BS 5837 Arboricultural Report

Impact Assessment

at
10 Park Village West
London
NW1 4AE

Dated
4th April 2024

CROWN
Tree Consultancy
Branching out through England and Wales

Contents

1. Introduction

1.1. Instruction

1.1.1. We are instructed by Simon Morray-Jones to:

- Undertake a Tree Survey to BS 5837 at 10 Park Village West and assess all trees potentially within influencing distance of proposed development within the site.
- Plot the trees on a Tree Constraints Plan and record the data in a Tree Data Schedule.
- Provide preliminary management recommendations for the tree stock (independent of development proposals).
- Assess the potential impact of the development proposals and provide guidance as to appropriate mitigation measures.
- Produce an Arboricultural Impact Assessment for submission to the local authority.
- Produce a Tree Protection Plan showing locations of tree protection barriers and where ground protection will be required.

1.2. Purpose of this Report

1.2.1. This report is produced according to the guidance and recommendations within *BS 5837: 2012 - Trees in Relation to Design, Demolition, and Construction.* It is tailored to accompany a planning application. It assesses the impact of all proposed construction works on the tree population. Tree removal, canopy pruning, and the impact upon roots from various groundworks are all considered in detail. Best practice mitigation is specified wherever appropriate.

1.2.2. Consideration is also given to the impact of the changed juxtaposition between trees and buildings and how that may influence future tree management.

1.2.3. This document should not be used to inform management decisions relating to liability or risk management. Such decisions should be based on a more detailed inspection of the trees than was carried out for this report.

1.3. References

1.3.1. We have liaised with our client to attain an adequate understanding of the project to enable us to carry out an accurate assessment of the proposals.

1.4. Author

1.4.1. This report was compiled by Joe Taylor - FdSc (Arboriculture), M. Arbor A. Joe's resumé can be found in Appendix 3.

2. The Survey

A visual ground-level assessment of all trees was undertaken on the 5th of March 2024 by Carl Lothian. No climbed inspections or specialist decay detection were undertaken.

2.1. Methodology

2.1.1. Structural condition was assessed by inspecting the stem and scaffold branches, looking for weak branch junctions, symptoms of decay, or other structural defects. Any recommended works were made to ensure the trees are in acceptable structural condition. The position of the tree and its potential targets were considered.

2.1.2. Physiological condition was assessed by inspecting the stem, branches, and foliage for symptoms of disease. The vigour of the tree was also considered.

2.1.3. Key measurements were obtained using a diameter tape, clinometer, distometer and logger's tape. Where this was not practical, measurements were estimated.

2.1.4. Some trees may be surveyed as groups, though this is usually avoided close to areas likely to be developed.

2.1.5. The tree locations shown on the accompanying drawings are based on a measured drawing of the site supplied to Crown Tree Consultancy. This drawing had the tree positions already plotted. Where applicable, additional trees have been plotted by us according to measurements taken on-site.

2.1.6. Finally, a *Retention Category* is allocated. The relevant BS5837 2012 cascade chart is duplicated below.

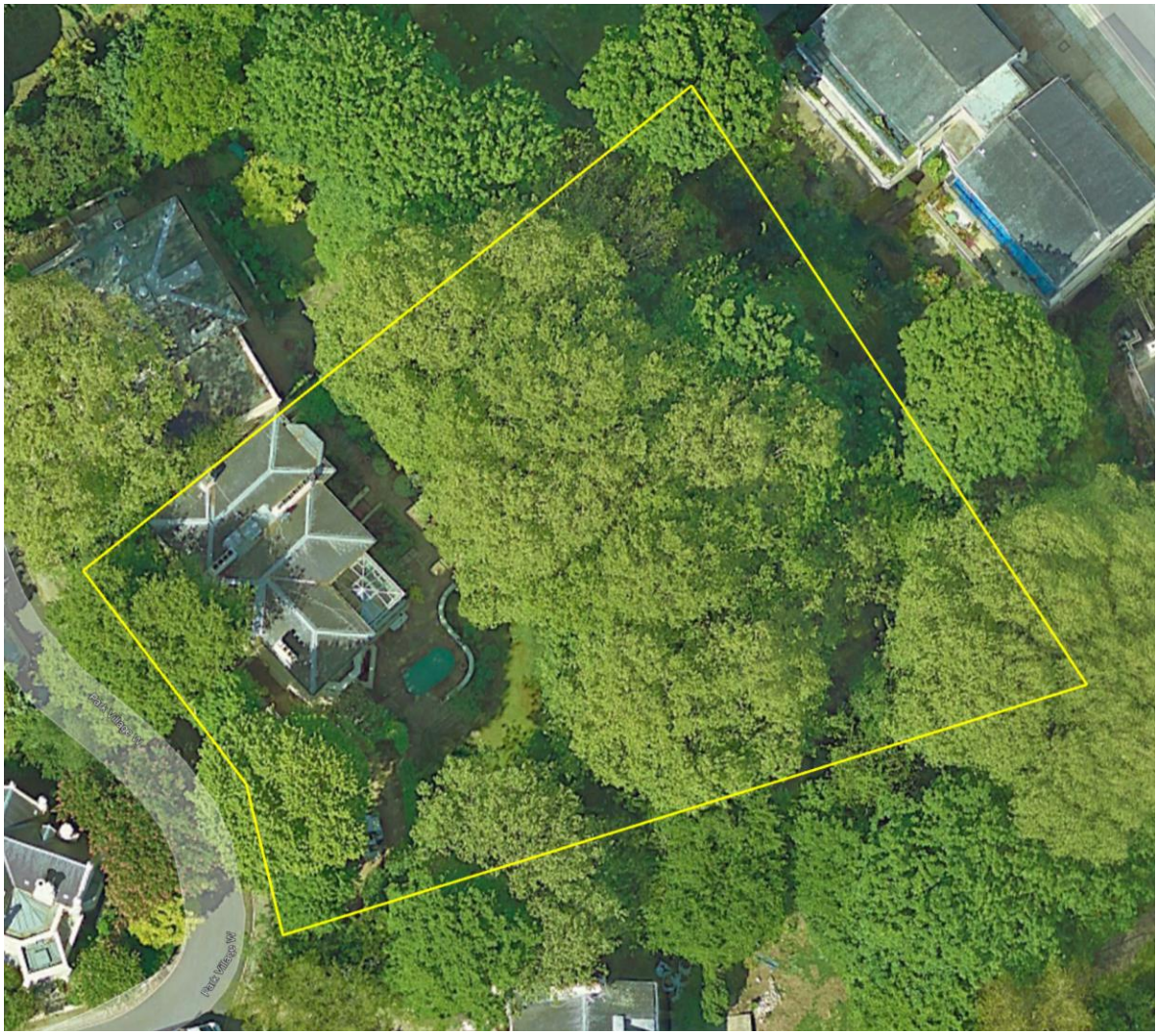
Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
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**.*			See Table 2
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
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)	See Table 2
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 the special quality necessary to merit the category A designation	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	See Table 2
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	See Table 2

2.1.7. Further guidance on interpreting BS 5837 and our survey methodology is given in Appendix 1.

2.2. Survey Extent

2.2.1. The area indicated below[1] shows the extent of the site. Our survey included all trees within the curtilage of the property and those adjacent to it.



2.3. Summary of Observations

2.3.1. Number ten, Park Village West is a detached residential property with gardens to the front and rear.

2.3.2. Within the curtilage of the site, we identified six Retention Category A, six Retention Category B tres and ten Retention Category C trees and tree groups.

2.3.3. Beyond the curtilage of the site, we identified one Retention Category A, six Retention Category B and four Retention Category C trees and tree groups.

2.3.4. The Tree Constraints Plan and Tree Data Schedule (see Appendix 4) should be referred to for descriptions and locations of all trees.

[1] Image taken from Google Earth and may not be current

3. Vegetation Overview (independent of proposals)

This section summarises all the recommendations within the Tree Data Schedule regardless of whether trees are to be retained, felled or pruned to facilitate the proposed development. It does not specify works that may be required to facilitate the development proposals.

3.1. Preliminary Management Recommendations

3.1.1. The following recommendations are made to maintain the trees in an acceptable condition:

3.1.2. Trees that are considered to be in acceptable condition at present but have defects that require monitoring include T13 and G18. The Tree Data Schedule indicates the recommended inspection frequency.

3.1.3. T24 requires further inspection with specialist decay detection equipment to accurately assess the extent of decay.

3.1.4. All other trees were deemed to be in satisfactory condition.

3.2. Work Priority and Future Inspections

3.2.1. The table below suggests a schedule for completing the works recommended in the Tree Data Schedule based on the perceived risk:

Work Priority	Definition	Tree Number
Urgent	As soon as possible	None
Very High	Within 1 Month	None
High	Within 3 Months	T24
Moderate	Within 1 year	T13 and G18
Low	Within 3 years	None

3.2.2. The table below suggests a schedule of future inspections based on the condition and location of each tree:

Inspection Frequency (years)	Tree Number
0.5	None
1	G18 and T24
1.5	T13
3	All other retained trees

3.2.3. The trees should be inspected sooner if there is a noticeable decline in their condition or following extreme weather events.

