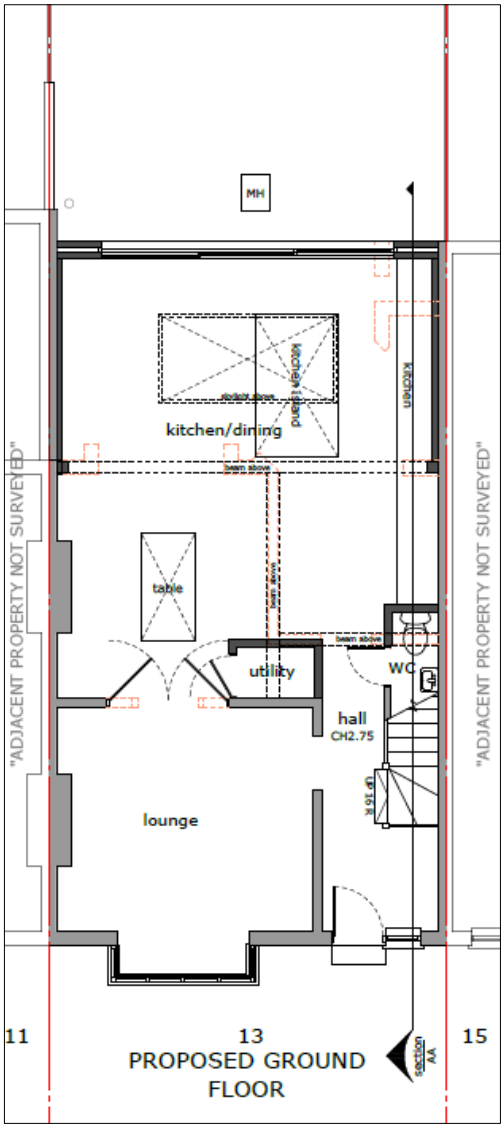
Document	Source	Format	Name
Site plan	Mr Benjamin Barber	PDF	*Location Plan 13 Byfeld Gardens SW13 9HP*
Proposed Plans	Mr Benjamin Barber	PDF	*EW202400138*

6.0 Proposal

6.1 The proposal is to construct a single storey rear extension to the property.



Existing Layout



Proposed Layout

INITIAL TREE SURVEY

7.0 The Scope of the Survey

7.1 Only trees expected to be impacted by the development (including nearby trees) were checked and documented in the tree survey.

7.2 Only trees with a Diameter at Breast Height (DBH) of 75mm or greater were surveyed in accordance with BS5837.

7.3 A comprehensive assessment of tree hazards (including decay, defects, and their consequences), as well as ecological implications, has not been conducted, as it is considered beyond the scope of this report.

7.4 Findings, including any identified hazards, have been recorded and detailed in the Tree Survey Schedule along with recommendations (see Appendix 1).

7.5 This tree survey provides data on the trees within and around the site. It does not set out to put arguments for or against any development. It should be used as a tool to aid the decision-making process regarding the retention or removal of trees.

7.6 The primary purpose of this report is for the Client and Council to review the information provided and use it to consider planning applications or engage in further discussions towards the same end.

8.0 Tree Survey Methodology

8.1 The trees were surveyed on the 3rd of December 2024.

8.2 The tree survey was undertaken as to the recommendations of British Standards BS5837:2012.

8.3 The trees were mapped using a laser measure, rolling wheel, tape measure, and reference points like buildings to provide approximate measurements for their locations both on-site and on the map. For more accurate tree positioning, it's advisable to engage a certified surveyor to conduct a comprehensive topographical survey of the site.

8.4 The trees were evaluated from ground level utilising Visual Tree Assessment (Mattheck, et al. 1993), supported by binoculars and a mallet when required. No invasive methods were utilised to evaluate the trees' structural integrity, nor were soil samples collected.

8.5 Measurements are approximate but provide a reasonable representation of the trees' dimensions. Tree heights were visually estimated, crown spreads were paced out, and Diameter at Breast Height (DBH) measurements were taken with a diameter tape rounded down to the nearest centimetre. If tree stems were inaccessible, their measurements were estimated, and a "?" was noted in the Tree Survey Schedule.

9.0 Tree Details

9.1 The total number of trees recorded are as follows:

- Individual Trees (T): ***Four (4)***
- Groups of Trees (G): ***Zero (0)***

9.2 Comprehensive information regarding the surveyed trees is available in the Tree Survey Schedule (TSS) located in Appendix 1, while the locations of the trees are documented in the Tree Constraints Plan and Tree Protection Plan, provided in Appendix 3.

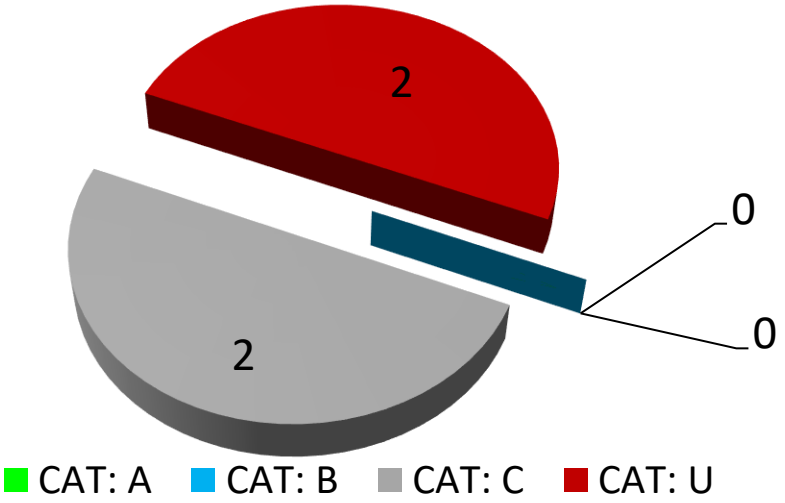
9.3 The quality and value of the trees on the site have been classified according to BS5837 guidelines. The grading system is outlined below:

- **A Grade** – Trees of high quality and value, with a life expectancy of more than 40 years
- **B Grade** – Trees of moderate quality and value, with a life expectancy of more than 20 years
- **C Grade** – Trees of low quality and value, with a life expectancy of more than 10 years
- **U Grade** – Trees for removal, with a life expectancy of less than 10 years

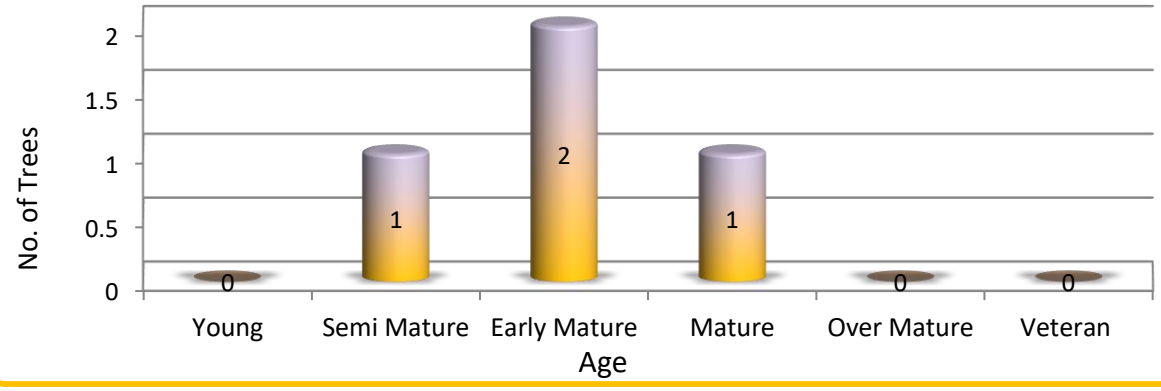
9.4 Quality and overview of existing tree stock:

Grade	A	B	C	U
Tree No.	0	0	2	2

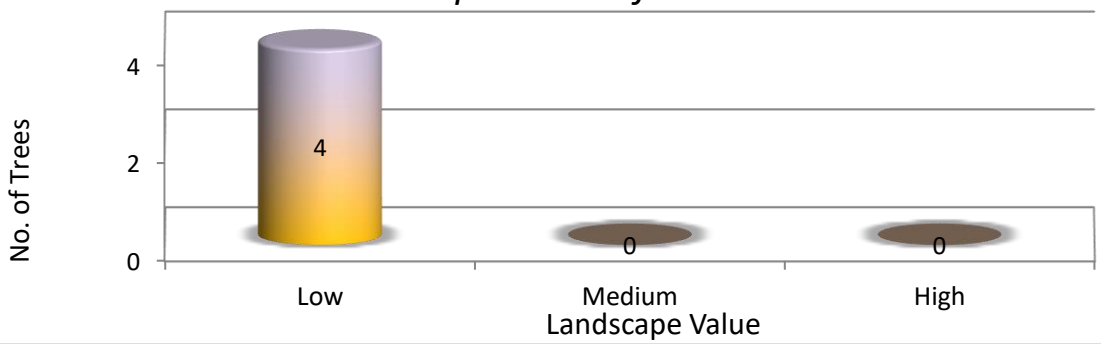
BS5837 Categorisation of Tree Stock



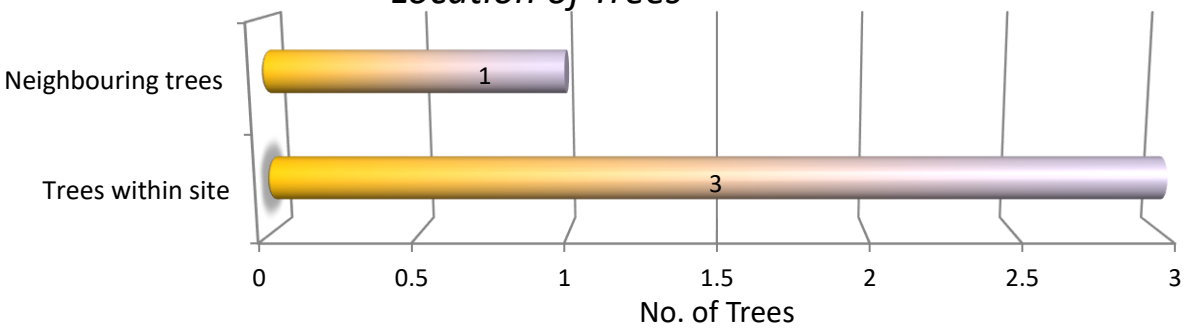
Age Class of Tree Stock



Landscape Value of Tree Stock



Location of Trees



10.0 Site Detail & Soil Assessment

10.1 The site is located off Byfeld Gardens.

10.2 The site consists of a terrace house with rear garden.

10.3 The site is bordered by the road to the North East, private residential properties to the South East and North West and an access path at the rear garden to the West.

10.4 The site is mostly level, with no notable changes in elevation.

10.5 The soil type on-site, at a scale of 1:50,000 as revealed by Online British Geological Society, is classified as:

- Bedrock: "London Clay Formation" consisting of clay and silt.
- Superficial deposits: "Kempton Park Gravel Member" consisting of sand and gravel.

10.6 The site has the potential to be located over soil that is shrinkable, indicating it could be more vulnerable to compaction and subsidence than that of a non-clay soil.

10.7 Where the underlying soil is identified as shrinkable, the foundations will be designed in accordance with the National House Building Council`s Stands Chapter 4.2 – Building near trees.

10.8 Note – No soil samples were taken on-site to confirm these findings.

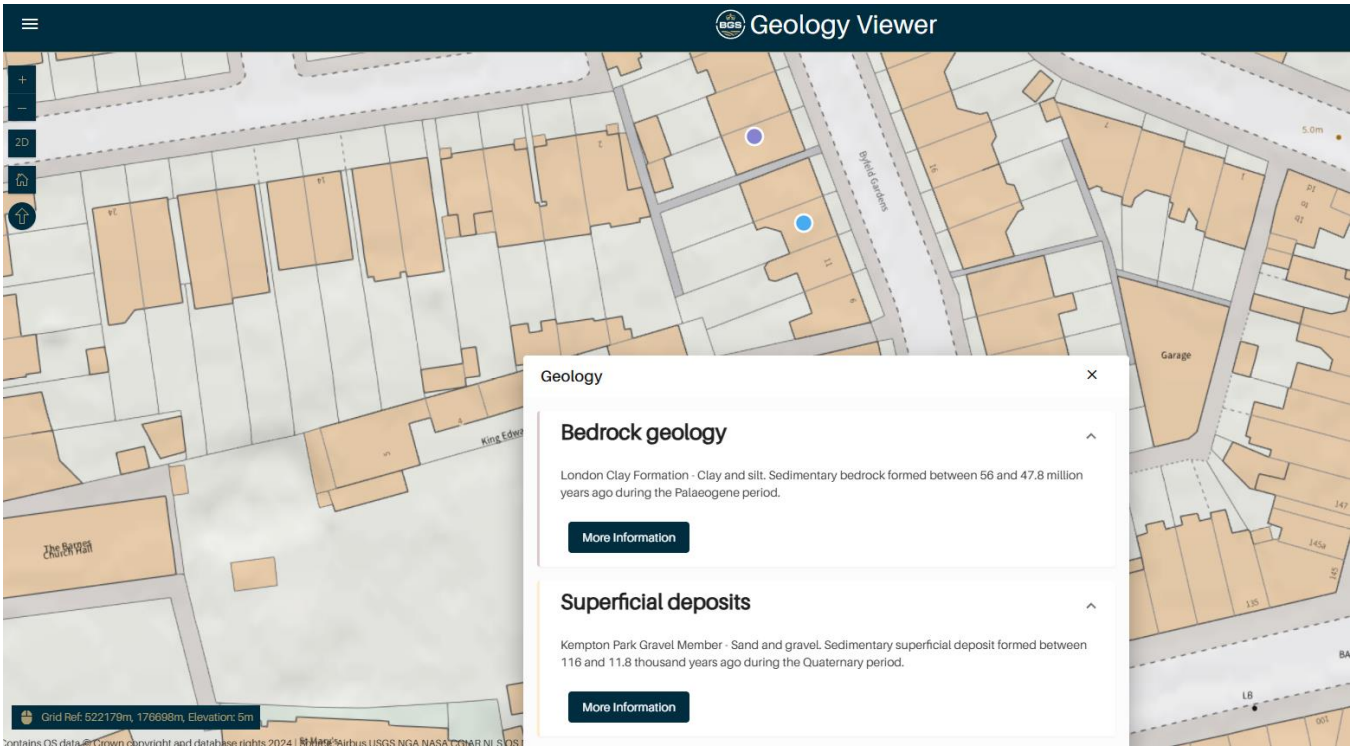


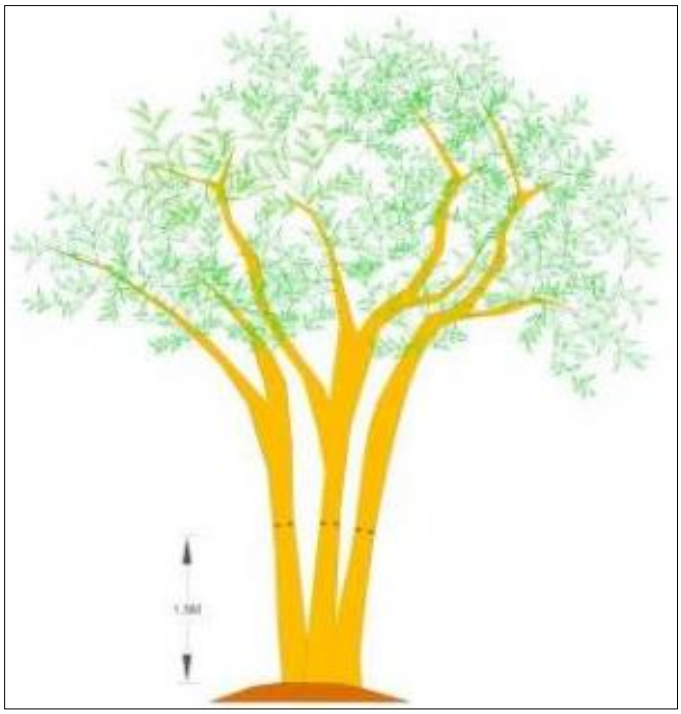
Figure 1 – BGS website 2024

11.0 Ecological Constraints

11.1 The Conservation of Habitats and Species Regulations 2017 (as amended) and The Wildlife and Countryside Act 1981, amended by the Countryside and Rights of Way Act 2000, provide statutory protection to birds, bats, and other tree-dwelling species. They could impose significant constraints on the use and timing of any tree matters considered in this report.

12.0 Root Protection Areas

12.1 The RPA radius is calculated by multiplying the tree's stem diameter at 1.5m above ground level by 12. The RPA radius is calculated for multi-stem trees by multiplying a formulated stem diameter by 12, as shown below.



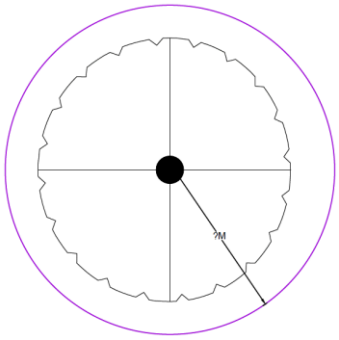
Multi-stem diameter calculations:

For Trees with 2 – 5 stems:

$$\sqrt{(Stem\ diameter\ 1)^2 + (Stem\ diameter\ 2)^2 \ldots . + (Stem\ diameter\ 5)^2}$$

For Trees with more than 5 stems:

$$\sqrt{((Mean\ stem\ diameter)^2\ x\ Number\ of\ stems)}$$



Purple circle represent RPA

12.2 In situations where tree root growth is likely to have been restricted by pre-existing site conditions, the shape of the RPA may be adjusted to reflect the rooting pattern and distribution, with the total area remaining the same.

12.3 The RPA figures shown in the TSS (Appendix 1) are square meters, and the RPR figures represent the radius in meters from the tree stem. These figures are derived from DBH calculations in accordance with section 4.6 of BS5837 Appendix D.

12.4 The figures should provide retained trees with sufficient rooting material to survive and remain healthy during the proposed development and beyond.

12.5 The RPA of each tree has been plotted as a purple circle on the constraints plans, as illustrated above.

13.0 Summary of Tree Survey

13.1 Of the trees included in the survey, it revealed that 0% of the tree stock is of high quality (A-Grade), 0% is of moderate quality (B-Grade), 50% is of low quality (C-Grade), and 50% is dead or dying (U-Grade).

13.2 All of the trees included within a survey are of relatively low quality.

13.3 Generally speaking, U grade trees should not be considered in the future landscape or potential development; however, any trees that are to be retained should be appropriately protected in accordance with the standard.