3.3. Statutory Protection – TPOs and Conservation Area Status

Before undertaking most works on trees protected by a tree preservation order[2], consent needs to be formally obtained from the local authority. Where trees are in a conservation area (but not protected by a TPO), works are generally not permitted without first giving the local authority six weeks' notice of intention[3]. Unauthorised works to protected trees or trees in a conservation area may result in criminal prosecution and a fine. Where works are required to implement a fully approved development, no such consent or notice is required.

[2] https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas

[3] During this time, the local authority may elect to create a tree preservation order or to inform the applicant that they have no objection to the proposed works. If the local authority does not respond within six weeks, then the intended work may be undertaken. Note: the local authority cannot refuse consent for works to trees within a conservation area; they may only create a tree preservation order if they wish to have further control over what works are undertaken.

4. Arboricultural Impact Assessment

4.1. Overview

4.1.1. It is proposed to extend the rear terrace and construct a new garage to the South of the dwelling, as indicated on the drawings in Appendix 4. The existing layout is indicated in black, the structures to be demolished are indicated in blue, and the footprint of the proposed layout is indicated in red.

4.1.2. The table below summarises the potential impact on trees due to various activities.

Activity	Trees Potentially Affected
Tree Removal: Retention Category A	None
Tree Removal: Retention Category B	None
Tree Removal: Retention Category C	T5, T6, the 4m tall acer and the 5m tall apple.
Tree Removal: Retention Category U	None
Tree Pruning	None
RPA: Garage Foundations	T1, T3, T7 and T8
RPA: Air Source Heat Pump	T1 and T8
RPA: Timber Fence Foundations	T1, T7 and T8
RPA: Terrace Extension	G18 and T19
RPA: New Hard Surface	None
RPA: Underground Services	None Anticipated
RPA: Change of Ground Levels	None
RPA: Soil Compaction	Trees adjacent the construction area (preventable by installing tree protection measures)

4.1.1. Other potentially damaging activities often associated with construction sites include demolition or the careless use of plant machinery, hazardous materials, or fires. All of the above potential impacts are considered in detail throughout this Section.

4.2. Tree Removal

4.2.1. To enable the development, it is proposed to remove four Retention Category C trees. The trees to be removed are specified in the above table.

4.2.2. None of these trees are considered to have significant landscape value so the impact on local amenity levels shall be minimal.

4.3. Tree Pruning

4.3.1. The retained tree canopies are sufficiently far from proposed building works and high over access routes so that they should not be impacted by construction activity. Consequently, no pruning works are required to enable the build.

4.4. Mitigation Planting

4.4.1. The trees to be removed are of such low amenity value that no mitigation planting is considered necessary.

4.5. Impact of Foundations

4.5.1. The table below assesses the impact of proposed foundations in Root Protection Areas:

Tree No	Nature of Foundation	Portion of RPA	Proposed Mitigation
T1 and T8	Heat Pump	Circa 3%	None (impact shall be minimal)
G18 and T19	Terrace Extension	Circa 5%	Hand-Dig Method • In the direction of the trees, excavation not to exceed 250mm beyond the build-line. • Hand tools to be used to a depth of 600mm. • Plant machinery may be used at deeper depths. • Operation to be supervised by the project arborist. • Exposed roots over 25mm diameter shall be retained and protected with damp hessian if practicable, else pruned by the arborist.
T1, T3, T7 and T8	Garage	<15%	Shallow Raft or Beam Foundation Method • In the direction of the trees, excavation is not to exceed 250mm beyond the build-line. • Excavation depth for raft or beam not to exceed 300mm. • Hand tools to be used to excavate. • Excavation to be supervised by the project arborist. • Exposed roots over 25mm diameter shall be retained and protected with damp hessian if practicable, else pruned by the arborist. • RC Raft or beam installed. This may be supported by narrow diameter piles (max 300mm diameter). • Trial pits excavated to determine pile locations. All roots over 25mm diameter to be retained intact and pile relocated.
T1, T7 and T8	Timber Fence	Circa 1%	Trial Pit and Post Hole • Post holes not to exceed 400mm x 400mm (unlimited depth). • Excavation for the post holes should be undertaken using hand tools. • Roots in excess of 25mm should be retained, and the post hole relocated. • Smaller roots to be neatly pruned. • Post hole to be sleeved with heavy-duty bin liners to prevent leaching of cement into the soil.

4.5.2. These measures are in accordance with industry best practices[4] and shall ensure minimal impact on roots.

4.6. Impact of Surfacing

4.6.1. No new hard surfaces are proposed within the Root Protection Areas of any trees.

4.7. Underground Services

4.7.1. The location of any underground services is yet to be determined. Wherever possible, these should be located outside of Root Protection Areas. Otherwise, the project arborist must be consulted, and approval obtained from the local authority.

[4] BS 5837 (2012 section 7.5 and 7.6)

4.8. Changes in Ground Levels

4.8.1. Arboricultural advice and approval from the local authority should be sought before changing any ground levels within the Root Protection Area of any retained tree. Even very shallow excavation can have detrimental impacts on tree health.

4.9. Soil Compaction

4.9.1. The majority of tree roots lie within the upper soil horizons. This is because the availability of oxygen decreases with depth, and roots need to breathe to stay alive. In addition, nutrients are more readily available in the form of organic matter close to the soil surface.

4.9.2. Healthy soils contain about 25% air space between solid particles. Increased loading of the soil caused by construction activity causes air to be squeezed out as the soil becomes compacted, preventing roots from breathing. Even an increase in pedestrian activity may cause some soil compaction.

4.9.3. It is important, therefore, that ground compaction and soil disturbance over Root Protection Areas should be avoided during the construction phase. Where access is required over Root Protection Areas, suitable ground protection measures must be installed.

4.10. Demolition Activities

4.10.1. Care is required to avoid damaging trees when removing adjacent structures. Structures must be demolished away from stems and in a manner that doesn't damage branches. Removal of underground foundations requires extra special care to avoid root damage. During the implementation of this project, the following activities require special care:

- Removal of the raised flowerbeds close to G18 – T20.
- Removal of the wall close to T7.

4.11. Waste and Materials Storage

4.11.1. All hazardous materials (including cement and petrochemical products) will need to be controlled according to COSHH regulations in order to ensure there is no detrimental impact on tree health. Provision shall need to be made to ensure that cement spillage avoids all Root Protection Areas.

4.11.2. Areas designated for the storage of building materials and waste products will need to be approved by the local authority. Root Protection Areas should be avoided. Where this is not possible, suitable ground protection measures will need to be installed.

4.12. Cabins and Site Facilities

4.12.1. Any cabins and welfare facilities should be located outside of Root Protection Areas wherever possible. Otherwise, the project arborist should be consulted, and approval obtained from the local authority.

4.13. Boundary Treatments

4.13.1. No changes are proposed to the existing boundary features that might impact trees.

4.14. Impact of Retained Trees on the Development

4.14.1. Adequate space has been allowed between retained trees and the proposal. Consequently, the proposal shall not result in increased pressure to remove or overly prune any of the retained trees.

4.14.2. The garage is not considered to be a residential living space, so the shade cast by trees is not considered relevant from a planning perspective.

4.14.3. The foundations and any new surfaces should be designed to accommodate all potential impacts due to future tree-rooting activity. These include potential vegetation-related subsidence, vegetation-related heave, and lifting of surfaces / light structures due to direct root pressure.

4.15. Arboricultural Method Statement

4.15.1. BS 5837 recommends that a detailed methodology is agreed upon in the form of an Arboricultural Method Statement, which shall ensure that trees are well protected during the construction phase. This should detail all tree protection measures and limitations on construction activity. All of the issues raised within this Impact Assessment should be covered by the Method Statement.

5. Photographs

Refer also to the Tree Constraints Plan for photo locations

Photo 1.

Photo 2.

Photo 3.

Photo 4.

Photo 5.

Photo 6.

Photo 7.

Photo 8.

Photo 9.

Photo 10.

Photo 11.

Photo 12.

Photo 13.

Photo 14.

Photo 15.

Photo 16.

Photo 17.

Photo 18.

Appendix 1: BS 5837: 2012 – Interpretation Guide

This Standard prescribes the principles to be applied to achieve a satisfactory juxtaposition of trees and structures. It sets out to assist those concerned with planning applications to form balanced judgments.

Stage 1: Survey Details and Notes

A ground-level visual survey is undertaken. Only trees with a stem diameter over 75mm, which lie within the site boundary or relatively close to it, are included.

Where applicable, trees with significant defects are highlighted and appropriate remedial works are recommended.

Wherever practicable dimensions are obtained using diameter tapes, logger's tapes, distometers and clinometers. Where obstacles prevent accurate measurement, dimensions are estimated. Trees on privately owned third-party land are surveyed from the best available vantage point and observations relating to the condition of these trees should be treated accordingly. All height measurements should be regarded as approximate.

Data is recorded for each tree and is presented in a Tree Data Schedule. Each tree is allocated a ***Retention Category*** according to its size, amenity value, condition, and safe useful life expectancy. The categories are allocated independently of development proposals. Our interpretation of the Retention Categories is explained below:

Retention Categories

A Category: Trees of high quality and amenity value. Usually, mature trees with a significant life expectancy which would enhance any development. Retention of these trees is strongly encouraged.