13.4 Root Protection Areas of trees to be retained should be avoided during any potential development phase.

14.0 Images

Figure 2 – T1

Figure 3 – T1: Large wound on stem

Figure 4 – T1: Encroaching onto building

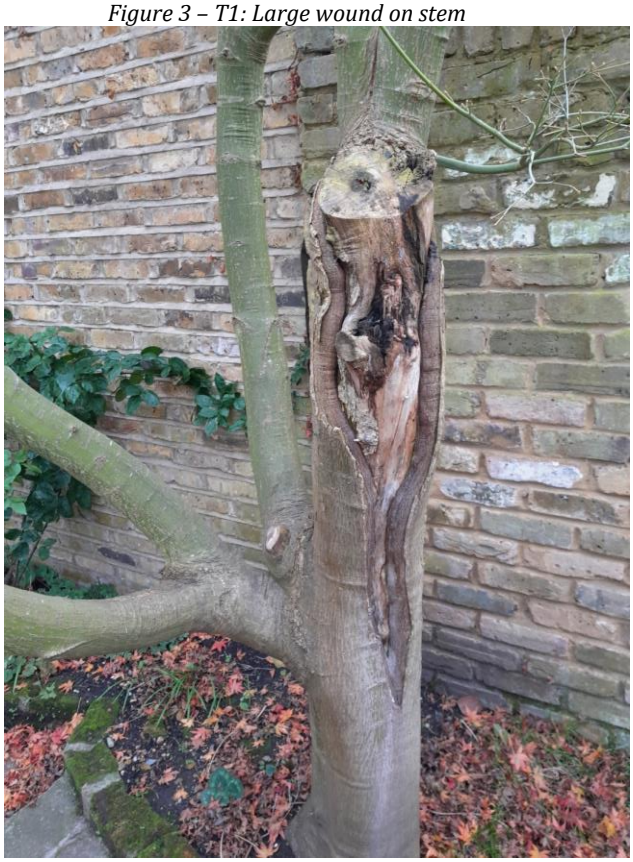


Figure 5 – T1: Decaying stem wound

Figure 6 – T2

Figure 7 – T3

Figure 8 – NT4

Figure 9 – NT4: Basal stem decay

Figure 10 - NT4: Basal stem decay

Figure 11 - NT4: Peeled bark

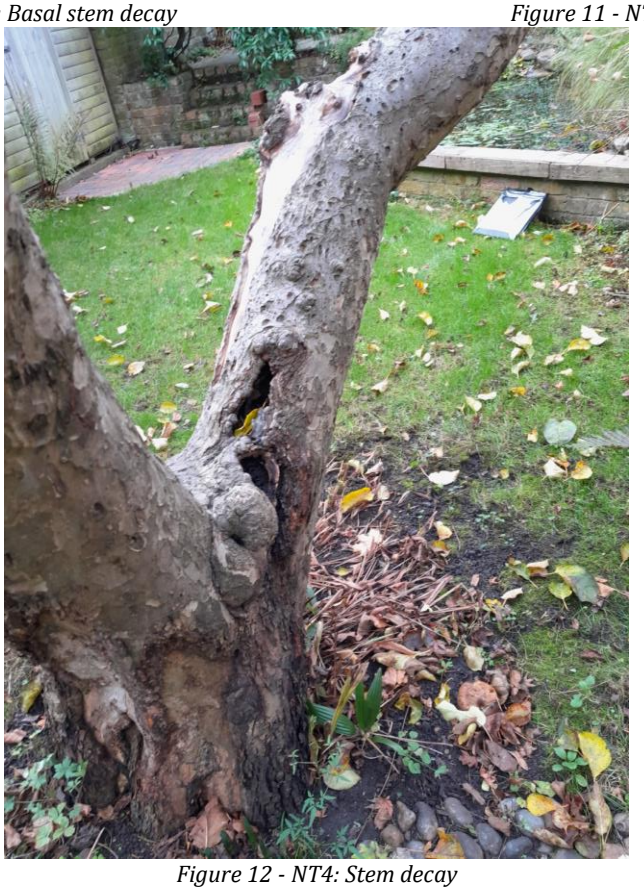


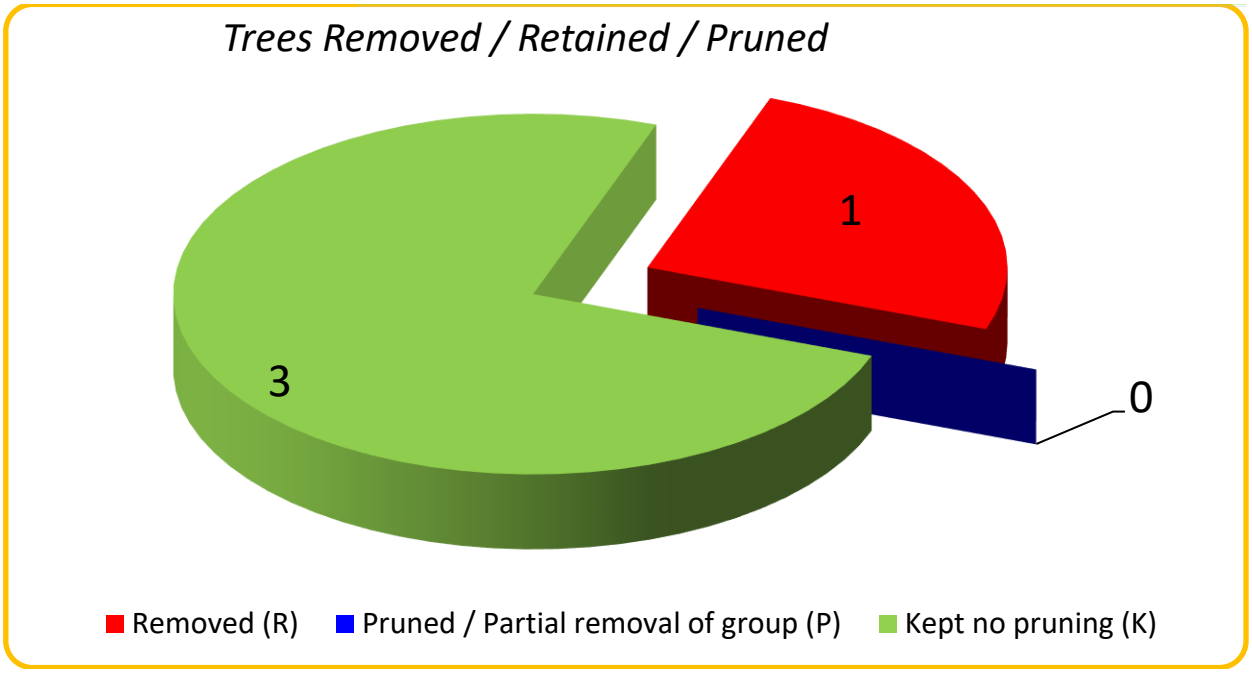
Figure 12 - NT4: Stem decay

ARBORICULTURAL IMPACT ASSESSMENT

15.0 Overview

15.1 This section involves an evaluation of the potential impacts that the proposed works outlined in Section 5.0 will have on the nearby trees. It addresses the Arboricultural considerations and pertinent mitigation measures.

15.2 Tree numbers and details below are provided solely for instances where works are designated to facilitate the development, excluding cases where recommendations have been made based on Good Arboricultural Management principles.



16.0 Tree Retention

16.1 The following trees are deemed suitable for retention and protection during the development.

Grade	A	B	C	U
Tree No.	/	/	T2, T3	NT4

*{} denotes partial removal of the group

17.0 Tree Pruning Works

17.1 No trees require pruning works to facilitate the development.

18.0 Tree Removal

18.1 The following tree was deemed unsuitable for retention and requires removal before the commencement of the development. The removal of the tree will not detract from the character and amenities of the local area.

Tree Removal		
Tree Grade	Tree Number	Reason
A	/	/
B	/	/
C	/	/
U	T1	***(Facilitate the development)*** The tree resides too close to the proposed extension; therefore, retention is not feasible. Additionally, the tree is of low quality, suffering from decay, and offers no amenity value to the surrounding areas.

Figure 13 – T1: Remove

19.0 Encroachment into RPAs

19.1 No encroachments into the RPAs of any retained trees are seen to be necessary during the development.

20.0 Access

20.1 Access to the rear of the site to build the extension will be entirely through the house itself.

20.2 No construction access will be permitted to use the rear garden access.

20.3 Access over the RPAs of retained trees is not required.

21.0 Proximity And Shading

21.1 Section 5.3 of BS5837 addresses the issue of structures in proximity to trees and recommends that buildings are erected adequate distances away from trees to allow for future growth and development. Issues that are addressed include shading of buildings and open spaces, direct damage, pressure for removal, seasonal nuisance and concerns over safety.

21.2 The proximity between the development and the trees to be retained is in accordance with section 5.3 of BS5837, with the majority of the shadowing falling short of the proposed extension.

21.3 Pressures on surrounding trees should be of little consequence for the following reasons:

- Future pruning works are unlikely to be greater than those for general maintenance purposes.

22.0 Tree Protection

22.1 All trees earmarked for retention will be safeguarded in accordance with the guidelines set out in BS5837:2012. Tree protection measures will entail the installation of physical barriers or ground protection to shield the Root Protection Areas (RPAs) of retained trees.

22.2 All barriers will be erected prior to the commencement of development and maintained throughout the development process or up to a designated stage.

Tree Protection Fencing (Protective Barrier)

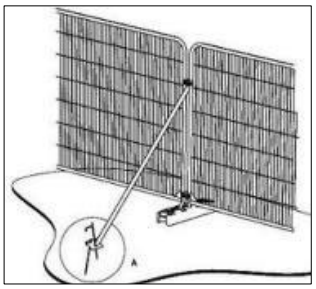
22.3 Tree Protection Fencing would be set out at the distances from the trees as noted in the Tree Survey Schedule under the RPA column or as illustrated in the Tree Protection Plan (Appendix 3).

22.4 The protected area would be designated as the 'Construction Exclusion Zone' (CEZ).

22.5 Only approved operations would be permitted to proceed within the CEZ.

22.6 The protective barrier to be used:

- ***Secondary Specification**:*
  The barrier is to consist of 2m tall welded mesh panels (Heras fencing) secured on pinned rubber or concrete feet. The weldmesh panels shall be securely fixed and joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The distance between the fence couplers shall be at least 1m and shall be uniform throughout the fence. The panels shall be supported on the inner side by stabilizer struts, attached to a base plate secured with ground pins. (Appendix 4).



22.7 Weatherproof signs (Appendix 5) to be placed on the fencing at regular intervals of no less than every 8m.

Ground Protection

22.8 Access over the root protection areas or retain trees is not required, therefore ground protection will not be required as part of this project

Materials Storage

22.9 The storage and mixing of materials are to be located outside of the RPAs (Construction exclusion Zone) of retained trees.

22.10 No contaminating runoff is to be allowed to enter the RPAs of retained trees.

Services

22.11 Existing site services are to be used.

22.12 No new services are to be installed within the RPAs of retained trees.

23.0 Mitigation & Summary of AIA

23.1 To facilitate the development:

- 1 x U-Grade tree is to be removed.
- No x trees require pruning.

23.2 A pre-commencement meeting is to be held before the project commences. Attendees to include the Client and the Contractor to, confirm and agree on the tree protection measures proposed.

23.3 All tree work, as recommended, is to be completed before the development begins.

23.4 Adequate Tree Protection Fencing is to be in place before the development begins.

23.5 During the development, the Construction Exclusion Zones are to be acknowledged and strictly seen as sacrosanct. Access is to be restricted over all RPAs without adequate ground protection being installed beforehand.

23.6 The proposed extension resides outside the RPAs and may proceed without Arboricultural design restrictions.

23.7 Where foundations are specified near trees, foundations will be designed in accordance with the National House Building Council`s Stands Chapter 4.2 – Building near trees to resist tree-related damage.

23.8 Any unforeseen encroachments into the RPAs of retained trees are to be carried out by hand under Arboricultural supervision.

23.9 Any operations within the Construction Exclusion Zone/RPAs are to be carried out under Arboricultural supervision.

23.10 No significant trees nor groups of notable amenity value are to be removed; therefore, additional planting will not be required.

23.11 Landscaping - Ground within the RPAs shall not be mechanically scraped at any time. The clearance of any vegetation and ground within the RPAs shall be carefully carried out by hand. Vehicles shall not be allowed to track over the RPAs of retained trees.

23.12 Existing services are to be used; no additional excavations within RPAs will be required.

23.13 All retained trees are to be protected in accordance with BS5837:2012.

23.14 The Arboricultural implications of the proposed development are deemed acceptable, subject to full compliance with these tree protection recommendations.

24.0 Appendices

Appendix 1 – Tree Survey Schedule BS5837:2012

Site: 13 Byfled Gardens, London, Richmond Upon Thames, SW13 9HP
Client: Mr Benjamin Barber
Survey Date: 3rd of December 2024
Ref No: TGB322.V1.0-TS.AIA
LPA: London Borough of Richmond Upon Thames
Weather: Dry
Inspector: Tom Butterfield BSc(Hons), DipArb L4, TechArbor A

Tree Survey Schedule With Required Works

TGB Tree Consulting,
Dunsfold,
Surrey,
GU83 4ND.
www.tgbtrees.co.uk
info@tgbtrees.co.uk

Prefix	ID	Species	No. Trees	No. Stem	HT (m)	N E S W	LB/Bear	LB/Ht(m)	DBH (mm)	Age	Landscape	RPR (m)	RPA (m^2)	Vitality	Structure	BS Cat	Life (yrs)	Notes and Observations	Preliminary Management Recommendations	*Required Works for Development*	Reason
T	1	Acer palmatum (Japanese Maple)	1	1	3.5	3.5 2 2 2	N	1	180	EM	Low	2.2	14.7	F	P	U	<10	Large exposed sapwood wound on the West side of stem from 0.4m up to 1.1m above ground level associated with apical stem loss. The wound appears to be actively actively decaying. Larger rising lateral brunch to the North from 0.6m above ground level. Growing within 50cm of the boundary wall (poor location). Overhang the neighbouring property. Crown reduced previously, minimal regrowth. Under ongoing pruning pressure.	/	Remove.	Facilitate the Development
T	2	Trachycarpus fortunei (Windmill Palm)	1	1	5	1.5 1.5 1.5 1.5	E	2.5	190	SM	Low	2.3	16.3	G	G	C1 C2	10+	High lifted crown. Several smaller dead fronds	/	/	/
T	3	Ficus carica (Fig)	1	1	5	3 4 4.5 4	E	2.5	290	EM	Low	3.5	38.1	G	G	C1 C2	10+	Exposed surface roots. Crown reduced previously, re-growth approximately 2m. Slight stem lean towards the East. Two basal stems.	Reduce crown height by 2m. Reduce crown spread by 2m back to the previous pruning points.	/	General Maintenance
NT	4	Malus (Apple)	1	2	4	1.5 3.5 3 4	SW	1.5	230, 260	M	Low	4.2	54.4	F	P	U	<10	Off-site tree. Various decay around stem base, progressing up the main stems. Various bark peel around stem base. Stem bifurcated at 0.5m above ground level. Crown reduced previously. Pruned back to near the boundary in the past, to help balance the crown. Limited life expectancy to to structural condition.	/	/	/