B Category: Trees of moderate quality and amenity value. Usually these are maturing trees or younger trees with exceptional form. Retention of these trees is desirable though the removal of occasional specimens may be acceptable.

C Category: Trees of low quality or small specimens with a relatively low amenity value. These trees are not considered to be a material planning constraint and their removal will generally be seen as acceptable in order to facilitate development.

U Category: Trees of such low quality that their removal is recommended regardless of development proposals.

Occasionally trees are borderline and do not fall neatly into one of these categories. In such cases we apply a superscript (**+/-**) such that:

C^{+} Indicates borderline C/B, though Category C is deemed to be most appropriate.

B^{-} Indicates borderline C/B, though Category B is deemed to be most appropriate.

The British Standard suggests that each of the A, B and C categories may be further subdivided (A1, A2, A3, B1, B2, B3 etc) such that subcategory 1 denotes mainly arboricultural values, subcategory 2 denotes mainly landscape values and subcategory 3 denotes mainly cultural values (including conservation). Multiple subcategories may be used.

Our experience suggests that these subdivisions lack clarity and can be confusing. Within this report subcategories are **not** denoted. Where appropriate, the use of phrases such as '*Part of a formal group*', or '*Has a high ecological value*', or '*Offers good screening to the site*' are incorporated into the observation section of the Tree Data Schedule. We believe this conveys all relevant landscape and cultural information without any confusion.

Tree Constraints Plan (TCP). This indicates the position, crown spread, Retention Category and Root Protection Area of each tree. It is used to inform where development may proceed without causing damage to trees.

Root Protection Area (RPA). This is the area around each tree likely to contain the majority of roots. It should ideally remain undisturbed to avoid a detrimental impact on tree health. For single stemmed trees It is calculated according to the formula "radius of RPA" = "12 x stem diameter". Where a tree has more than one stem, the equivalent-single-stem diameter is usually recorded. This is calculated by adding the squares of the stems and then finding the square root of this total. The radius of the Root Protection Area is then calculated by multiplying the equivalent-stem-diameter by 12.

Stage 2: Arboricultural Impact Assessment

After the initial survey and the production of the Tree Constraints Plan, arborists and designers are encouraged to work together to establish a design proposal with minimal impact on the high-quality trees. An assessment should be made of all possible impacts including the impact that the trees may have on the proposal. The arborist may recommend mitigation strategies to minimise these impacts and help achieve a more harmonious juxtaposition between buildings and trees.

Stage 3: Arboricultural Method Statement

This type of report specifies the measures necessary to protect trees against damage from construction activity. The Method Statement should be written in a manner that it may be conditioned and enforced by the local authority upon granting of planning permission. The site manager should be familiar with all aspects of the Method Statement and should ensure that all persons working on the site are aware of those aspects which appertain to their work. This includes service installation engineers and operators of plant machinery.

Appendix 2: Glossary of Tree Data

This section explains the terms used in the **Tree Data Schedule** (see Section 3 and Appendix 4).

A2.1 General Observations

Numbering System: Each item of vegetation has its own unique number prefixed by a letter such that T1=Tree 1, G2=Group 2, H3=Hedge 3 and W4=Woodland 4, S5=Shrub 5.

Age Categories:

Young	Usually less than 10 years old.
Semi-Mature	Significant future growth to be expected, both in height and crown spread (typically below 30% of life expectancy).
Early-Mature	Full height almost attained. Significant growth may be expected in terms of crown spread (typically 30-60% of life expectancy).
Mature	Full height attained. Crown spread will increase but growth increments will be slight (typically 60% or more of life expectancy).
Veteran	A level of maturity whereby significant management may be required in order to keep the tree in a safe condition.
Over Mature	As for veteran except management is not considered worthwhile.

Species: Common names and Latin names are given.

Height: Measured from ground level to the top of the crown.

Stem Diameter: Taken at 1.5m above ground level where possible. On multi-stemmed trees this measurement may be taken at ground level, though usually an indication of the number of stems and average diameter is given, e.g. 3 x 30cm.

Crown Height: Measured from ground level to the height at which the main crown begins. Where the crown is unbalanced it is measured on the side deemed to be most relevant. This is usually the side facing the area of anticipated development.

Tree Diagram: This scaled drawing is computer generated based on measurements taken for stem diameter, crown height and spread, and overall height. It is designed to help the reader rapidly assess the data. It is not an accurate representation of the form of the tree.

Crown Spread: Measured N, E, S & W, taken from the centre of the stem and usually rounded up to the nearest metre.

Observations: If a tree's position is considered to be relevant it will be commented upon (e.g. overhanging a children's play area). Tree form and pruning history are also recorded along with an account of any significant defects. Defects and descriptive terms are dealt with in more detail at the end of this section.

Recommendations: Usually based on any defects observed and intended to ensure that the tree is in an acceptable condition.

Priority Scale: Depending upon the threat posed by the tree, and the likelihood of failure, recommendations should be carried out according to the following priority scale:

Urgent	To be carried out as soon as possible.
Very High	To be carried out within 1 month.
High	To be carried out within 3 months.
Moderate	To be carried out within 1 year.
Low	To be carried out within 3 years.

Inspection Frequency: An interval of 6 months, 1 year, 1.5 years or 3 years is allocated before the next inspection is due. Wherever practical, consideration should be given to seasonal changes so that deciduous trees are not always surveyed in winter when they have no leaves, or in summer when leaves may obscure branches within the upper crown.

Vigour: An indication of growth rate and the tree's ability to cope with stresses:

High	Having above average vigour.
Moderate	Having average vigour.
Low	Having below average vigour.
Very Low	Tree is struggling to survive and may be dying.

Physiological Condition:

Good	Healthy and with no symptoms of significant disease.
Fair	Disease present or vigour is impaired.
Poor	Significant disease present or vigour is extremely low.
Very Poor	Tree is dying.

Structural Condition:

Good	Having no significant structural defects.
Fair	Some defects observed though no high priority works are required.
Poor	Significant defects found. Tree requires monitoring or remedial works.
Very Poor	Major defects which will usually require significant remedial works or tree removal.

Amenity Value:

Very High	Exceptional specimen, observable by a large number of people.
High	Attractive specimen, observable by a significant number of people.
Moderate	One of the above factors is not applicable.
Low	Unattractive specimen or largely hidden from view.

Life Expectancy: The estimated number of years before the tree may require removal. Classified as (<10), (10 – 20), (20 – 40), or (40+).

Retention Category: These are explained in detail in Appendix 1.

A2.2 Evaluation of Defects

Cavities, wounds, deadwood etc are all evaluated as follows:

Major	Such that structural integrity is, or will become, compromised and the tree is, or will inevitably become, hazardous.
Significant	A defect that may over time become a major defect, though not necessarily so. This will depend on the vigour of the tree and its ability to deal with decay etc.
Minor	A defect thatis unlikely to develop into a major defect.

Appendix 3: Author's Qualifications

Qualifications & Experience of Joe Taylor - MArborA, FdSc (Arboriculture)

Joe began his career in Arboriculture as a tree surgeon/climber. During his time as a tree surgeon, Joe has achieved City & Guilds NPTC qualifications in Chainsaw Maintenance and Cross Cutting, Tree Climbing and Rescue, Safe Use of Manually Fed Wood-chipper and Supporting Colleagues Undertaking Tree Related Operations.

Joe obtained a Foundation Degree in Arboriculture at Askham Bryan College in 2015 which he passed with merit. Joe is a professional member of the Arboricultural Association, the International Society of Arboriculture, and the Royal Forestry Society and regularly attends industry-related seminars in to keep abreast of industry best practices.

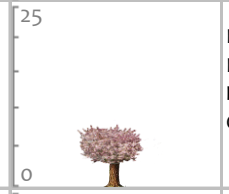
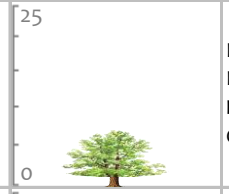
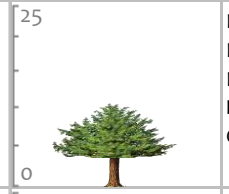
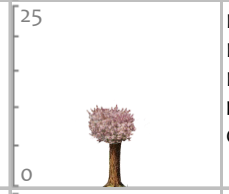
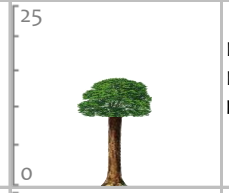
Studying at Askham Bryan College reinforced Joe's passion for trees and drove his enthusiasm to learn more. Learning how trees interact with their surrounding environment and their importance within our urban and rural landscapes highlighted an interest in pursuing a career in consultancy.