Tree Survey Schedule Key

Tree Survey Schedule Key and Notes

Prefix	Refers to:		**ID**	Refers to a unique identification number or tag number for the given tree or group. Corresponds to the Tree Constraints Plan and Tree Survey Schedule
	T	Tree		
	NT	Neighbouring Tree		
	G	Group		
	NG	Neighbouring Group		
	W	Woodland		
	H	Hedge		
No. Trees	Refers to the number of trees in a group			
No. Stem	Refers to the number of stems per individual tree			
Height	Describes the approximate height of the tree from ground level or buttress flare in meters			
Crown Spread	Refers to the radius of the canopy in meters from the stem of the tree in the directions of North, East, South and West			
LB/Bear	Lowest Branch Bearing: Refers to the directions of the lowest point of the canopy in meters			
LB/Ht(m)	Lowest Branch Height: Refers to the ground clearance from the ground level to the height of the lowest point of the canopy in meters			
DBH	Diameter at Breast Height. Stem diameter of the tree trunk measured in millimetres. If the tree is multi-stemmed, each diameter is recorded in the survey and a final DBH is calculated in accordance with BS5837			
Age	Refers to the age class of the tree:			
	Y	Young	Young = Usually less than 10 years old	
	SM	Semi-Mature	Semi-Mature = Significant future growth to be expected, both in height and crown spread (typically below 30% of life expectancy)	
	EM	Early Mature	Early Mature = Full height almost attained. Significant growth may be expected in terms of crown spread (typically 30-60% of life expectancy)	
	M	Mature	Mature = Full height attained. Crown spread will increase but growth increments will be slight (typically 60% or more of life expectancy)	
	OM	Over Mature	Over Mature = A level of maturity whereby significant management may be required to keep the tree in a safe condition	
	V	Veteran	Veteran = A level of maturity whereby the crown has undergone natural or aided regression (veteranisation), significant management may be required to keep the tree in a safe condition. Typically contributes richly to ecological diversity	
RPR	The radius of the **R**oot **P**rotection **R**adius given in meters. The minimum area of ground requiring protection thorough developments			
RPA	The radius of the **R**oot **P**rotection **A**rea given in meters. The minimum area of ground requiring protection thorough developments			
Vitality	Refers to the vitality of the tree:			
	G	Good	Having above average vitality	
	F	Fair	Having average vitality	
	P	Poor	Having well below average vitality is struggling to survive and may be dying	
	D	Dead	Tree is dead	
Structure	Refers to the structure of the tree:			
	G	Good	Tree presents no significant structural defects	
	F	Fair	Tree presents some structural defects, unlikely to lead to high priority works	
	P	Poor	Tree presents significant structural defects that may lead to high priority works	
	D	Dead	Tree is dead	
Landscape	Refers to the Landscape contribution value of the tree:			
	H	High	Exceptional or very attractive specimen, observable by a significant number of people and locations	
	M	Medium	Attractive specimen, Medium potential to be observable by many people or vice versa	
	L	Low	Unattractive specimen or largely hidden from view	
BS CAT	Retention category refers to the BS5837, (See Appendix 2) list quality and value. "A"-high, "B"-moderate, "C"-Low and "U"-Remove. List retentions criteria. "1"- Arboricultural, "2"-Landscape and "3"- Cultural / Conservational			
Life Exp	Life Expectancy: An estimated useful remaining contribution in years before the tree requires removal. Classed as (<10), (>10), (20+), (40+)			
Reasons	Refers to the reason a recommendation is made. Typically to facilitate the development, access, good Arboricultural practice or Health and Safety			

Appendix 2 –Cascade chart for tree quality assessment

BS 5837:2012. TREES IN RELATION TO DESIGN, DEMOLITION AND CONSTRUCTION - RECOMMENDATIONS

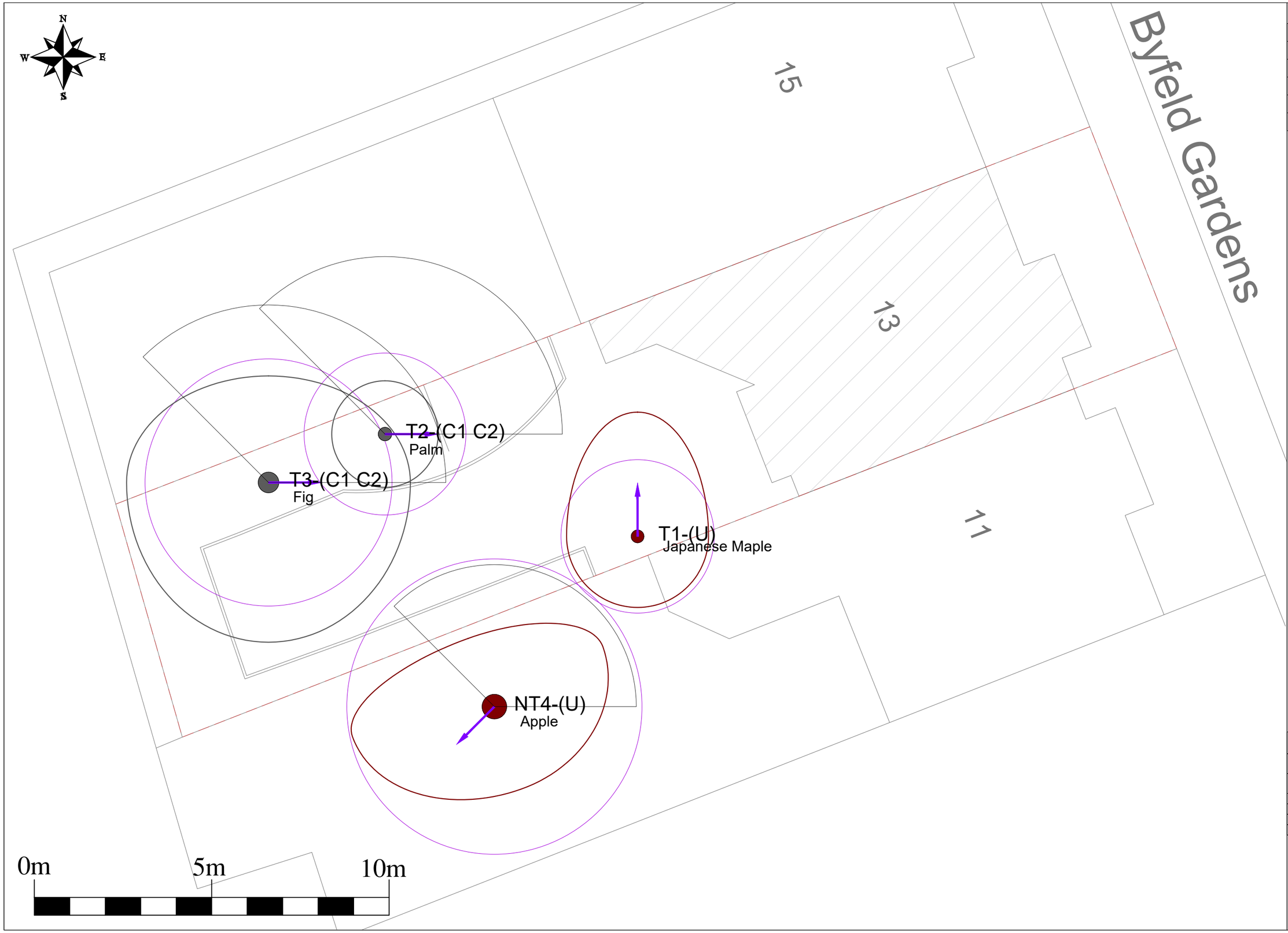
~ Cascade Chart for Tree Quality Assessment ~

Trees to be considered for retention (see Note)				Identification on Plan
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees [e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning] • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby or very low-quality trees suppressing adjacent trees of better quality NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7			Dark Red RGB Code: 127-000-000
	1 Mainly Arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	Identification on Plan
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual, or those that are essential components of groups or formal or semi-formal Arboricultural features [e.g. the dominant and/or principal trees within an avenue]	Trees, groups or woodlands of particular visual importance as Arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value [e.g. veteran trees or wood- pasture]	Light green RGB Code: 000-255-000
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition [e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage]. such that they are unlikely to be suitable for retention for beyond 40 years, or trees lacking a special quality necessary to merit the cate or A destination	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.	Trees with material conservation or other cultural value	Mild Blue RGB Code: 000-000-255
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value, and/or trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value	Grey RGB code: 091-091-019

Appendix 3 - Tree Constraints Plans & Tree Protection Plan

TGB322.V1.0.A3.TCP (Tree Constraints Plan)

TGB322.V1.0.A3.TPP(AIA)



Notes:

BS5837 Tree Retention Categories

CATEGORY A (**Purple Arrow illustrates direction of lowest part of canopy**)	Trees of a high quality with an estimated remaining life expectancy of at least 40 years
CATEGORY B	Trees of a moderate quality with an estimated remaining life expectancy of at least 20 years.
CATEGORY C	Trees of a low quality with an estimated remaining life expectancy of at least 10 years
CATEGORY U	Tree of poor condition that cannot be realistically retained as living trees in the context of the current land use for longer than 10 years
ROOT PROTECION AREA	Precautionary areas - soil structure must be protected.

Title: Tree Constraints Plan

Site: 13 Byfled Gardens, London, Richmond Upon Thames, SW13 9HP

Client: Mr Benjamin Barber

Project No:	TGB322.V1.0		
Drawing No:	TGB322.V1.0-A3-TCP		
Scale @ A3:	1:100	Date:	06/12/2024
Drawn By:	Tom B	Revision:	1.0

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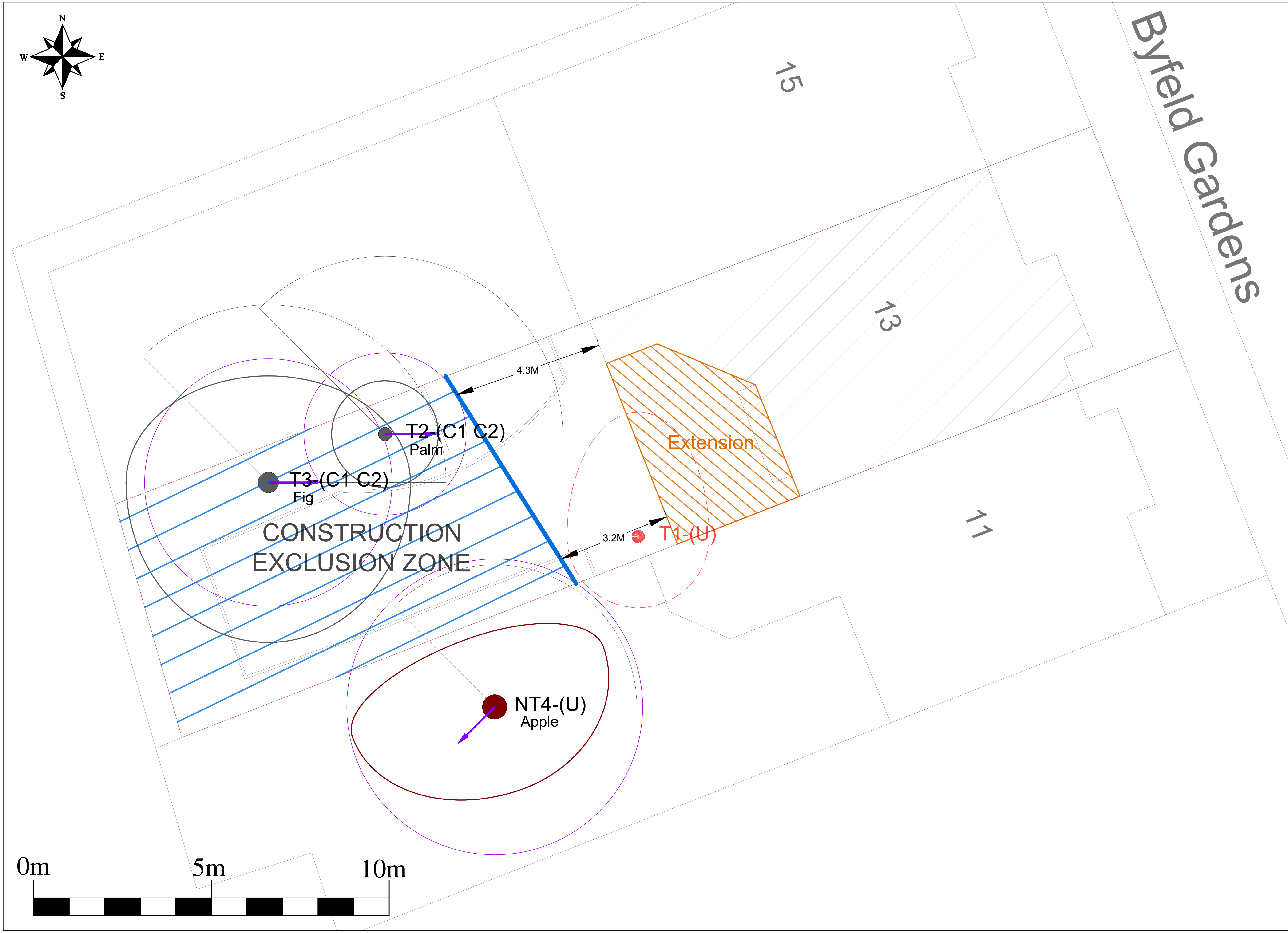


Notes:

BS5837 Tree Retention Categories

CATEGORY A	Trees of a high quality with an estimated remaining life expectancy of at least 40 years
Purple Arrow illustrates direction of lowest part of canopy	
CATEGORY B	Trees of a moderate quality with an estimated remaining life expectancy of at least 20 years.
CATEGORY C	Trees of a low quality with an estimated remaining life expectancy of at least 10 years
CATEGORY U	Tree of poor condition that cannot be realistically retained as living trees in the context of the current land use for longer than 10 years
ROOT PROTECION AREA	T### TREES / GROUPS TO REMOVE
TREE PROTECTION FENCING	TREE SHADOW
CONSTRUCTION EXCLUSION ZONE	

The Warning sign below is to be attached to the Tree protective fencing once erected

TREE PROTECTION AREA

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND ARE SUBJECTS OF A TREE PRESERVATION ORDER
(TOWN & COUNTRY PLANNING ACT 1990)

CONTRAVENTION OF TREE PRESERVATION ORDERS MAY LEAD TO **CRIMINAL PROSECUTION**

THE FOLLOWING **MUST** BE OBSERVED BY ALL PERSONS:-

- THE PROTECTIVE FENCING MUST NOT BE REMOVED
- NO PERSON SHALL ENTER THE PROTECTED AREA
- NO MACHINE OR PLANT SHALL ENTER THE PROTECTED AREA
- NO MATERIALS SHALL BE STORED IN THE PROTECTED AREA
- NO SPOIL SHALL BE DEPOSITED IN THE PROTECTED AREA
- NO EXCAVATION SHALL OCCUR IN THE PROTECTED AREA

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSON OF THE LOCAL PLANNING AUTHORITY

KEEP OUT!