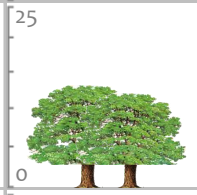
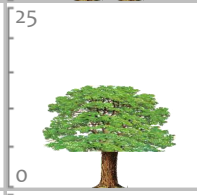
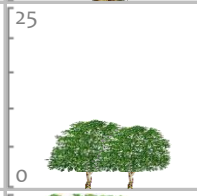
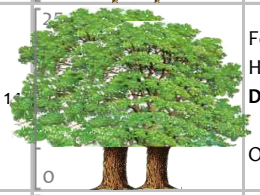
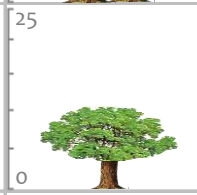
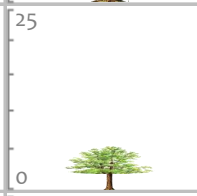
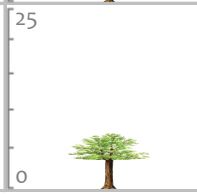
Since working for Crown Consultants Joe has undertaken numerous surveys and produced numerous reports for the purpose of planning (BS 5837), tree condition surveys, subsidence risk assessments, root surveys and decay detection investigations.

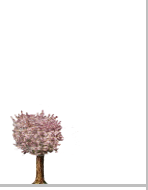
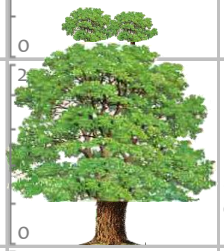
Appendix 4: Tree Data Schedule and Drawings

The Tree Data Schedule and any drawings accompanying this report follow this page. They are also provided as separate documents for ease of printing and screen viewing.

Reference (G = Group, H = Hedge)	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N / W / E / S	Scaled Tree Diagram (m)	Notes	Recommendations (Independent of any development proposals)		Vigour / Physiological Condition / Structural Condition	Amenity Value / Life Expectancy (yrs) / Retention Category
								Priority	Inspect Freq (yrs)		
T1	Mature **London Plane** Platanus x hispanica.	21	8	92	N 5, W 5.5, E 5, S 5		Form: Multi-stemmed at 9m with a balanced crown. History: Maintained by cyclical pollarding. **Defects: No significant defects observed.** Other: Retaining walls adjacent to the tree are being displaced.	No action required.	n/a / 3	Moderate Good Good	Moderate 40+ **B +**
T2	Semi-Mature **Honey-locust** Gleditsia triacanthos.	10	4	15	N 3, W 1, E 4, S 3		Form: Single stemmed with a slight lean and a slightly unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects observed.** Other: Vegetation prevented detailed inspection. Limited inspection, dimensions estimated.	No action required.	n/a / 3	Moderate Good Good	Low 40+ C
T3	Semi-Mature **Honey-locust** Gleditsia triacanthos.	15	7	27	N 4, W 1, E 6, S 7		Form: Single stemmed with a slight lean and a slightly unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Vegetation prevented detailed inspection. Limited inspection, dimensions estimated.	No action required.	n/a / 3	Moderate Good Good	Moderate 40+ **B -**
T4	Semi-Mature **Honey-locust** Gleditsia triacanthos.	15	5	25	N 5, W 2, E 4, S 2		Position: Situated on third party land. Form: Single stemmed with a slight lean and a slightly unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Vegetation prevented detailed inspection. Limited inspection, dimensions estimated.	No action required.	n/a / 3	Moderate Good Good	Moderate 40+ **B -**
T5	Semi-Mature **New Zealand Broadleaf** Griselinia littoralis.	4.5	2	14	N 1, W 4.5, E 0.5, S 4.5		Form: Single stemmed and leaning with an unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Leaning on the timber fence.	No action required.	n/a / 3	Moderate Good Fair	Low 40+ C
T6	Semi-Mature **Purple Plum** Prunus sp.	6	2	19	N 4.5, W 4.5, E 4.5, S 2.5		Form: Multi-stemmed at 1m with a slightly unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Recorded stem diameter is equivalent for three stems (15cm, 8cm, 8cm).	No action required.	n/a / 3	Moderate Good Good	Low 40+ C
T7	Early-Mature **Lime** Tilia sp.	16	5	64	N 3.5, W 3, E 3.5, S 4		Form: Single stemmed and vertical with a balanced crown. History: Maintained by cyclical pollarding. **Defects: No significant defects observed.** Other: Vegetation prevented detailed inspection.	No action required.	n/a / 3	Moderate Good Good	Moderate 40+ **B**

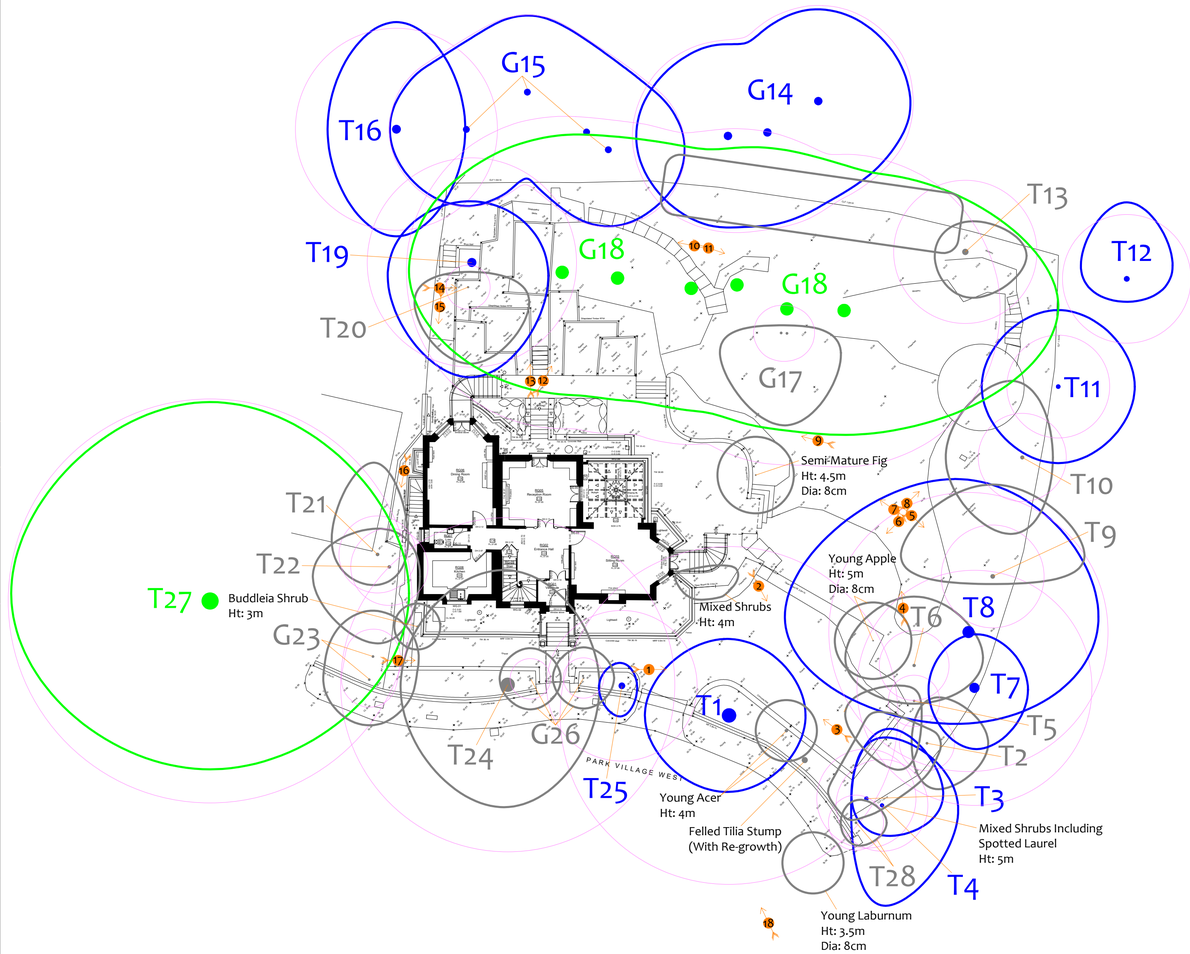
Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m) 9 0 9	Notes	Recommendations (Independent of any development proposals) Priority / Inspect Freq (yrs)	Vigour Physiological Condition Structural Condition	Amenity Value Life Expectancy (yrs) Retention Category
T8	Early-Mature **London Plane** Platanus x hispanica.	22	4	76	N 10 W 12 E 8.5 S 6		Form: Single stemmed with a slight lean and a balanced crown. History: Reduced on the east side. **Defects: No significant defects observed.**	No action required. n/a / 3	Moderate Good Good	Moderate 40+ **B**
T9	Early-Mature **Cherry** Prunus sp.	8	3	28	N 6 W 6 E 6 S 0.5		Form: Twin-stemmed at 1m with an unbalanced crown and leaning. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Vegetation prevented detailed inspection. Recorded stem diameter is equivalent for two stems estimated at 20cm.	No action required. n/a / 3	Moderate Good Fair	Low 20-40 C +
T10	Early-Mature **Portuguese Laurel** Prunus lusitanica.	6	0	24	N 5 W 5 E 2 S 5		Form: Single stemmed and vertical with a slightly unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Vegetation prevented detailed inspection.	No action required. n/a / 3	Moderate Good Good	Low 40+ C
T11	Semi-Mature **Hornbeam** Carpinus betulus.	10	4	28	N 5 W 5 E 5 S 5		Position: Situated on third party land. Form: Twin-stemmed at 3m with a balanced crown. History: No evidence of significant pruning. **Defects: Significant dead wood (low target occupancy).** Other: Vegetation prevented detailed inspection. Limited inspection, dimensions estimated.	No action required. n/a / 3	Moderate Good Good	Moderate 40+ **B -**
T12	Mature **Cherry** Prunus sp.	11	6	35	N 5 W 3 E 3 S 1.5		Position: Situated on third party land. Form: Single stemmed and leaning with a slightly unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Limited inspection, dimensions estimated. Ivy prevented detailed inspection.	No action required. n/a / 3	Moderate Good Good	Moderate 20-40 **B -**
T13	Early-Mature **Lime** Tilia sp.	14	10	39	N 2 W 2 E 4 S 3		Form: Twin-stemmed at 9m with a balanced crown. History: Managed cyclical pollard. **Defects: Significant decay at the base, good wound wood and acceptable condition at present due to historic reduction/low occupancy.**	Monitor. Moderate / 1.5	Moderate Fair Poor	Moderate 10-20 C
G14	Early-Mature **Sycamore** Acer pseudoplatanus.	av 13	av 6	av 52	N av 6 W 6 E 6 S 6 each		Position: Situated on third party land. Form: Row of three close growing specimens. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Limited inspection, dimensions estimated.	No action required. n/a / 3	Moderate Good Good	Moderate 40+ **B +**

Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m) 9 0 9	Notes	Recommendations (Independent of any development proposals) Priority / Inspect Freq (yrs)	Vigour Physiological Condition Structural Condition	Amenity Value Life Expectancy (yrs) Retention Category
G15	Early-Mature **Sycamore** Acer pseudoplatanus.	av 13	av 3	av 42	av 5 5 5 5 each		Position: Situated on third party land. Form: Row of four close growing specimens. History: No evidence of significant pruning. **Defects: No significant defects.**	No action required. n/a / 3	Moderate Good Good	Moderate 40+ **B +**
T16	Early-Mature **Sycamore** Acer pseudoplatanus.	13	5	55	7 4.5 4.5 7		Position: Situated on third party land. Form: Single stemmed and vertical with a balanced crown. History: Reduced. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required. n/a / 3	Moderate Good Good	Moderate 40+ **B**
G17	Semi-Mature **Silver Birch** Betula pendula.	av 8	av 1.5	av 15	av 0.5 4 3.5 6 each		Form: Two close growing specimens both leaning. History: No evidence of significant pruning. **Defects: No significant defects.**	No action required. n/a / 3	Moderate Fair Fair	Low 40+ **C**
G18	Mature **London Plane** Platanus x hispanica.	av 25	av 6	av 85	av 9 10 1 8 each		Form: Row of six mature trees. History: Multiple pruning wounds due to crown lifting and crown reduction. **Defects: Lesions to the stems and undersides of branches. Occasional minor cavities to pruning wounds.** Other: Vegetation prevented detailed inspection at the bases.	Monitor the tree health. Moderate / 1	Moderate Good Good	High 40+ **A +**
T19	Early-Mature **Sycamore** Acer pseudoplatanus.	10	4	57	4 5.5 5 7.5		Form: Twin-stemmed at 2m with a slightly unbalanced crown. History: Reduced. **Defects: Significant cavity 1.5m above ground level on the west side.** Other: Acceptable condition at present. Recorded stem diameter is equivalent for four stems (35cm, 37cm, 20cm, 17cm).	No action required. n/a / 3	Moderate Good Good	Moderate 20-40 **B -**
T20	Semi-Mature **Cotoneaster** Cotoneaster sp.	4.5	1.5	12	1 3.5 4 5		Form: Multi-stemmed at 0.5m with an unbalanced crown. **Defects: No significant defects observed.** Other: Recorded stem diameter is equivalent for two stems (8cm, 9cm).	No action required. n/a / 3	Moderate Good Fair	Low 40+ **C**
T21	Semi-Mature **Cotoneaster** Cotoneaster sp.	6	4	21	6 3 2 2		Position: Situated on third party land. Form: Twin-stemmed at ground level with a poorly formed crown. History: No evidence of significant pruning. **Defects: No significant defects observed.** Other: Vegetation prevented detailed inspection. Recorded stem diameter is equivalent for three stems estimated at 9cm, 12cm, 14cm.	No action required. n/a / 3	Moderate Good Fair	Low 40+ **C**

Reference (G = Group, H = Hedge)	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m)	Notes	Recommendations (Independent of any development proposals) Priority	Inspect Freq (yrs)	Vigour / Physiological Condition / Structural Condition	Amenity Value / Life Expectancy (yrs) / Retention Category
T22	Semi-Mature **Cherry** Prunus sp.	9.5	3.5	21	N 2.5, W 5, E 2, S 5		Position: Situated on third party land. Form: Triple-stemmed at 1m with an unbalanced crown. History: Occasional pruning wounds due to crown reduction. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated. Vegetation prevented detailed inspection. Recorded stem diameter is equivalent for three stems (12cm, 14cm, 11cm).	No action required.	n/a / 3	Moderate / Good / Good	Low / 40+ / C
G23	Semi-Mature **Mixed**	av 5	av 2	av 15	N av 3, W 3, E 3, S 3 each		Position: Situated on third party land. Form: Two close growing specimens, laburnum and silverberry. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Limited inspection, dimensions estimated.	No action required.	n/a / 3	Moderate / Good / Good	Moderate / 40+ / C
T24	Mature **Oak** Quercus robur.	16	5	91	N 7.5, W 7, E 6, S 8		Form: Twin-stemmed at 5m with a balanced crown. History: Reduced. **Defects: Significant decay to the stem on the south side from circa 1-2.5m above ground level.** Other: Displacing the boundary wall.	Decay detection required.	High / 1	Moderate / Good / Poor	High / 10-20 / C +
T25	Semi-Mature **Lime** Tilia sp.	14	10	41	N 1.5, W 1.5, E 1, S 2		Form: Single stemmed and vertical with a compact crown. History: Heavily reduced. **Defects: No significant defects observed.**	No action required.	n/a / 3	Moderate / Good / Good	Moderate / 40+ / B -
G26	Young **Japanese Maple** Acer japonicum.	av 5	av 2	av 11	N av 2, W 2, E 2, S 2 each		Form: Two close growing specimens either side of the gateway. History: No evidence of significant pruning. **Defects: No significant defects.**	No action required.	n/a / 3	Moderate / Good / Good	Moderate / 40+ / C
T27	Mature **London Plane** Platanus x hispanica.	28	6.5	110	N 13, W 13, E 13, S 11		Position: Situated on third party land. Form: Twin-stemmed at 5m with a balanced crown. History: Occasional pruning wounds due to crown lifting. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required.	n/a / 3	Moderate / Good / Good	High / 40+ / A
T28	Semi-Mature **Hawthorn** Crataegus monogyna.	6.5	2	15	N 1.5, W 1, E 2, S 1.5		Position: Situated on third party land. Form: Multi-stemmed at 0.5m with a slightly unbalanced crown. History: Significant pruning wounds and some stems are topped. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required.	n/a / 3	Moderate / Good / Good	Low / 40+ / C

Tree Data Schedule

Reference (C = Group, H = Hedge)	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m)	Notes	Recommendations (independent of any development proposals) Priority	Inspect Freq (yrs)	Vigour Physiological Condition Structural Condition	Amenity Value Life Expectancy (yrs) Retention Category
T1	Mature **London Plane** *Platanus x hispanica.*	21	8	92	5 5.5 5 5		Forms: Multi-stemmed at 1m with a balanced crown. History: Maintained by cyclical pollarding. **Defects: No significant defects observed.** Other: Retaining walls adjacent to the tree are being displaced.	No action required. n/a	3	Moderate Good Good	Moderate 40+ B +
T2	Semi-Mature **Honey-locust** *Gleditsia triacanthos.*	10	4	15	3 1 4 3		Forms: Single stemmed with a slight lean and a slightly unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects observed.** Other: Vegetation prevented detailed inspection. Limited inspection, dimensions estimated.	No action required. n/a	3	Moderate Good Good	Low 40+ C
T3	Semi-Mature **Honey-locust** *Gleditsia triacanthos.*	15	7	37	4 1 6 7		Forms: Single stemmed with a slight lean and a slightly unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Vegetation prevented detailed inspection. Limited inspection, dimensions estimated.	No action required. n/a	3	Moderate Good Good	Moderate 40+ B -
T4	Semi-Mature **Honey-locust** *Gleditsia triacanthos.*	15	5	25	5 2 5 2		Position: Situated on third party land. Forms: Single stemmed with a slight lean and a slightly unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Vegetation prevented detailed inspection. Limited inspection, dimensions estimated.	No action required. n/a	3	Moderate Good Good	Moderate 40+ B -
T5	Semi-Mature **New Zealand Broadleaf** *Griselinia littoralis.*	4.5	2	14	4.5 1 4.5 4.5		Forms: Single stemmed and leaning with an unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Leaning on the timber fence.	No action required. n/a	3	Moderate Good Fair	Low 40+ C
T6	Semi-Mature **Purple Plum** *Prunus sp.*	6	2	19	4.5 4.5 4.5 2.5		Forms: History: Multi-stemmed at 1m with a slightly unbalanced crown. **Defects:** No evidence of significant pruning. Other: **No significant defects.** Recorded stem diameter is equivalent for three stems (15cm, 8cm, 8cm).	No action required. n/a	3	Moderate Good Good	Low 40+ C
T7	Early-Mature **Lime** *Tilia sp.*	16	5	64	3.5 3 3.5 4		Forms: Single stemmed and vertical with a balanced crown. History: Maintained by cyclical pollarding. **Defects: No significant defects observed.** Other: Vegetation prevented detailed inspection.	No action required. n/a	3	Moderate Good Good	Moderate 40+ B
T8	Early-Mature **London Plane** *Platanus x hispanica.*	22	4	76	10 8.5 6		Forms: Single stemmed with a slight lean and a balanced crown. History: Reduced on the east side. **Defects: No significant defects observed.**	No action required. n/a	3	Moderate Good Good	Moderate 40+ B
T9	Early-Mature **Cherry** *Prunus sp.*	8	3	28	6 6 6 0.5		Forms: Twin-stemmed at 1m with an unbalanced crown and leaning. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Vegetation prevented detailed inspection. Recorded stem diameter is equivalent for two stems estimated at 20cm.	No action required. n/a	3	Moderate Good Fair	Low 20-40 C +
T10	Early-Mature **Portuguese Laurel** *Prunus lusitanica.*	6	0	24	5 5 2 5		Forms: Single stemmed and vertical with a slightly unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Vegetation prevented detailed inspection.	No action required. n/a	3	Moderate Good Good	Low 40+ C
T11	Semi-Mature **Hornbeam** *Carpinus betulus.*	10	4	28	5 5 5 5		Position: Situated on third party land. Forms: Twin-stemmed at 3m with a balanced crown. History: No evidence of significant pruning. **Defects: Significant dead wood (low target occupancy).** Other: Vegetation prevented detailed inspection. Limited inspection, dimensions estimated.	No action required. n/a	3	Moderate Good Good	Moderate 40+ B -
T12	Mature **Cherry** *Prunus sp.*	11	6	35	3 5 3 1.5		Position: Situated on third party land. Forms: Single stemmed and leaning with a slightly unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated. Ivy prevented detailed inspection.	No action required. n/a	3	Moderate Good	Moderate 20-40 B -
T13	Early-Mature **Lime** *Tilia sp.*	14	10	39	2 2 4 3		Forms: Twin-stemmed at 3m with a balanced crown. History: Managed cyclical pollard. **Defects: Significant decay at the base, good wound wood and acceptable condition at present due to historic reduction/low occupancy.**	Monitor. Moderate	1.5	Moderate Fair Poor	Moderate 10-20 C
G14	Early-Mature **Sycamore** *Acer pseudoplatanus.*	av 13	av 6	av 57	6 av 6 each		Position: Situated on third party land. Forms: Row of three close growing specimens. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Limited inspection, dimensions estimated.	No action required. n/a	3	Moderate Good Good	Moderate 40+ B +
G15	Early-Mature **Sycamore** *Acer pseudoplatanus.*	av 13	av 3	av 42	5 av 5 each 5		Position: Situated on third party land. Forms: Row of four close growing specimens. History: No evidence of significant pruning. **Defects: No significant defects.**	No action required. n/a	3	Moderate Good Good	Moderate 40+ B +
T16	Early-Mature **Sycamore** *Acer pseudoplatanus.*	13	5	55	4.5 7 7 4.5		Position: Situated on third party land. Forms: Single stemmed and vertical with a balanced crown. History: Reduced. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required. n/a	3	Moderate Good Good	Moderate 40+ B
G17	Semi-Mature **Silver Birch** *Betula pendula.*	av 8	av 1.5	av 15	av 0.5 4 3.5 6 each		Forms: Two close growing specimens both leaning. History: No evidence of significant pruning. **Defects: No significant defects.**	No action required. n/a	3	Moderate Fair	Low 40+ C
G18	Mature **London Plane** *Platanus x hispanica.*	av 25	av 6	av 85	av 8 8 8 each		Form: Row of six mature trees. History: Multiple pruning wounds due to crown lifting and crown reduction. **Defects: Lesions to the stems and undersides of branches. Occasional minor cavities to pruning wounds.** Other: Vegetation prevented detailed inspection at the bases.	Monitor the tree health. Moderate	1	Moderate Good Good	High 40+ A +
T19	Early-Mature **Sycamore** *Acer pseudoplatanus.*	10	4	57	4 7 5.5 7.5		Forms: Twin-stemmed at 2m with a slightly unbalanced crown. History: Reduced. **Defects: Significant cavity 1.5m above ground level on the west side.** Other: Acceptable condition at present. Recorded stem diameter is equivalent for four stems (35cm, 32cm, 20cm, 15cm).	No action required. n/a	3	Moderate Good Good	Moderate 20-40 B -
T20	Semi-Mature **Cotoneaster** *Cotoneaster sp.*	4.5	1.5	12	3.5 4 3.5 5		Forms: Multi-stemmed at 0.5m with an unbalanced crown. **Defects: No significant defects observed.** Other: Recorded stem diameter is equivalent for two stems (8cm, 9cm).	No action required. n/a	3	Moderate Good Fair	Low 40+ C
T21	Semi-Mature **Cotoneaster** *Cotoneaster sp.*	6	4	21	6 2 6 2		Position: Situated on third party land. Forms: Twin-stemmed at ground level with a poorly formed crown. History: No evidence of significant pruning. **Defects: No significant defects observed.** Other: Vegetation prevented detailed inspection. Recorded stem diameter is equivalent for three stems estimated at 9cm, 12cm, 14cm.	No action required. n/a	3	Moderate Good Fair	Low 40+ C
T22	Semi-Mature **Cherry** *Prunus sp.*	9.5	3.5	21	3.5 5 3.5 5		Position: Situated on third party land. Forms: Triple-stemmed at 1m with an unbalanced crown. History: Occasional pruning wounds due to crown reduction. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated. Vegetation prevented detailed inspection. Recorded stem diameter is equivalent for three stems (12cm, 14cm, 11cm).	No action required. n/a	3	Moderate Good Good	Low 40+ C
G23	Semi-Mature **Mixed**	av 5	av 2	av 15	av 3 3 3 each 3		Position: Situated on third party land. Forms: Two close growing specimens, laburnum and silverberry. History: No evidence of significant pruning. **Defects: No significant defects.** Other: Limited inspection, dimensions estimated.	No action required. n/a	3	Moderate Good Good	Moderate 40+ C
T24	Mature **Oak** *Quercus robur.*	16	5	91	7.5 7 7.5 8		Forms: Twin-stemmed at 5m with a balanced crown. History: Reduced. **Defects: Significant decay to the stem on the south side from circa 1.5m above ground level.** Other: Displacing the boundary wall.	Decay detection required. High	1	Moderate Good Poor	High 10-20 C +
T25	Semi-Mature **Lime** *Tilia sp.*	14	10	41	1.5 1.5 2 2		Forms: Single stemmed and vertical with a compact crown. History: Heavily reduced. **Defects: No significant defects observed.**	No action required. n/a	3	Moderate Good Good	Moderate 40+ B -
G26	Young **Japanese Maple** *Acer japonicum.*	av 5	av 2	av 11	av 2 2 2 each		Forms: Two close growing specimens either side of the gateway. History: No evidence of significant pruning. **Defects: No significant defects.**	No action required. n/a	3	Moderate Good	Moderate 40+ C
T27	Mature **London Plane** *Platanus x hispanica.*	28	6.5	110	13 13 13 11		Position: Situated on third party land. Forms: Twin-stemmed at 3m with a balanced crown. History: Occasional pruning wounds due to crown lifting. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required. n/a	3	Moderate Good Good	High 40+ A
T28	Semi-Mature **Hawthorn** *Crataegus monogyna.*	6.5	2	15	1.5 2 1.5 1.5		Position: Situated on third party land. Forms: Multi-stemmed at 0.5m with a slightly unbalanced crown. History: Significant pruning wounds and some stems are topped. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required. n/a	3	Moderate Good Good	Low 40+ C



Tree Ref.	Species	Height (m)	Root Protection Area Radius (m)	m²	Square (m)
T1	London Plane	21	11.0	383	19.6
T2	Honey-locust	10	1.8	10	3.2
T3	Honey-locust	15	3.2	33	5.7
T4	Honey-locust	15	3.0	28	5.3
T5	New Zealand Broadleaf	4.5	1.7	9	3.0
T6	Purple Plum	6	2.3	16	4.0
T7	Lime	16	7.7	185	13.6
T8	London Plane	22	9.1	261	16.2
T9	Cherry	8	3.4	35	6.0
T10	Portuguese Laurel	6	2.9	26	5.1
T11	Hornbeam	10	3.4	35	6.0
T12	Cherry	11	4.2	55	7.4
T13	Lime	14	4.7	69	8.3
G14	Sycamore	13	6.2	122	11.1
G15	Sycamore	13	5.0	80	8.9
T16	Sycamore	13	6.6	137	11.7
G17	Silver Birch	8	1.8	10	3.2
G18	London Plane	25	10.2	327	18.1
T19	Sycamore	10	6.8	147	12.1
T20	Cotoneaster	4.5	1.4	7	2.6
T21	Cotoneaster	6	2.5	20	4.5
T22	Cherry	9.5	2.5	20	4.5
G23	Mixed	5	1.8	10	3.2
T24	Oak	16	10.9	375	19.4
T25	Lime	14	4.9	76	8.7
G26	Japanese Maple	5	1.3	5	2.3
T27	London Plane	28	13.2	547	23.4
T28	Hawthorn	6.5	1.8	10	3.2

Drawing No:	CCL 11795 / TCP Rev: 2
Title:	Tree Constraints Plan (Existing Layout)
Site:	10 Park Village West NW1 4AE
Scale:	1:200 (0, 5, 10m) Paper Size: A1

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Tree Retention Categories
Stems & canopies shown

Category A tree	Trees of high quality with an estimated life expectancy of 40+ years. Usually large trees with significant presence or smaller trees with excellent form. Retention of these trees is highly desirable.
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Category C tree	Unremarkable trees of low quality and merit. Individual specimens are not considered to be a material planning consideration.
Category U tree	Trees unsuitable for retention due to their very poor condition.

Tree Constraints Plan

Status: Final

BS 5837 Root Protection Area (radius = 12xstem diameter)

Root Protection Area needing amendment due to site conditions, e.g. presence of exising road or building.

Root Protection Area having been amended to account for for site conditions

T1 = Tree No 1 G2 = Group No 2 H3 = Hedge No 3

1 Photo 1

MN = Measured North:

Canopy spreads are sometimes measured to an approximate N defined by site features. Often more accurate, especially where rows of trees are not aligned N-S or E-W.

Overview

It is proposed to extend the rear terrace and construct a new garage to the South of the dwelling, as indicated on the drawings in Appendix 4. The existing layout is indicated in black, the structures to be demolished are indicated in blue, and the footprint of the proposed layout is indicated in red.

The table below summarises the potential impact on trees due to various activities.

Activity	Trees Potentially Affected
Tree Removal: Retention Category A	None
Tree Removal: Retention Category B	None
Tree Removal: Retention Category C	T5, T6, the 4m tall acer and the 5m tall apple.
Tree Removal: Retention Category U	None
Tree Pruning	None
RPA: Garage Foundations	T1, T3, T7 and T8
RPA: Air Source Heat Pump	T1 and T8
RPA: Timber Fence Foundations	T1, T7 and T8
RPA: Terrace Extension	G18 and T19
RPA: New Hard Surface	None
RPA: Underground Services	None Anticipated
RPA: Change of Ground Levels	None
RPA: Soil Compaction	Trees adjacent the construction area (preventable by installing tree protection measures)

Other potentially damaging activities often associated with construction sites include demolition or the careless use of plant machinery, hazardous materials, or fires. All of the above potential impacts are considered in detail throughout this Section.

Tree Removal

To enable the development, it is proposed to remove four Retention Category C trees. The trees to be removed are specified in the above table.

None of these trees are considered to have significant landscape value so the impact on local amenity levels shall be minimal.

Tree Pruning

The retained tree canopies are sufficiently far from proposed building works and high over access routes so that they should not be impacted by construction activity. Consequently, no pruning works are required to enable the build.

Impact of Foundations

The table below assesses the impact of proposed foundations in Root Protection Areas:

Tree No	Nature of Foundation	Portion of RPA	Proposed Mitigation
T1 and T8	Heat Pump	Circa 3%	None (impact shall be minimal)
G18 and T19	Terrace Extension	Circa 5%	Hand-Dig Method • In the direction of the trees, excavation not to exceed 250mm beyond the build-line. • Hand tools to be used to a depth of 600mm. • Plant machinery may be used at deeper depths. • Operation to be supervised by the project arborist. • Exposed roots over 25mm diameter shall be retained and protected with damp hessian if practicable, else pruned by the arborist.
T1, T3, T7 and T8	Garage	<15%	Shallow Raft or Beam Foundation Method • In the direction of the trees, excavation is not to exceed 250mm beyond the build-line. • Excavation depth for raft or beam not to exceed 300mm. • Hand tools to be used to excavate. • Excavation to be supervised by the project arborist. • Exposed roots over 25mm diameter shall be retained and protected with damp hessian if practicable, else pruned by the arborist. • RC Raft or beam installed. This may be supported by narrow diameter piles (max 300mm diameter). • Trial pits excavated to determine pile locations. All roots over 25mm diameter to be retained intact and pile relocated.
T1, T7 and T8	Timber Fence	Circa 1%	Trial Pit and Post Hole • Post holes not to exceed 400mm x 400mm (unlimited depth). • Excavation for the post holes should be undertaken using hand tools. • Roots in excess of 25mm should be retained, and the post hole relocated. • Smaller roots to be neatly pruned. • Post hole to be sleeved with heavy-duty bin liners to prevent leaching of cement into the soil.

These measures are in accordance with industry best practices[4] and shall ensure minimal impact on roots.

Demolition Activities

Care is required to avoid damaging trees when removing adjacent structures. Structures must be demolished away from stems and in a manner that doesn't damage branches. Removal of underground foundations requires extra special care to avoid root damage. During the implementation of this project, the following activities require special care:

- Removal of the raised flowerbeds close to G18 – T20.
- Removal of the wall close to T7.

Impact of Retained Trees on the Development

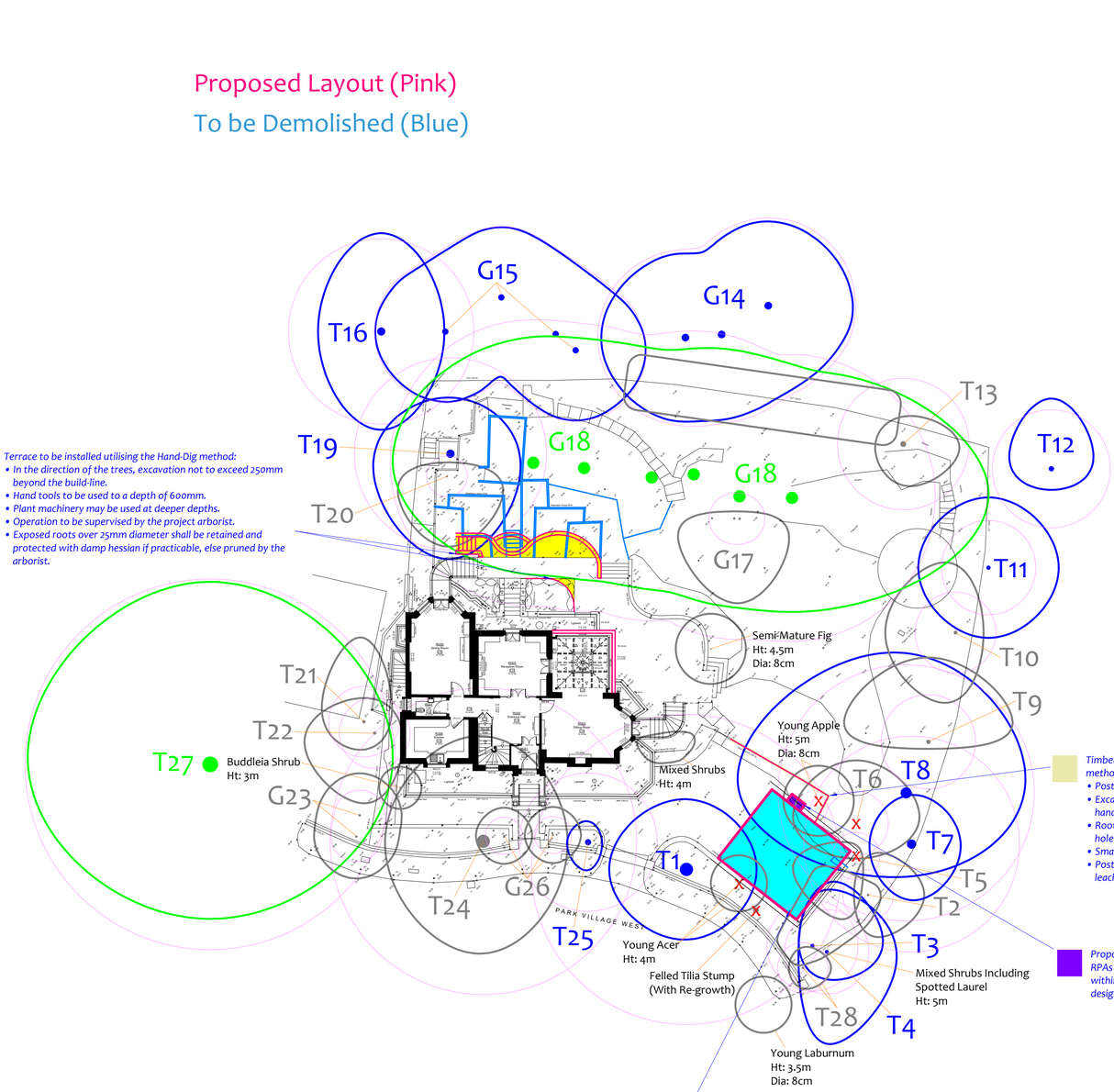
Adequate space has been allowed between retained trees and the proposal. Consequently, the proposal shall not result in increased pressure to remove or overly prune any of the retained trees.

The garage is not considered to be a residential living space, so the shade cast by trees is not considered relevant from a planning perspective.

The foundations and any new surfaces should be designed to accommodate all potential impacts due to future tree-rooting activity. These include potential vegetation-related subsidence, vegetation-related heave, and lifting of surfaces / light structures due to direct root pressure.

Arboricultural Method Statement

BS 5837 recommends that a detailed methodology is agreed upon in the form of an Arboricultural Method Statement, which shall ensure that trees are well protected during the construction phase. This should detail all tree protection measures and limitations on construction activity. All of the issues raised within this Impact Assessment should be covered by the Method Statement.



Tree Ref.	Species	Height (m)	Root Protection Area Radius (m)	m²	Square (m)
T1	London Plane	21	11.0	383	19.6
T2	Honey-locust	10	1.8	10	3.2
T3	Honey-locust	15	3.2	33	5.7
T4	Honey-locust	15	3.0	28	5.3
T5	New Zealand Broadleaf	4.5	1.7	9	3.0
T6	Purple Plum	6	2.3	16	4.0
T7	Lime	16	7.7	185	13.6
T8	London Plane	22	9.1	261	16.2
T9	Cherry	8	3.4	35	6.0
T10	Portuguese Laurel	6	2.9	26	5.1
T11	Hornbeam	10	3.4	35	6.0
T12	Cherry	11	4.2	55	7.4
T13	Lime	14	4.7	69	8.3
G14	Sycamore	13	6.2	122	11.1
G15	Sycamore	13	5.0	80	8.9
T16	Sycamore	13	6.6	137	11.7
G17	Silver Birch	8	1.8	10	3.2
G18	London Plane	25	10.2	327	18.1
T19	Sycamore	10	6.8	147	12.1
T20	Cotoneaster	4.5	1.4	7	2.6
T21	Cotoneaster	6	2.5	20	4.5
T22	Cherry	9.5	2.5	20	4.5
G23	Mixed	5	1.8	10	3.2
T24	Oak	16	10.9	375	19.4
T25	Lime	14	4.9	76	8.7
G26	Japanese Maple	5	1.3	5	2.3
T27	London Plane	28	13.2	547	23.4
T28	Hawthorn	6.5	1.8	10	3.2

Drawing No: CCL 11795 / IAP Rev: 1
Title: Impact Assessment Plan
Site: 10 Park Village West NW1 4AE
Scale: 1:200 Paper Size: A1

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Tree Retention Categories
Stems & canopies shown

Category A tree — Trees of high quality with an estimated life expectancy of 40+ years. Usually large trees with significant presence or smaller trees with excellent form. Retention of these trees is highly desirable.

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Category C tree — Unremarkable trees of low quality and merit. Individual specimens are not considered to be a material planning consideration.

Category U tree — Trees unsuitable for retention due to their very poor condition.

Impact Assessment Plan

Status: Final - for submission

BS 5837 Root Protection Area (radius = 12xstem diameter)

Root Protection Area needing amendment due to site conditions, e.g. presence of exising road or building.

Root Protection Area having been amended to account for for site conditions

T1 = Tree No 1 G2 = Group No 2 H3 = Hedge No 3

X — Tree to be removed to facilitate the proposal

X — Tree to be removed due to its low quality

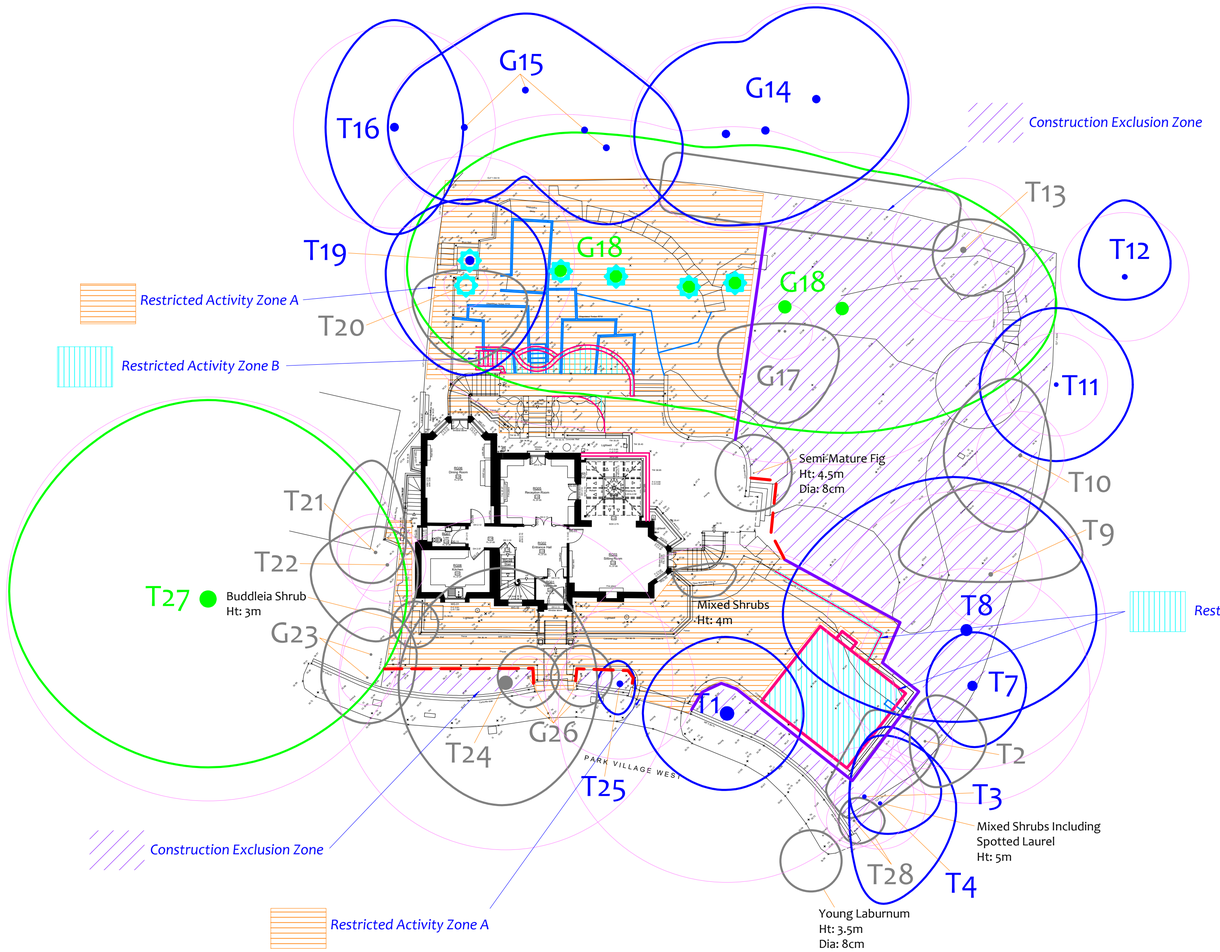
Proposed pruning

MN = Measured North:

Canopy spreads are sometimes measured to an approximate N defined by site features. Often more accurate, especially where rows of trees are not aligned N-S or E-W.

Proposed Layout (Pink)

To be Demolished (Blue)

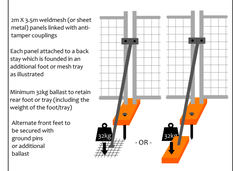


Tree Protection Plan

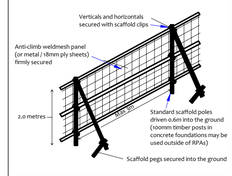
Tree Protection Barriers:

	Fixed protective barrier: The 'In-Ground System' or the 'Backstay System'. To remain in place for all construction activity		Construction Exclusion Zone Stem protected to a height of 2.5m with thick cloth & wire
			Orange Barrier Mesh Fencing. Ht 1m, on steel fencing pins and wooden posts To remain in place throughout all construction activity

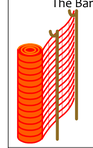
The 'Back Stay System'



The 'In-Ground' System



The Barrier Mesh System



High visibility plastic safety fencing, 1m high, minimum grade 140g/m2, supported on steel fencing pins located at 2.5m intervals and driven into the ground.

Construction Exclusion Zone

Within this area the following restrictions shall apply:

No excavation or land regrading whatsoever.
No storage of materials, rubble, soil or spoil.
No fires within the exclusion zone or within 10m of any tree canopy.
No site cabins or other temporary structures.
No discahrge of polluted water, cement or chemicals of any kind.
No use of any machinery, or passage or parking of vehicles.
No tree works without council consent.

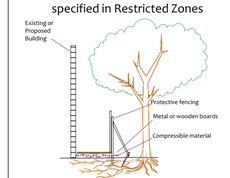
Restricted Activity Zones

Restrictions are detailed within the accompanying Method Statement

Restricted Zone A - Ground Protection Measures & Careful Demolition

Restricted Zone B - Restricted Excavation

Ground Protection where specified in Restricted Zones



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Drawing No:	CCL 11795 / TPP Rev: 1
Title:	Tree Protection Plan (Existing Layout with Proposals Overlaid)
Site:	10 Park Village West NW1 4AE
Scale:	1:200
Paper Size:	A1

0 5 10m

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