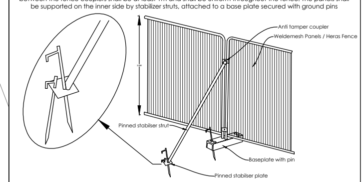
General Site precautions

The following points will be observed at all times:

- No mechanical digging or scraping is allowed within defined RPAs.
- No fires to be lit on site.
- No access permitted inside the CEZ or TPF.
- No materials, equipment or debris to be stored within the CEZ or RPAs of retained trees.
- Notice boards, telephone cables or other services will not be attached to retained trees.
- Materials that may contaminate the soil (cement mixer, fuel, vehicle washings) will not be permitted to operate or allow run off into the RPAs of retained trees or soils.
- Site operations will avoid damage to the aerial part of the tree.

TREE PROTECTION FENCING (TPF)

Secondary Specification - Protective fencing shall consist of a heras fencing framework in accordance with figure 3 of British Standard 5837 (2012); comprising 2m tall welded mesh (Heras fencing) panels on rubber or concrete feet. The weldmesh panels shall be securely fixed and joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The distance between the fence couplers shall be at least 1m and shall be uniform throughout the fence. The panels shall be supported on the inner side by stabilizer struts, attached to a base plate secured with ground pins



Title: Tree Protection Plan (AIA)

Site: 13 Byfled Gardens, London, Richmond Upon Thames, SW13 9HP

Client: Mr Benjamin Barber

Project No:	TGB322.V1.0		
Drawing No:	TGB322.V1.0-A3-TPP(AIA)		
Scale @ A3:	1:100	Date:	06/12/2024
Drawn By:	Tom B	Revision:	1.0

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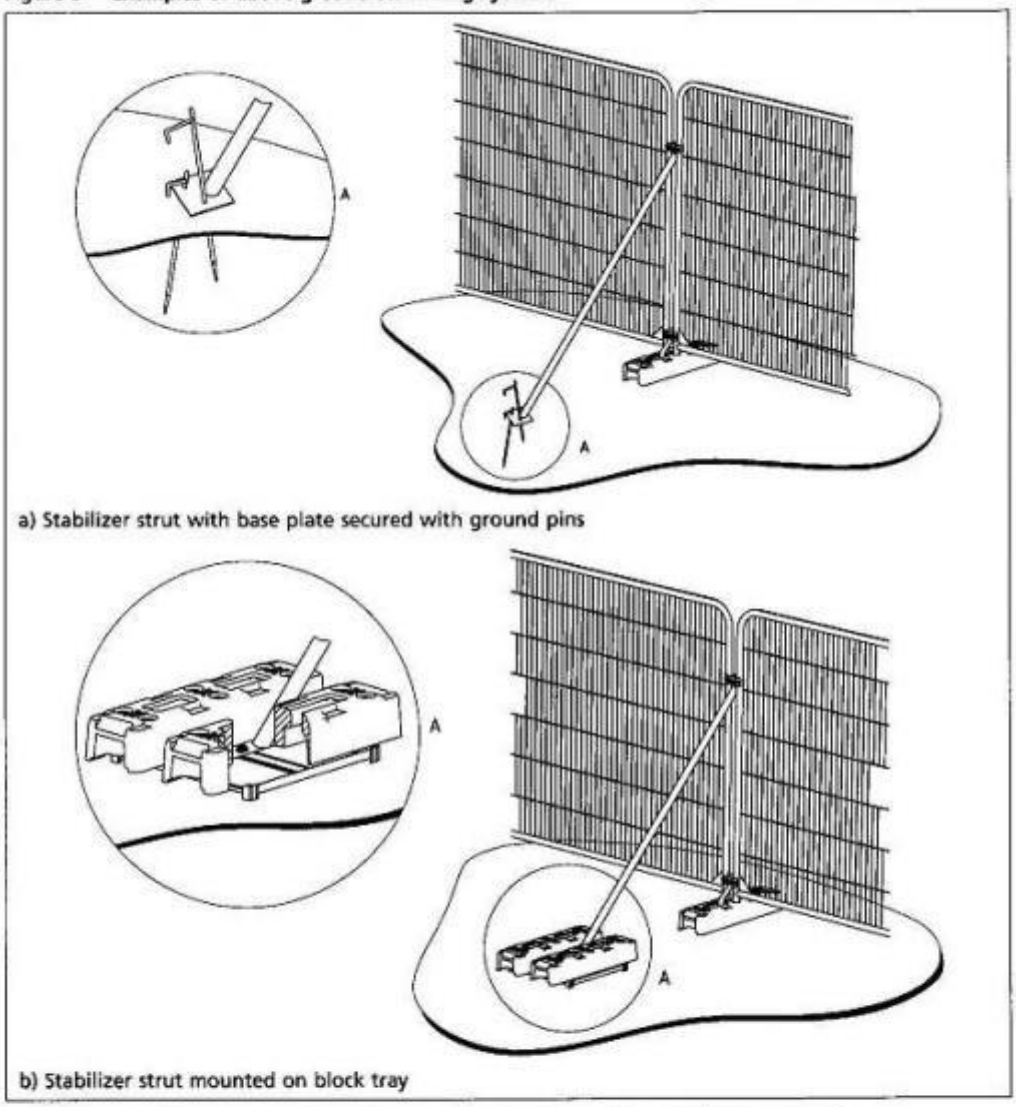
Appendix 4 – Tree Protection

Tree Protection Fencing

SECONDARY SPECIFICATION - HERAS FENCING ON PINNED BASEPLATE

Figure 3 **Examples of above-ground stabilizing systems**



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray

6.2.3 Ground protection during demolition and construction

6.2.3.1 Where construction working space or temporary construction access is justified within the RPA, this should be facilitated by a set-back in the alignment of the tree protection barrier. In such areas, suitable existing hard surfacing that is not proposed for re-use as part of the finished design should be retained to act as temporary ground protection during construction, rather than being removed during demolition. The suitability of such surfacing for this purpose should be evaluated by the project arboriculturist and an engineer as appropriate.

Appendix 5 - Exclusion sign for CEZ

TREE PROTECTION AREA

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND ARE SUBJECTS OF A TREE PRESERVATION ORDER
(TOWN & COUNTRY PLANNING ACT 1990)

CONTRAVENTION OF TREE PRESERVATION ORDERS MAY LEAD TO **CRIMINAL PROSECUTION**

THE FOLLOWING **MUST** BE OBSERVED BY ALL PERSONS:-

- THE PROTECTIVE FENCING MUST NOT BE REMOVED
- NO PERSON SHALL ENTER THE PROTECTED AREA
- NO MACHINE OR PLANT SHALL ENTER THE PROTECTED AREA
- NO MATERIALS SHALL BE STORED IN THE PROTECTED AREA
- NO SPOIL SHALL BE DEPOSITED IN THE PROTECTED AREA
- NO EXCAVATION SHALL OCCUR IN THE PROTECTED AREA

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSON OF THE LOCAL PLANNING AUTHORITY

KEEP OUT!

PROTECTIVE FENCING. THIS FENCING MUST BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND DRAWINGS FOR THIS DEVELOPMENT.

TREE PROTECTION AREA

KEEP OUT !

(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY