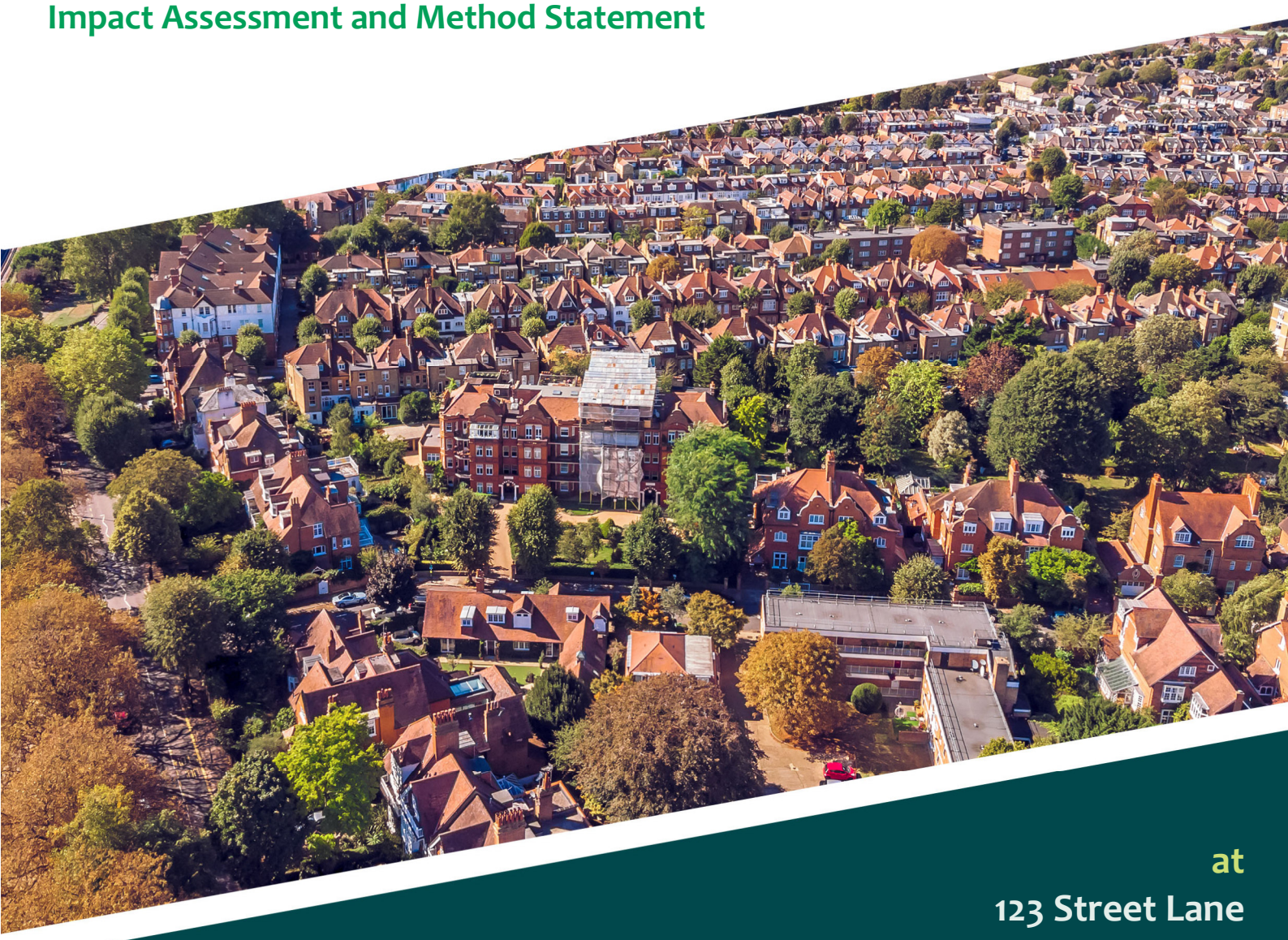
BS 5837
Arboricultural Report

CROWN Tree Consultancy

Branching out through England and Wales

Impact Assessment and Method Statement



at

123 Street Lane
London
Postcode

Dated

May 2025

Contents

1. Introduction

1.1. Instruction

1.1.1. We are instructed by client name to:

- Undertake a Tree Survey to BS 5837 at 123 Street Lane 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 Heads-of-Terms Tree Protection Plan and Arboricultural Method Statement specifying how the retained trees will be protected from accidental damage by demolition or construction activity.
- Produce a Tree Planting Scheme specifying trees proposed as mitigation for tree removal.

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. A planting schedule and maintenance program are also specified to ensure continued tree cover and improved biodiversity.

1.2.3. The accompanying Arboricultural Method Statement specifies how the trees shall be protected from accidental damage by demolition and construction activities. It is designed to be enforceable and may be conditioned upon the granting of planning permission.

1.2.4. 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 the project architect and studied topographical surveys and projected ground levels to attain an adequate understanding of the project to enable us to carry out an accurate assessment of the proposals and to specify suitable tree protection measures.

1.4. Author

1.4.1. This report was compiled by Emma Hoyle FDSc (Arboriculture), ED (Forestry & Arboriculture), M. Arbor. A. Emma's resumé can be found in Appendix 3.

2. The Survey

2.1.1. A visual ground-level assessment of all trees was undertaken on the 29th November 2024 by Carl Lothian. No climbed inspections or specialist decay detection were undertaken.

2.2. Methodology

2.2.1. 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.

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

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

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

2.2.5. 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.

2.2.6. Finally, a *Retention Category* was 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

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

2.3. Survey Extent

2.3.1. 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.

2.4. Summary of Observations

2.4.1. Number 123 Street Lane is a semi-detached, residential property. Vehicular access leads onto a driveway at the front of the dwelling from the east.

2.4.2. Within the garden grow three Retention Category C trees (T1, T2 and T5) and three Retention Category U trees (T3, T4 and T6).

2.4.3. In an adjacent garden to the northwest is a Retention Category C Pyracantha (T7) and a Retention Category B Cherry (T8). The roots of these trees may extend into the site.

2.4.4. Within the adjacent public footway is a large Retention Category A London Plane (T9).

2.4.5. 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 in order to maintain the trees in an acceptable condition:

3.1.2. Trees T3, T4 and T6 are in a poor condition and are recommended for removal to prevent tree or limb failure. These works should be prioritised as indicated on the Tree Data Schedule.

3.1.3. 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. **Where funds permit, works should be undertaken sooner, though it is not recommended that the timescales below are extended.**

Work Priority	Definition	Tree Number
Urgent	As soon as possible	None
Very High	Within 1 Month	None
High	Within 3 Months	None
Moderate	Within 1 year	T3, T4 and T6
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	T9
1.5	T6
3	T1, T2, T5, T7 and T8

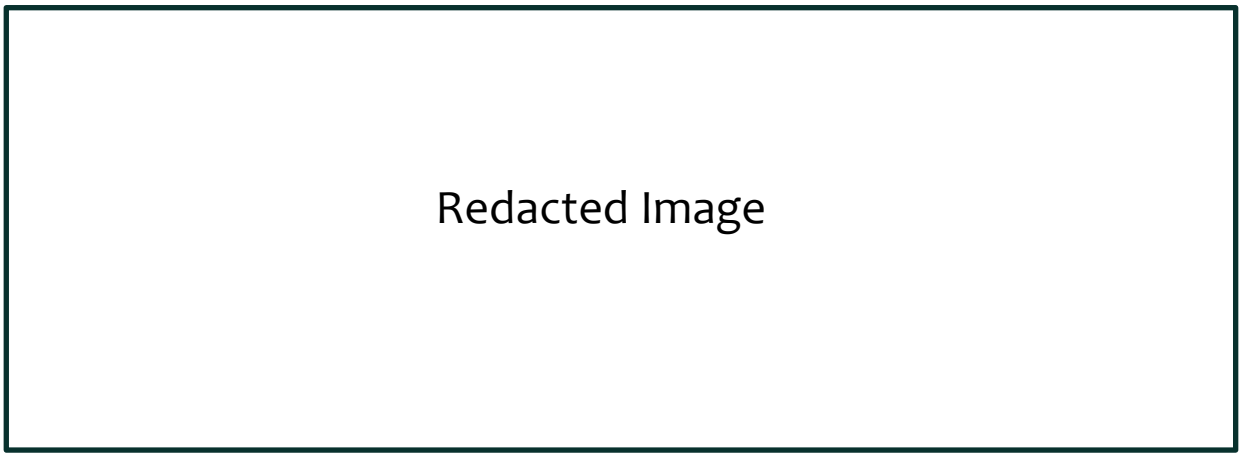
3.2.3. The trees should be inspected sooner if there is a noticeable decline in their condition or following extreme weather events.

4. 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.

4.1. Desktop Research

4.1.1. On the 30th November 2024, we accessed the local authority website. A screenshot is produced below:



4.1.2. This indicates that:

- The site is not within a conservation area.
- There are no tree preservation orders affecting trees within the site.
- There are no tree preservation orders on trees immediately adjacent to the site.

4.2. Felling Licences

4.2.1. Felling licences issued by the Forestry Commission are sometimes required before removing trees. However, these licenses are aimed toward woodland and forestry management. Felling licences are NOT required for any of the following:

- Lopping, topping or pollarding.
- Removal of small trees (stem diameter less than 8cm) or fruit trees.
- Works to any trees growing within domestic gardens, orchards, or the Inner London boroughs.
- Operations involving less than five cubic meters of timber in any quarter year.
- Thinning and understorey clearing operations.
- Dangerous trees, nuisance trees, some diseased trees.
- Where removal is required to enable a fully approved development.

4.2.2. More detailed guidance can be found at https://www.gov.uk/government/publications/tree-felling-getting-permission

4.2.3. Hence, a felling license will not be required for any tree removal if the development receives approval.

[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.

4.3. Species Present – Additional Information

4.3.1. The table below contains general information about the tree *species* (rather than the actual tree *specimens*) included in the survey. Its purpose is to assist readers who are unfamiliar with the characteristics of the various species.

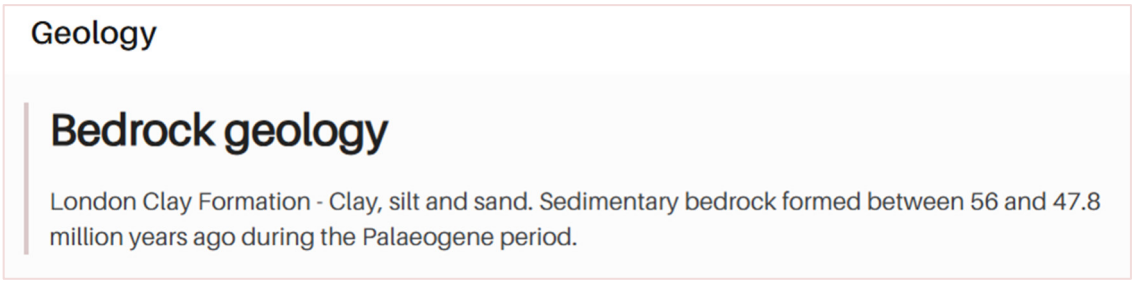
Species	Typical Height at Maturity (m)	Typical Canopy Spread at Maturity (m)	General Notes
Cherry	8	10	Many cultivars available, bred for their abundance of spring flowers, edible cherries or ornamental bark (e.g. Tibetan Cherry). Usually white or pink flowering, often in very early spring. Usually with a single bole to around 2.5m and multi-stemmed thereafter. Most varieties have excellent autumn colour.
Elder	8	8	Deciduous tree native throughout Europe, N Africa and W Asia. Untidy, shrubby habit. Very fast growing. Covered in dense creamy flowers and deep red berries which are excellent for making wine. Visit http://www.pfaf.org/user/Plant.aspx?LatinName=Sambucus+nigra or more info.
Laburnum	9	10	Deciduous tree native to Southern and Central Europe. Garden tree prized for its small stature and abundance of hanging yellow flowers in spring. Poisonous. Liable to split at forks. Visit http://www.pfaf.org/user/Plant.aspx?LatinName=Laburnum+anagyroides for more info
London Plane	30	20	Deciduous tree arisen in cultivation probably as a cross between the Oriental Plane and the American Buttonwood. Has attractive bark which peels off in small plates leaving a multicoloured flecked pattern. Very common as a street tree, especially throughout London where it dominates the streetscape. Often managed as a pollard in order to constrain its large size to more manageable proportions, especially where there are clay soils and adjacent buildings. Somewhat susceptible to the decay fungus Innonotus hispidus. Visit http://en.wikipedia.org/wiki/Platanus for more info.
Plum	6	8	Small fruit tree. Many varieties available. Usually white flowering. Fruits may be green, yellow, red or dark purple. Often quite an untidy looking tree.
Amelanchier	6	4	Delicate small deciduous tree / shrub also known as Shadbush or Serviceberry. Provides good spring flowers, early red berries (much loved by birds who may strip the tree of fruit before it ripens) and splendid autumn colour. Also attractive when the buds are about to burst. Visit http://www.pfaf.org/user/Plant.aspx?LatinName=Amelanchier+lamarckii for more info.

The figures quoted regarding typical height and canopy spread should be treated as approximate. Actual heights and spreads vary according to several environmental factors such as soil conditions, climate, and the presence of competing vegetation. The figures quoted are not the maximum dimensions that the species may attain.

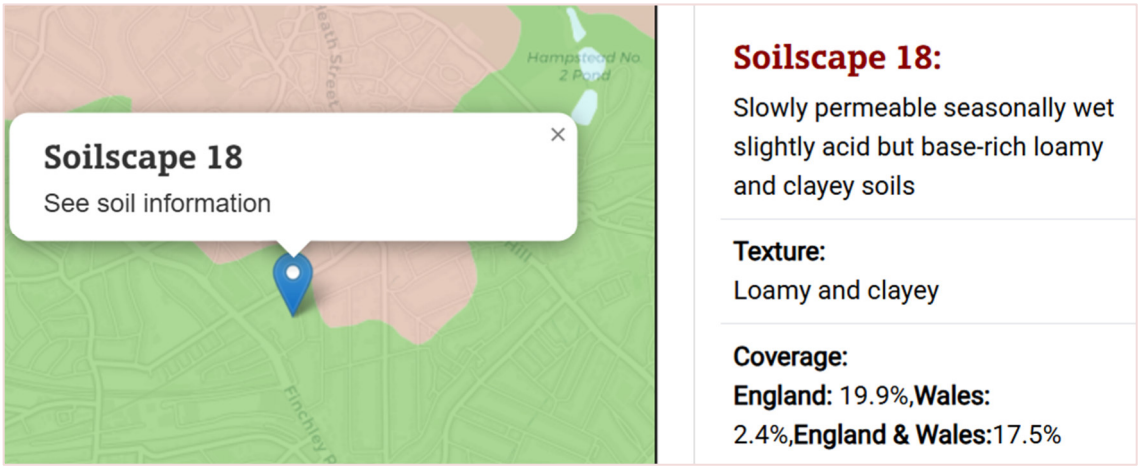
5. Local Geology and Soils

5.1. Desktop Research

5.1.1. Desktop research into local geology based on the postcode obtained the following results:



Source: https://geologyviewer.bgs.ac.uk/?_ga=2.100849601.17774785.1660229567-1737936254.1660229567



Source http://www.landis.org.uk/soilscapes/

5.2. Site Investigations

5.2.1. We are unaware of any specific investigations into soil properties at the site.

5.3. Conclusion and Relevance

5.3.1. Based on the information reproduced above, local soils are assumed to have a loamy and clayey texture.

5.3.2. Loamy soils contain a mixture of clay and sand. Soil compaction may occur due to vehicular activity on building sites, so ground protection is recommended wherever vehicles operate. Most tree species will grow well in loamy soils.

5.3.3. Clay soils may be especially prone to compaction and slurrying caused by general construction activity. Both of which significantly impair root function. This must be guarded against using boards to protect any soils where roots are growing. When planting new trees, species that can tolerate heavy soils should be selected.

5.3.4. Trees of most species are less likely to root deeply in clay soils. Any new surfacing over tree roots should avoid deep excavation and have good load-spreading properties.

6. Arboricultural Impact Assessment

6.1. Overview

6.1.1. It is proposed to extend the existing dwelling and install a new garden patio as indicated on the drawings in Appendix 4. The existing layout is indicated in black, & the footprint of the proposed layout is indicated in pink.

6.1.2. 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	Small shrubs and mixed young trees
Tree Removal: Retention Category U	T3, T4 and T6
Tree Pruning	T7
RPA: Building Foundations	None
RPA: New Hard Surface	T8
RPA: Replace Existing Hard Surface	T2
RPA: Underground Services	None
RPA: Change of Ground Levels	T8
RPA: Soil Compaction	Trees adjacent the construction area (preventable by installing tree protection measures)

6.1.1. 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.

6.1.2. The accompanying Arboricultural Method Statement (duplicated in Appendix 4) specifies the measures proposed to minimise all possible potential risks of damage to the retained trees.

6.2. Tree Removal

6.2.1. All trees to be removed are indicated on the Impact Assessment Plan and are listed below:

6.2.2. **Retention Category A:** It is proposed to retain the Retention Category A tree.

6.2.3. **Retention Category B:** It is proposed to retain the Retention Category B tree.

6.2.4. **Retention Category C:** It is proposed to retain all significant Retention Category C trees. Only small shrubs and mixed young trees require removal to facilitate the proposal. These are small specimens located within a residential garden. They are not considered to have any landscape value and their removal shall not have a significant impact on the visual amenity of the locality. Consequently, they are not considered to be a material planning consideration.

6.2.5. **Retention Category U:** It is proposed to remove Retention Category U trees T3, T4 and T6. Trees within this category are recommended for removal regardless of development proposals. Consequently, the removal of Category U trees is not considered to be a direct impact of the development.

6.2.6. None of the trees to be removed are considered worthy of special protection. Details specific to each tree can also be found in the Tree Data Schedule.

6.3. Tree Pruning

6.3.1. It is proposed to trim the overhanging foliage of T7 (a Pyracantha) back towards the boundary. Such pruning shall increase clearance for construction activity and demolition of the shed. This minimal pruning of a Retention Category C Pyracantha is not considered to be a material planning consideration.

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

6.4. Mitigation Planting

6.4.1. To maintain improve levels of amenity and biodiversity, it is proposed to plant three new trees. The proposed species, their indicative location and a planting specification can be found on the accompanying Tree Planting Plan in Appendix 4.

6.5. Impact of Foundations

6.5.1. No new building foundations are proposed within the Root Protection Area of any retained tree. Consequently, no restrictions on foundation design or implementation are considered necessary from an arboricultural perspective.

6.6. Impact of Surfacing

6.6.1. The table below assesses the impact of proposed surfacing in Root Protection Areas:

Tree No	Nature of Surfacing	Portion of RPA	Proposed Mitigation
T2	Existing driveway (hard surface) replaced with soft planting.	>5%	n/a (the impact shall be beneficial)
T2	Existing driveway to be replaced with a new hard surface	<20%	• No excavation to occur below the existing surface and its associated sub-base. • Hand tools only used for removal of the existing surface. • Excavation to be supervised by the project arborist. • New surface to be permeable.
T8	Soft surface replaced with new patio.	4%	• Excavation to be undertaken using hand tools only. • Excavation limited to the footprint of the new patio.

6.6.2. These measures shall ensure minimal impact on roots.

6.7. Underground Services

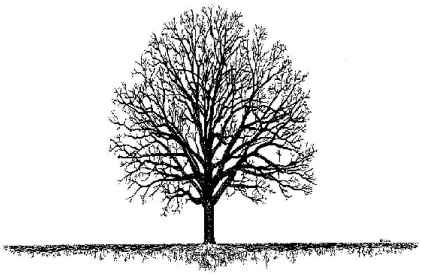
6.7.1. No new underground services are to be installed through any Root Protection Areas.

6.8. Changes in Ground Levels

6.8.1. Ground levels are to be lowered slightly where the new patio is to be installed. So long as excavation is limited to the footprint of the proposed patio and any roots encountered are neatly severed, impact on T8 shall be minimal.

6.8.2. No further changes of ground levels in excess of 100mm within Root Protection Areas shall be made without consulting the arborist and, if necessary, gaining approval from the local authority.

6.9. Soil Compaction



6.9.1. 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.

6.9.2. 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.

6.9.3. 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.

6.10. Demolition Activities

6.10.1. All tree and ground protection measures as specified in the accompanying Arboricultural Method Statement should be installed before any demolition or construction works occur.

6.11. Waste and Materials Storage

6.11.1. 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.

6.11.2. 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.

6.12. Cabins and Site Facilities

6.12.1. 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.

6.13. Boundary Treatments

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

6.14. Impact of Retained Trees on the Development

6.14.1. 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.

6.15. Arboricultural Method Statement

6.15.1. The accompanying Arboricultural Method Statement specifies restrictions on construction activities to ensure minimal impact on retained trees. All of the potential impacts noted in this section are accounted for in the Arboricultural Method Statement. So long as these protection measures are fully implemented, there shall be no long-term detrimental impact on the health of the adjacent trees.

7. Photographs

Refer also to the Tree Constraints Plan for photo locations.

Photo 1.

Photo 2.

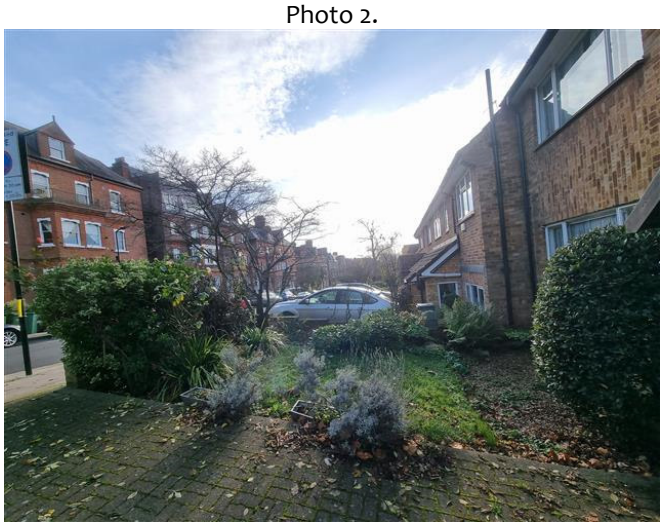


Photo 3.

Photo 4.

Photo 5.

Photo 6.

Photo 7.

Photo 8.

Photo 9.

Photo 10.

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

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	Notable tree with features associated with atypically advanced age (such as unusually large girth, crown retrenchment or significant stem decay). Veteran trees have a high habitat value and require a Buffer Zone / RPA with a radius of at least 15x stem diameter and extending at least 5m beyond the dripline. Any natural or semi-natural habitats within the buffer zone should be well protected and retained (or improved) as part of the development. Lawns and cultivated gardens should be discouraged. See https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions
Over Mature	Tree with declining health but not worthy of veteran status.

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.

Where funds permit, works should be undertaken sooner, though **it is not recommended that the timescales above are extended**.

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 that is unlikely to develop into a major defect.

General Glossary

A general glossary of arboricultural terms may be found on our website at
https://www.crowntrees.co.uk/crown-tree-consultancy/glossary-tree-terms/

Appendix 3: Arborist's Qualifications

Qualifications & Experience of Ivan Button N.C.H. (Arb), FDSc (Arb), BSc (Hons), P.G.C.E., M. Arbor. A.

Early Career

Before and whilst attending college and university (1983 – 1990) Ivan worked as a gardener and also within the building industry where he received training in a broad range of building skills. In 1989 Ivan obtained a BSc (Hons) in psychology at Leeds University followed by a P.G.C.E at The University of Wales in 1990. After one year of teaching, he returned to the construction activity and worked on new builds, refurbishments and groundworks until 1995.

Arboriculture

In 1996 Ivan obtained a NCH (Arboriculture) at the University of Lincoln and became a member of the Arboricultural Association. He then received further arboricultural consultancy training with Peter Wynn Associates for one year before establishing a tree surgery and landscaping business in 1998.

In 2005 Ivan commenced full time employment with JCA Ltd, an Arboricultural Association registered consultancy where he soon adopted a senior role responsible for five consultants. During this time, he obtained a FDSc (Arboriculture) at the University of Lancashire, which he passed with distinction.

Since 2013, Ivan has been the Director and Principal Consultant of Crown Consultants Ltd which provides Arboricultural Reports for the purposes of Development, Safety, Management, Mortgage, Subsidence, Mitigation and Litigation. In 2015, he acted as tree officer for Barnsley Council and has since provided consultancy services to other local authorities.

He has obtained the LANTRA *Professional Tree Inspector* Qualification promoted by the Arboricultural Association and recognised as appropriate for all levels of tree inspection.

He is a long-standing member of the Consulting Arborist Society and has obtained CAS accreditations for Tree Inspection, Planning, Mortgage Reports (Subsidence Risk Assessment) and for his expert witness work.

At the time of writing, he has written approximately sixty CPR-compliant reports (civil and criminal) covering a range of subjects including Subsidence Damage, Personal Injury, Direct Root Damage, Professional Negligence, TPO Breaches.

Ivan is a long-standing professional member of the Arboricultural Association and the International Society of Arboriculture.

He is a licensed Quantified Tree Risk Assessment user.

Ivan has undertaken Bond Solon expert witness training and has obtained the University of Cardiff Expert Witness certificate. He has given written and oral evidence.

Between 2008 and 2017 he was registered as a Sweet and Maxwell Checked Expert Witness.

Qualifications & Experience of Emma Hoyle FDSc (Arboriculture), ED (Forestry & Arboriculture), M. Arbor. A.

Emma is a qualified Arboricultural Consultant educated to Level 5 in Arboriculture at Askham Bryan College, is a professional member of the Arboricultural Association and is a LANTRA-accredited *Professional Tree Inspector*. She has worked for Crown Consultants since 2015 and has since written numerous reports relating to all aspects of arboriculture including; planning and development, vegetation-related subsidence, tree preservation orders and tree risk assessment. Emma regularly attends seminars and events in order to keep abreast with current knowledge and best practice in Arboriculture.

Prior to becoming an arboricultural consultant, Emma worked for two reputable tree surgery firms from 2008 and became an NPTC Qualified tree surgeon after completing a Level 3 Extended Diploma in Forestry and Arboriculture at Askham Bryan College. Emma also has experience in other areas of arboriculture such as forest clearance, tree planting, tree maintenance and landscaping.

Qualifications & Experience of Joe Taylor – M. Arbor. A, 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.

Qualifications & Experience of Sarah Alway – M. Arbor. A, FdSc (Arboriculture).

Sarah obtained an FdSc in Arboriculture and Tree Management at the University of Central Lancashire in 2021 which she passed with distinction. She is a member of the Arboricultural Association and regularly attends seminars and events to keep abreast of developments in industry knowledge and current best practice in Arboriculture.
Sarah has been working closely alongside the principal consultant and managing director of Crown Consultants since the company was established in 2008. During that time, she has gained experience in all aspects of the business such as reporting, CAD, administration, accounting, and business management. Additionally, she has assisted consultants with numerous reports relating to all aspects of arboriculture including BS:5837 planning and development, vegetation-related subsidence, tree preservation orders, and tree risk assessment. She has also assisted with tree surveys for several years and since qualifying has been undertaking her own surveys.
In addition to working for Crown Tree Consultants Ltd producing reports, Sarah also likes to expand her knowledge of the wider Arboricultural industry by training in other areas of tree services and management. She has recently completed a training programme in tree-planting and volunteer management, including education in tree planting and natural dam building to help mitigate against the risks of heavy flooding (Natural Flood Management). Sarah also regularly volunteers with two local climate action groups who plant trees and build leaky dams.
As Sarah's career develops, she intends on focusing her attention on sustainable innovation in arboriculture and how green urban spaces could pave the way for the forests of the future.

Qualifications & Experience of Carl Lothian – BSc (Hons) (Arboriculture).

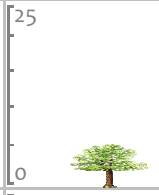
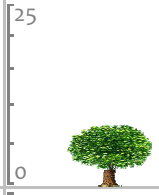
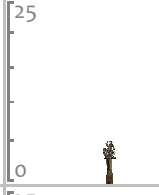
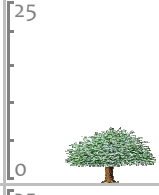
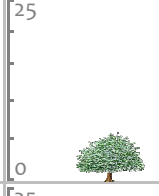
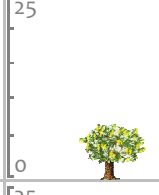
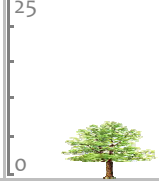
Carl began his career undertaking a Level 3 extended diploma in arboriculture and forestry at Merrist Wood College in 2015. Upon completion of his diploma, Carl worked with several tree surgery firms completing a range of arboricultural works. In 2018 Carl began his BSc (Hons) in arboriculture and urban forestry, graduating with a first-class degree and attaining the Institute of Chartered Foresters student of the year award.

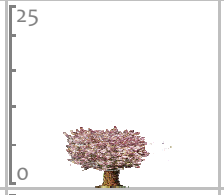
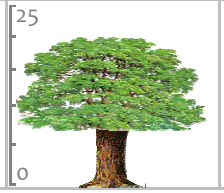
After graduating, Carl worked as a TreeRadar technician where he carried out tree root and decay surveys with specialist ground-penetrating radar equipment. During this time Carl was fortunate enough to work at prestigious sites, such as the Palace of Westminster and the National Maritime Museum.

Whilst working at Crown, Carl has undertaken a range of tree surveys and written reports relating to development, safety, subsidence, and decay detection. Carl is a professional member of the Consulting Arborist Society and an associate member of the Institute of Chartered Foresters.

Appendix 4: Tree Data Schedule and Drawings

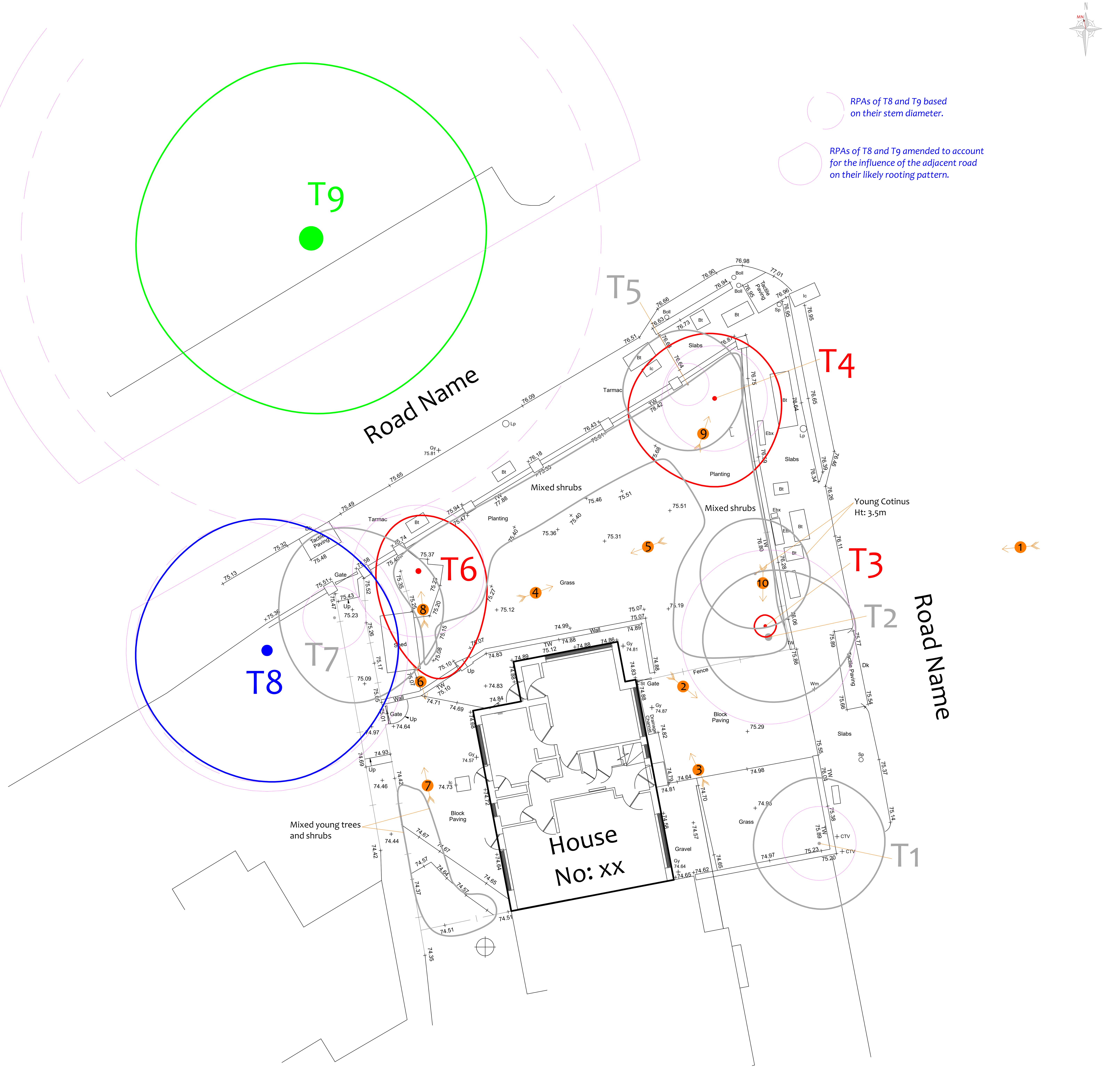
The Tree Data Schedule and any drawings accompanying this report follow this page. They are also provided as separate documents for ease of printing and screen viewing.

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	Young **Amelanchier** Amelanchier sp.	4.5	1.5	14	N 3, W 3, E 3, S 3		Position: Situated within the front garden. Form: Multiple-stemmed specimen. History: No evidence of significant pruning. **Defects: No significant defects observed.** Other: Recorded stem diameter is equivalent for 3 stems at 8cm and one stem at 9cm diameter.	No action required.	n/a / 3	Moderate / Good / Good	Moderate / 40+ / C
T2	Mature **Elder** Sambucus nigra.	7	2	33	N 3, W 3, E 4, S 3		Form: Multi-stemmed at 1m with a narrow, upright habit. History: Previously topped at 3m. **Defects: No significant defects observed.** Other: Recorded stem diameter is equivalent for 4 stems (22cm, 20cm, 11cm and 9cm).	No action required.	n/a / 3	Moderate / Good / Fair	Low / 40+ / C
T3	Semi-Mature **Cherry** Prunus sp.	3.5	3.5	15	N 0.5, W 0.5, E 0.5, S 0.5		Form: Dead tree.	Remove.	Moderate / N/A	Dead / **Dead** / **Dead**	Dead / Dead / **U**
T4	Semi-Mature **Plum** Prunus sp.	6	2.5	20	N 3, W 4, E 3, S 4		Form: Multiple stemmed and leaning with a slightly unbalanced crown. History: Two significant stems previously removed. **Defects: Major decay to base.** Other: Recorded stem diameter is equivalent for 2 stems (18cm and 8cm).	Remove.	Moderate / N/A	Moderate / Fair / **Very Poor**	Low / <10 / **U**
T5	Young **Plum** Prunus sp.	5	0.5	8	N 2.5, W 3, E 2.5, S 3		Form: Multi-stemmed at ground level with a slightly unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects observed.**	No action required.	n/a / 3	Moderate / Good / Good	Low / 40+ / C
T6	Early-Mature **Laburnum** Laburnum anagyroides.	6.5	1.5	25	N 2.5, W 2, E 3, S 5		Form: Twin-stemmed at ground level and leaning with a poorly formed crown. History: No evidence of significant pruning. **Defects: Evidence of decay to stems.** Other: Recorded stem diameter is equivalent for 3 stems (17cm, 16cm and 8cm).	Remove or reduce overall height to 3.5m above ground level and monitor.	Moderate / 1.5	Moderate / Fair / Poor	Low / <10 / **U**
T7	Semi-Mature **Firethorn** Pyracantha sp.	6.5	2	12	N 4, W 2.5, E 5, S 4		Position: Situated on third party land. Form: Twin-stemmed at ground level with an unbalanced crown. History: Previously topped at 3m. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated. Recorded stem diameter is equivalent for 2 stems estimated at 9cm and 8cm.	No action required.	n/a / 3	Moderate / Good / Good	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)		Vigour / Physiological Condition / Structural Condition	Amenity Value / Life Expectancy (yrs) / Retention Category
								Priority	Inspect Freq (yrs)		
T8	Early-Mature **Cherry** Prunus sp.	8	2	50	N 6, W 6, E 6, S 6		Position: Situated on third party land. Form: Multi-stemmed at 1m with a balanced crown. **Defects: No significant defects observed.** Other: Recorded stem diameter is equivalent for 3 stems at 20cm, 30cm and 35cm. Limited inspection, dimensions estimated.	No action required. n/a	3	Moderate Good Fair	Moderate 40+ **B**
T9	Mature **London Plane** Platanus x hispanica.	20	8	110	N 8, W 8, E 8, S 8		Position: Situated on third party land. Form: Multi-stemmed at 5m with a balanced crown. History: Managed by cyclical pollarding, recently pruned. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required. n/a	1	Moderate Good Good	High 40+ **A**

Tree Data Schedule

Reference (G = Group, H = Hedge)	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N / E / S / W	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	Young **Amelanchier** Amelanchier sp.	4.5	1.5	14	3 / 3 / 3 / 3		Position: Situated within the front garden. Form: Multiple-stemmed specimen. History: No evidence of significant pruning. **Defects: No significant defects observed.** Other: Recorded stem diameter is equivalent for 3 stems at 8cm and one stem at 9cm diameter.	No action required.	n/a	3	Moderate	Good	Good	Moderate	40+	C
T2	Mature **Elder** Sambucus nigra.	7	2	33	3 / 4 / 3 / 3		Form: Multi-stemmed at 1m with a narrow, upright habit. History: Previously topped at 3m. **Defects: No significant defects observed.** Other: Recorded stem diameter is equivalent for 4 stems (22cm, 20cm, 11cm and 9cm).	No action required.	n/a	3	Moderate	Good	Fair	Low	40+	C
T3	Semi-Mature **Cherry** Prunus sp.	3.5	3.5	15	0.5 / 0.5 / 0.5 / 0.5		Form: Dead tree.	Remove.	Moderate	N/A	Dead	Dead	Dead	Dead	Dead	U
T4	Semi-Mature **Plum** Prunus sp.	6	2.5	20	3 / 3 / 4 / 4		Form: Multiple stemmed and leaning with a slightly unbalanced crown. History: Two significant stems previously removed. **Defects: Major decay to base.** Other: Recorded stem diameter is equivalent for 2 stems (18cm and 8cm).	Remove.	Moderate	N/A	Moderate	Fair	Very Poor	Low	<10	U
T5	Young **Plum** Prunus sp.	5	0.5	8	2.5 / 2.5 / 3 / 3		Form: Multi-stemmed at ground level with a slightly unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects observed.**	No action required.	n/a	3	Moderate	Good	Good	Low	40+	C
T6	Early-Mature **Laburnum** Laburnum anagyroides.	6.5	1.5	25	2.5 / 3 / 5 / 2		Form: Twin-stemmed at ground level and leaning with a poorly formed crown. History: No evidence of significant pruning. **Defects: Evidence of decay to stems.** Other: Recorded stem diameter is equivalent for 3 stems (17cm, 16cm and 8cm).	Remove or reduce overall height to 3.5m above ground level and monitor.	Moderate	1.5	Moderate	Fair	Poor	Low	<10	U
T7	Semi-Mature **Firethorn** Pyracantha sp.	6.5	2	12	4 / 5 / 4 / 2.5		Position: Situated on third party land. Form: Twin-stemmed at ground level with an unbalanced crown. History: Previously topped at 3m. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated. Recorded stem diameter is equivalent for 2 stems estimated at 9cm and 8cm.	No action required.	n/a	3	Moderate	Good	Good	Low	40+	C
T8	Early-Mature **Cherry** Prunus sp.	8	2	50	6 / 6 / 6 / 6		Position: Situated on third party land. Form: Multi-stemmed at 1m with a balanced crown. **Defects: No significant defects observed.** Other: Recorded stem diameter is equivalent for 3 stems at 20cm, 30cm and 35cm. Limited inspection, dimensions estimated.	No action required.	n/a	3	Moderate	Good	Fair	Moderate	40+	B
T9	Mature **London Plane** Platanus x hispanica.	20	8	110	8 / 8 / 8 / 8		Position: Situated on third party land. Form: Multi-stemmed at 5m with a balanced crown. History: Managed by cyclical pollarding, recently pruned. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required.	n/a	1	Moderate	Good	Good	High	40+	A



Photographs 1 - 4

Photo 1.

Photo 2.

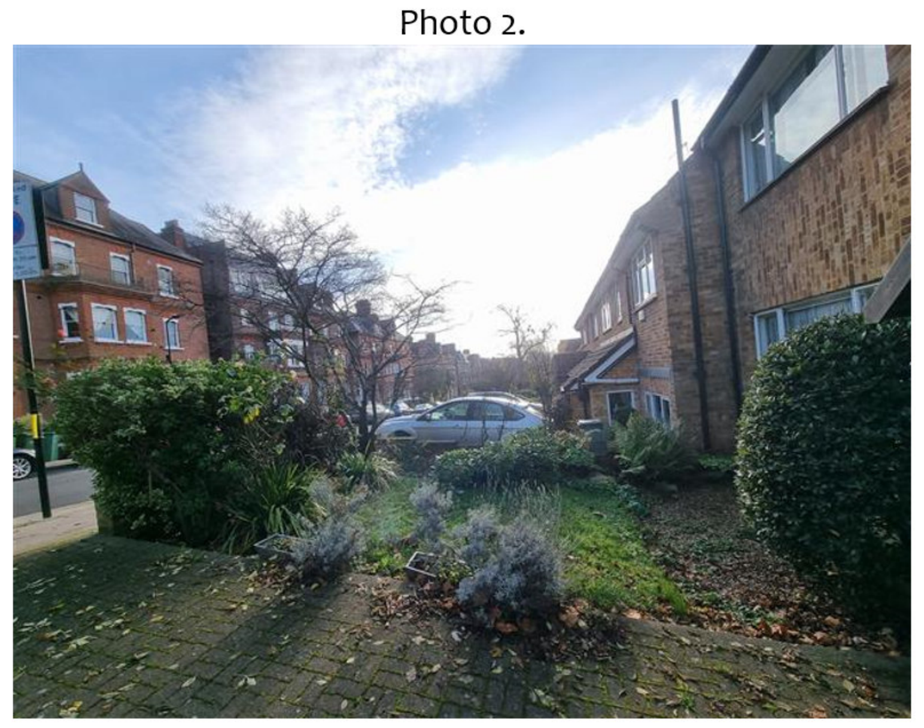


Photo 3.

Photo 4.

Drawing No:	CCL 12xxx / TCP Rev: 1
Title:	Tree Constraints Plan (Existing Layout)
Site:	123 Street Lane London, Postcode
Scale: 1:100	Paper Size: A1

CROWN Tree Consultancy 08000 14 13 30

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.
- Category B tree — Trees of moderate quality with a life expectancy of 20+ years. Usually maturing trees, or younger trees with good form. Retention of these trees is desirable though less than Category A trees
- 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

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.

Tree Ref.	Species	Height (m)	Root Protection Area Radius (m)	m²	Square (m)
T1	Amelanchier	4.5	1.7	9	3.0
T2	Elder	7	4.0	49	7.0
T3	Cherry	3.5	1.8	10	3.2
T4	Plum	6	2.4	18	4.3
T5	Plum	5	1.0	3	1.7
T6	Laburnum	6.5	3.0	28	5.3
T7	Firethorn	6.5	1.4	7	2.6
T8	Cherry	8	6.0	113	10.6
T9	London Plane	20	13.2	547	23.4

Tree Data Schedule

Ref. Category U = Unsuitable 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	Young **Amelanchier** Amelanchier sp.	4.5	1.5	14	3 3 3 3		Position: Situated within the front garden. Form: Multiple-stemmed specimen. History: No evidence of significant pruning. **Defects: No significant defects observed.** Other: Recorded stem diameter is equivalent for 3 stems at 8cm and one stem at 9cm diameter.	No action required. n/a	3	Moderate Good Good	Moderate 40+ C
T2	Mature **Elder** Sambucus nigra.	7	2	33	3 3 3 4		Form: Multi-stemmed at 1m with a narrow, upright habit. History: Previously topped at 3m. **Defects: No significant defects observed.** Other: Recorded stem diameter is equivalent for 4 stems (22cm, 20cm, 11cm and 9cm).	No action required. n/a	3	Moderate Good Fair	Low 40+ C
T3	Semi-Mature **Cherry** Prunus sp.	3.5	3.5	15	0.5 0.5 0.5 0.5		Form: Dead tree.	Remove. Moderate	N/A	Dead **Dead** **Dead**	Dead Dead **U**
T4	Semi-Mature **Plum** Prunus sp.	6	2.5	20	4 3 4 3		Form: Multiple stemmed and leaning with a slightly unbalanced crown. History: Two significant stems previously removed. **Defects: Major decay to base.** Other: Recorded stem diameter is equivalent for 2 stems (18cm and 8cm).	Remove. Moderate	N/A	Moderate Fair **Very Poor**	Low <10 **U**
T5	Young **Plum** Prunus sp.	5	0.5	8	2.5 3 3 2.5		Form: Multi-stemmed at ground level with a slightly unbalanced crown. History: No evidence of significant pruning. **Defects: No significant defects observed.**	No action required. n/a	3	Moderate Good Good	Low 40+ C
T6	Early-Mature **Laburnum** Laburnum anagyroides.	6.5	1.5	25	2.5 2 5 3		Form: Twin-stemmed at ground level and leaning with a poorly formed crown. History: No evidence of significant pruning. **Defects: Evidence of decay to stems.** Other: Recorded stem diameter is equivalent for 3 stems (17cm, 16cm and 8cm).	Remove or reduce overall height to 3.5m above ground level and monitor. Moderate	1-5	Moderate Fair Poor	Low <10 **U**
T7	Semi-Mature **Firethorn** Pyracantha sp.	6.5	2	12	4 2.5 2.5 5		Position: Situated on third party land. Form: Twin-stemmed at ground level with an unbalanced crown. History: Previously topped at 3m. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated. Recorded stem diameter is equivalent for 2 stems estimated at 9cm and 8cm.	No action required. n/a	3	Moderate Good Good	Low 40+ C
T8	Early-Mature **Cherry** Prunus sp.	8	2	50	6 6 6 6		Position: Situated on third party land. Form: Multi-stemmed at 1m with a balanced crown. **Defects: No significant defects observed.** Other: Recorded stem diameter is equivalent for 3 stems at 20cm, 30cm and 35cm. Limited inspection, dimensions estimated.	No action required. n/a	3	Moderate Good Fair	Moderate 40+ B
T9	Mature **London Plane** Platanus x hispanica.	20	8	110	8 8 8 8		Position: Situated on third party land. Form: Multi-stemmed at 5m with a balanced crown. History: Managed by cyclical pollarding, recently pruned. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required. n/a	1	Moderate Good Good	High 40+ A

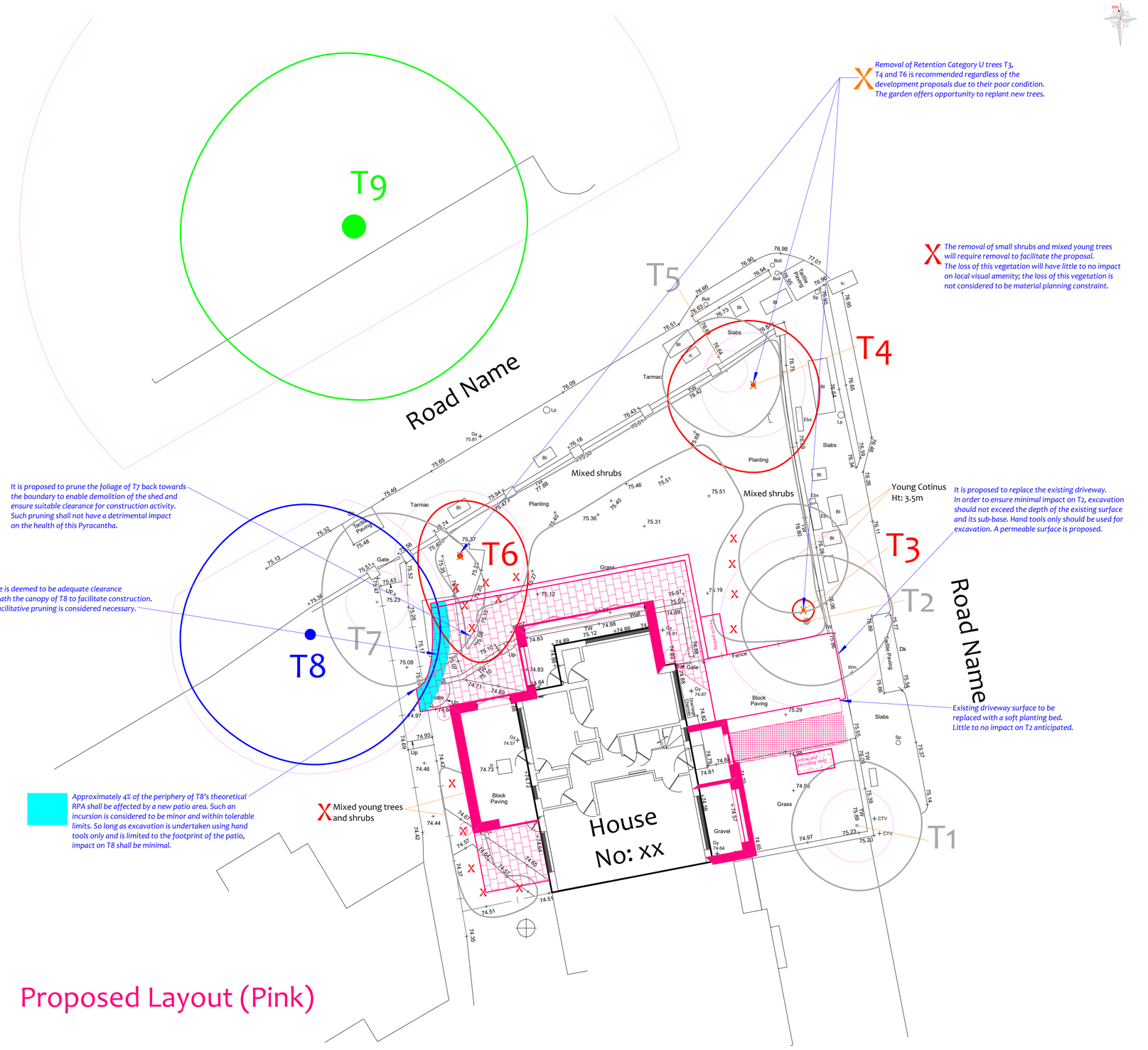
Photographs 1 - 4

Photo 1.

Photo 2.

Photo 3.

Photo 4.



Drawing No:	CCL 12xxx	/ IAP	Rev: 1
Title:	Impact Assessment Plan		
Site:	123 Street Lane, London, Postcode		
Scale:	1:100	Paper Size:	A1

CROWN Tree Consultancy 08000 14 13 30

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.
Category B tree	Trees of moderate quality with a life expectancy of 20+ years. Usually maturing trees, or younger trees with good form. Retention of these trees is desirable though less than Category A trees
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.

Tree Ref.	Species	Height (m)	Root Protection Area Radius (m)	m²	Square (m)
T1	Amelanchier	4.5	1.7	9	3.0
T2	Elder	7	4.0	49	7.0
T3	Cherry	3.5	1.8	10	3.2
T4	Plum	6	2.4	18	4.3
T5	Plum	5	1.0	3	1.7
T6	Laburnum	6.5	3.0	28	5.3
T7	Firethorn	6.5	1.4	7	2.6
T8	Cherry	8	6.0	113	10.6
T9	London Plane	20	13.2	547	23.4

Arboricultural Method Statement

CROWN Tree Consultancy 08000 14 13 30

Site: 123 Street Lane, London, Postcode

Author: Emma Hoyle
FDSc (Arboriculture), ED (Forestry & Arboriculture), M. Arbor. A

Date: May 2025 | Revision: 1 | CCL ref No: 12xxx

Client: Client name / Company

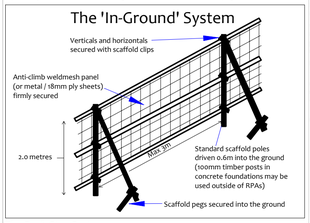
Tree Protection Barriers

The purpose of tree protection barriers is to keep construction activity away from Restricted Activity Zones or Construction Exclusion Zones. They must be appropriate to the nature and proximity of activity within the site. The barriers must be erected prior to the commencement of all activity including demolition, soil stripping and delivery of materials and demolition (except where existing structures require demolition to enable the barriers to be installed). Barrier systems are specified below and are to be installed according to the legend on the Tree Protection Plan.

The In-Ground System

This system will be installed where indicated by a solid purple line on the Tree Protection Plan. It will be robust enough to withstand occasional knocks by plant machinery and, once installed, will remain in place throughout the entire construction phase.

Vertical scaffold poles are driven into the ground, onto which are affixed horizontal scaffold poles and diagonal bracing struts. Weldmesh panels (or similar – e.g. Heras type fencing panels, or 18mm+ plywood boards) are secured to this scaffold framework using sturdy clips e.g. standard scaffold clips. The system is illustrated in the diagram below and is based on BS 5837 guidelines.

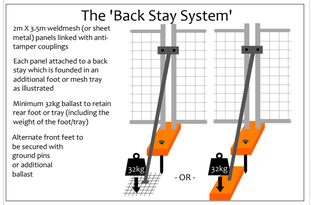


The Back-Stay System

This system will be installed where indicated by a dashed purple line on the Tree Protection Plan. It is more practical over existing hard surfaces or where the fencing needs to be moved to enable permitted activities within a Restricted Activity Zone. This system is able to withstand occasional knocks by machinery and must not be relocated except with the consent of the site manager and the approval of the local authority.

Within this system, weldmesh fencing panels (minimum height 2m) are affixed into rubber or concrete feet and clipped together with anti-tamper couplers. Two couplers should be used, spaced at least 1m apart. Alternate panels will be attached to a diagonal back stay connected to an additional foot or baseplate secured with ground pins or additional ballast. Where ground pins are not used, the total weight of the foot/plate plus ballast must total no less than 25kg.

Where it is not possible to install diagonal struts (such as very close to a hedge) then the front feet will be secured using ground pins or ballast.



Notices

Suitable weather-proof notices are to be displayed to identify tree protection zones. They must state the purpose of the fencing and that it will not be moved, or traversed, other than by authorised personnel.

Removal of Tree Protection Barriers

Removal of protective fencing or ground protection measures will only be done after all major construction work is complete and their removal has been approved by the appointed arborist.

Ground Protection Measures

Within Restricted Activity Zones, soils containing roots may be subject to compaction due to general construction activity (including pedestrian activity and use of plant machinery). In order to minimise compaction, it is proposed to ensure that a suitable load-spreading surface is in place at all times.

Any existing hard surfacing may be retained where engineers consider it adequate to spread the load of construction traffic. Otherwise, it will be reinforced or replaced with adequate ground protection measures.

Unless specified otherwise, ground protection will consist of 24mm OSB boards laid at double thickness and screwed together to prevent slippage. The ground will be made even by raking, and by adding a 100mm of sand or woodchip, wherever vehicular access is proposed. Where only pedestrian traffic will occur, boards or planks may be laid directly onto the ground or supported by a scaffold framework. The scaffold will be founded on poles driven into the ground and/or onto blocks (to raise the scaffold) with additional couplings to make the framework secure.

Where engineers consider OSB boards to be inadequate (e.g. for large plant machinery where the tracks may chew up the timber) sturdier ground protection measures will be installed such as road plates, or 100mm of 7–40mm angular gravel installed in 3D cellular confinement system (e.g. Cellweb TM).

If a piling mat is required, specifications will be agreed between engineers and the project arborist.

The ground protection measures will be installed and approved before commencement of demolition and construction activity and before the arrival of plant machinery or materials. They shall remain in place until all heavy construction activity is complete or until they are due to be replaced with a new hard surface.

Construction Exclusion Zones

Within Construction Exclusion Zones the following restrictions apply:

- Tree Protection Barriers will be erected and maintained throughout the entire project as indicated on the Tree Protection Plan and under the header *-Tree Protection Barriers*.
- These will remain in place at all times except when authorised landscaping works are being undertaken. At such times, adequate ground protection measures will be installed, and excavation shall be limited to that required for new planting. Furthermore, the project arborist will be consulted prior to any works being undertaken in these zones.
- No construction activity or excavation will occur unless agreed otherwise by the project arborist and local authority.
- No vehicles or plant machinery will be driven or parked.
- No tree works, other than those specified on this document will be undertaken.
- No alterations of ground levels or conditions will occur.
- No chemicals or cement washings will be permitted.
- No temporary structures will be installed.
- No spoil will be stored.
- No fires will be permitted.
- All hazardous materials (including non-essential cement products) will be forbidden.
- Removal of hard surfaces, structures or turf will be done using hand operated tools only and supervised by the project arborist.

Tree Works Specification

The following table specifies the tree works which will be required prior to the commencement of construction activity:

Tree Reference	Action Required	Notes
T3, T4, T6, small shrubs and a cluster of young trees	Remove.	Stumps of trees within the RPAs of retained trees will be removed with a stump grinder, not a mechanical excavator.
T7	Prune canopy back towards the boundary.	Branches to be pruned back to a suitable branch junction wherever possible.

Trees to be removed are indicated by a thin, dashed line.

Restrictions in Specific Zones

Restricted Activity Zone

Within this zone, tree roots are likely to be present where access will be required to facilitate construction. The following restrictions shall apply:

- No vehicles or plant machinery will park or operate unless a suitable load spreading surface is in place. The load spreading surface will be installed and/or maintained as specified under the heading **Ground Protection Measures**. This will remain in place throughout the entire demolition and construction phase or until any new permanent hard surfacing is installed. Any pedestrian activity (other than very occasional) will also require a suitable load spreading surface.
- Removal of existing structures such as walls, steps and hard surfaces (where applicable) will be undertaken using hand tools or a small mechanical excavator operating from outside the Restricted Activity Zone and carefully marshalled by the project arborist.
- Where excavation for the **new garden patio** is required, hand tools only will be used for the excavation. If any tree roots are encountered during the excavation, they will be neatly pruned using clean, sharp secateurs. Excavation will be limited to the footprint of the proposed patio.
- When replacing the **existing driveway**, excavation will be limited to the removal of the existing surface and any associated sub-base. A new permeable surface is to be installed.
- No further excavation will occur in this zone without consulting the project arborist and obtaining approval from the local authority.
- Existing ground levels will be retained undisturbed or raised by no more than 150mm. Ground levels may only be raised using granular topsoil (not rich in clay) or where new surfacing is proposed. No raising of ground levels whatsoever will occur within 0.5m of any tree stem.
- No new permanent or temporary structures will be erected other than those shown on the planning application documents unless approved by the local authority.
- Underground services will not be installed in these areas.
- If roots are encountered in excess of 25mm diameter, they will be retained wherever possible and protected with damp sacking during times that they are unearthed. Any roots in excess of 10mm that need to be severed will be pruned with secateurs.
- Storage of materials and spoil will be avoided unless it has been agreed with the project arborist that the ground protection measures are adequate to ensure no soil compaction or contamination occurs.
- All hazardous materials (including non-essential cement products) will be forbidden.
- No fires will be permitted.

Timing of Operations

Activity within the site shall be phased according to the following chronology

Order	Phase	Activity
1st.	Pre-Construction Phase	Planning conditions relating to trees to be identified and discussed with the Project arborist and site manager.
2nd.		All specified tree removal and pruning to be undertaken (see Header -Tree Works Schedule).
3rd.		Install the tree protection barriers (fencing and ground protection boards - see Headers *-Tree Protection Barriers* and *Ground Protection Measures*).
4th.		Pre-Commencement site meeting: Tree protection barriers inspected. Additional protection measures to be agreed. Variances to be agreed. Location of underground services to be agreed. Boundary treatments to be agreed. Extents of excavation to be agreed. Scaffold restrictions to be agreed. Exact specification for foundations to be agreed. Exact specification for new surfaces to be agreed. Scope of future inspections / monitoring to be agreed.
5th.		Arboricultural Method Statement to be revised and approved (if necessary).
	Protection measures confirmed acceptable by the local authority	
6th.	Construction Phase	Demolish existing structures and remove existing surfaces where applicable.
7th.		Install new building foundations and hard surfaces taking into account restricted activities as specified in this Arboricultural Method Statement.
8th.	Post-Construction Phase	Site meeting with project arborist. Landscaping restrictions to be agreed. Condition of retained trees to be assessed and mitigation agreed. Ground conditions to be assessed and ground remediation to be agreed.
9th.		Remove protective barriers (fencing and ground protection measures as applicable).
10th.		Undertake restricted landscaping operations within Root Protection Areas, including (where applicable) boundary treatments, pedestrian surfaces, decking and any proposed tree planting.

General Restrictions

Preparatory Works

No demolition, removal of surfaces, or soil stripping will commence until the protective fencing and ground protection measures are installed to the satisfaction of the local authority.

Fires

No fires will be permitted beneath any tree canopy or within 5m of any tree stem, branch or foliage. No fires will be permitted within any Construction Exclusion Zone or Restricted Activity Zone. No fires will be permitted in the vicinity of any exposed tree roots.

Canopy Protection

In order to protect tree canopies the following restrictions will apply throughout the site:

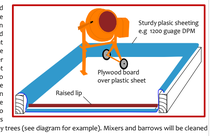
- No machinery in excess of 2m will pass beneath the canopy of any tree without being carefully marshalled in order to ensure that no branches are damaged.
- If materials require installation or delivery beneath tree canopies, this will be done without the use of overhead cranes.
- If materials are to be installed or delivered close to tree canopies (but not beneath them) and a crane is required, they will be carefully marshalled in order to ensure that branches are not accidentally damaged.

Storage of Spoil and Materials

Storage of materials and spoil will be avoided in any Construction Exclusion Zones and Restricted Activity Zones unless it has been agreed with the project arborist that the ground protection measures are adequate to ensure no soil compaction or contamination occurs. All hazardous materials (including non-essential cement products) will be forbidden.

Hazardous Materials

Any mixing of cement based materials will take place outside the Construction Exclusion Zones and Restricted Activity Zones. Where cement is to be mixed at considerable distances from trees and water run-off cannot enter Root Protection Areas, then no further special measures are required. Otherwise, provision will be made to ensure that the mixing area is contained so that no water run-off enters the Root Protection Area of any trees (see diagram for example). Mixers and barrows will be cleaned within this area.



All other chemicals hazardous to tree health, including petrol and diesel, will be stored in suitable containers as specified by current COSHH Regulations, and kept away from Root Protection Areas.

Underground Services

No underground services (including soak-aways) will be located in any part of the Construction Exclusion Zones or Restricted Activity Zones unless done so in a manner detailed in a specific Method Statement and approved by the local authority.

Site Hoarding

If site hoarding shall be installed over the Root Protection Area of any tree, the following restrictions will apply:

- Ground levels will be maintained as existing.
- Post holes will not exceed 300mm x 300mm.
- No post hole will be excavated within 1.5m of any tree stem.
- Post holes will be excavated using hand tools or by a post-hole auger attached to plant machinery sited outside of Root Protection Areas.
- Roots in excess of 25mm will be retained wherever possible.
- Roots in excess of 10mm will be pruned with sharp secateurs.
- Pruning will be minimal and only undertaken where absolutely necessary to facilitate the site hoarding. It will be undertaken by a reputable tree surgeon working to BS 3998 (2010).

Site hoarding may be installed in place of the specified tree protection measures subject to the approval of the local authority with regard to its location and specification.

Siting of Cabins

Cabins will be located outside of Construction Exclusion Zones and Restricted Activity Zones unless agreed otherwise by the project arborist. Where this is being considered, the project arborist will be consulted, and specific tree protection measures agreed. The following general restrictions will apply:

- All services to and from site cabins will be installed above ground through any Root Protection Areas.
- No excavation will occur within Root Protection Areas to enable cabins to be installed.
- The cabins will be founded on a suitable load spreading surface.

Fence Posts or Decking Posts

If permanent fencing or decking is to be installed within Root Protection Areas, the following restrictions will apply:

- All post holes will be excavated by hand and kept as narrow as possible (maximum diameter 300mm).
- Exploratory post holes will be dug before committing to post / panel positions. If any roots in excess of 25mm are encountered they are to remain intact and the post hole will be relocated slightly. The fencing system must permit such flexibility (i.e. where fixed panel widths are used, all post holes must be excavated before committing to the final location).
- Any roots in excess of 10mm which are severed will be neatly pruned back with secateurs. This shall encourage healing and reduce the likelihood of infection.

Walls will be avoided over Root Protection Areas, unless their foundations are spanned over roots using a beam system.

Tree Protection Plan

CROWN Tree Consultancy 08000 14 13 30

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

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.
Category B tree	Trees of moderate quality with a life expectancy of 20+ years. Usually maturing trees, or younger trees with good form. Retention of these trees is desirable though less than Category A trees
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.

Drawing No: CCL 12xxx / TPP Rev: 1

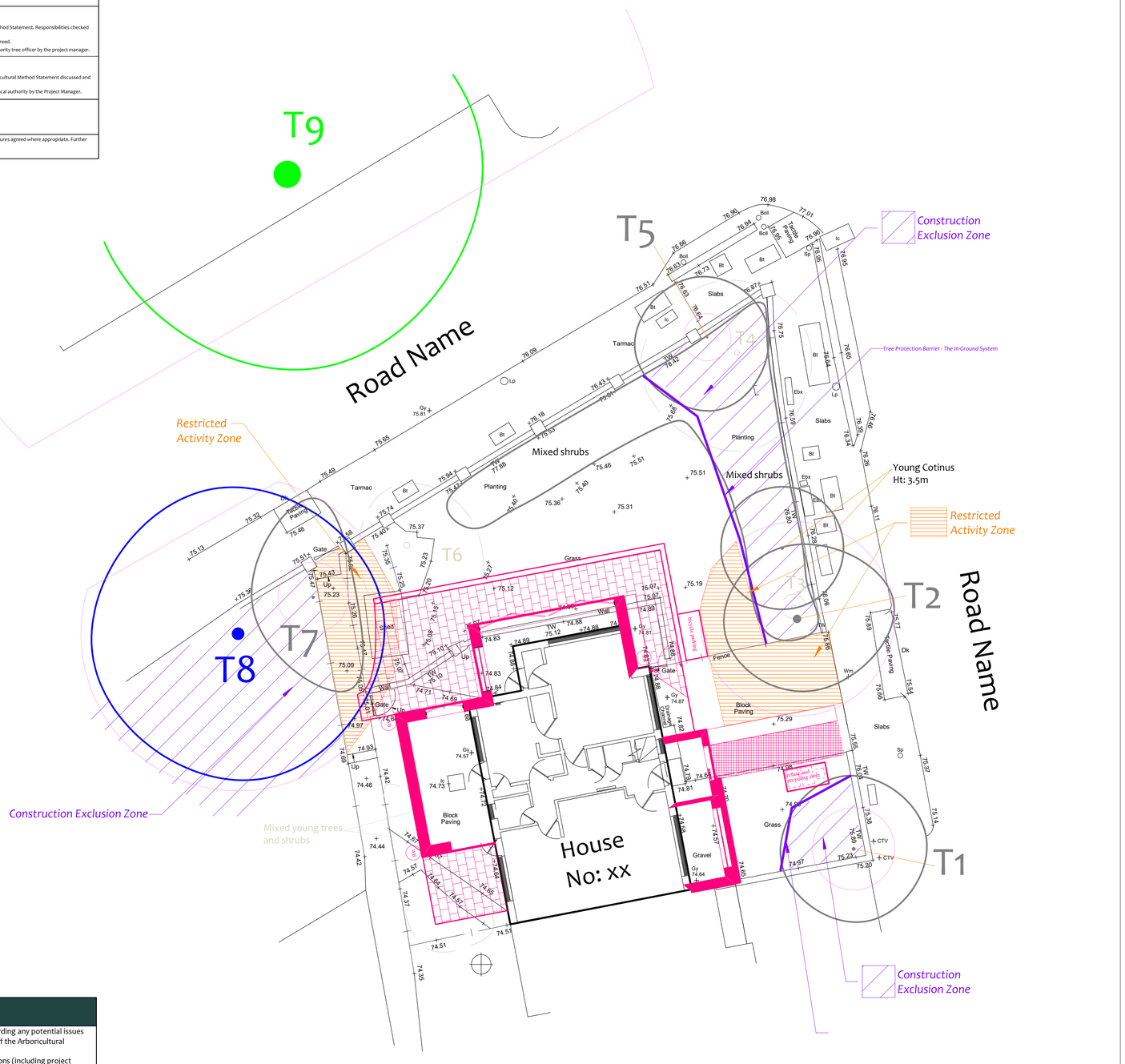
Title: Tree Protection Plan (Existing Layout with Proposals Overlaid)

Site: 123 Street Lane, London, Postcode

Scale: 1:100 | Paper Size: A1

Site Monitoring Schedule

Inspection	Site Attendees	Comments
Pre- Start Desk-top To occur prior to any works taking place on the site.	N/A.	Project Manager and Site Manager to study this Method Statement & contact the Project Arborist to clarify all protection measures.
Pre-Start Meeting After tree works completed & tree protection barriers / ground protection measures installed and prior to any other activity, inc. demolition & soil stripping.	Project Manager, Site Manager, Project Arborist, relevant contractors. Tree Officer invited.	Tree protection fencing locations & specification checked. Ground protection measures checked. Contractors to be inducted to all relevant aspects of the Arboricultural Method Statement. Responsibilities checked and acknowledged. Adherence to the Arboricultural Method Statement to be discussed and agreed. Report on findings to be provided by the arborist and sent to the local authority tree officer by the project manager.
Monthly Inspection and Reporting To occur once per calendar month throughout the entirety of the project until the local authority agree that tree protection measures may be removed.	Site Manager and Project Arborist.	Tree protection fencing locations & specification checked. Ground protection measures checked. Past month, present and future month – activities and adherence to Arboricultural Method Statement discussed and checked. Report on findings to be provided by the Project Arborist and sent to the local authority by the Project Manager.
Any other ground disturbance in Restricted Zones & Construction Exclusion Zones Including demolition, soil stripping, removal of hard surfaces, excavation for new surfacing, foundations, service trenches etc.	Site Manager, Project Arborist.	Two weeks' notice to be given prior to commencement. Excavation to be as specified in this Method Statement. Excavations to be recorded and photographed. Mitigation measures to be employed specified by the project arborist.
Post-Construction Meeting Post external construction activity but prior to removal of fencing & landscaping operations.	Site Manager, Project Arborist. Tree Officer invited.	Retained trees inspected. Ground conditions assessed and mitigation measures agreed where appropriate. Further landscaping operations and restrictions to be agreed.



Personnel and Accountability

This table should be completed at the Pre-Start Meeting or earlier

Position	Name	Contact Phone & email	Roles
Project Manager	Insert Details	Insert Details	Liaising with site manager & project arborist regarding any potential issues relating to trees (including pre-start clarification of the Arboricultural Method Statement). Scheduling of meetings, excavations and inspections (including project arborist and local authority tree officer where applicable). Overseeing this monitoring schedule. Instructing the project arborist and arranging access. Liaising with local authority regarding discharge of planning conditions and variances to the Arboricultural Method Statement. Reporting to the local authority following site inspections and any variation or incidents.
Site Manager	Insert Details	Insert Details	Day to day monitoring of tree protection measures. Induction of all contractors. Reporting to the Project Manager and the Appointed Arborist of any incidents or potential variations to the agreed tree protection measures.
Project Arborist	Insert Details Crown Tree Consultancy	08000 14 13 30 0203 797 7449 Info@crowntrees.co.uk	Liaising with LPA Tree Officer over technical arboricultural matters. Upon instruction the arborist shall inspect the tree protection barriers including ground protection measures and produce a short report for the project manager to submit. Upon instruction the arborist shall attend any specified site visits and inspections and produce a short report for the project manager to submit.
Additional Contact	Insert Details	Insert Details	Insert Details

Planting Scheme

Tree Planting Schedule

It is proposed to plant three standard sized trees in the locations indicated on the accompanying Proposed Planting Plan ref CCL/12xxx/PPP.

The proposed species and sizes are specified below:

Ref No	Species		N°	Size		
N1	Flowering Cherry	Prunus accolade	2	Standard	8-10cm girth, 3-3.5m height	Attractive ornamental tree with seasonal interest.
N2	Willow-leaved Pear	Pyrus salicifolia 'Pendula'	1	Standard	8-10cm girth, 2.5-3m height	Deciduous, flowering tree with slender weeping branches.

Planting Specification

Timing: Trees should be planted from late October to late March and copiously watered in immediately after planting.

Preparation: Any ground that has been compacted during construction shall be cultivated to a depth of at least 300mm. A minimum area of 1m x 1m shall be de-compacted for each tree.

Where chemical contamination is suspected of having occurred or where the soil is determined to be too shallow or infertile, an appropriate amount of soil is to be removed and replaced with quality topsoil compliant with BS 3882. A minimum volume of 2m x 2m x 0.5m deep will be replaced for each tree. Before backfilling with topsoil, bases and sides of all excavation should be de-compacted/loosened with a garden fork or spade.

Planting: A planting hole 1.5 to 2 times larger than the root ball/ root spread shall be excavated by hand. The edge of the planting hole shall be roughened with a spade, and the base dug over to a depth of 150mm to improve drainage. Trees shall be planted with stem base at ground level, and the planting hole shall be backfilled with the same (or slightly ameliorated) soil material and firmed to prevent air pockets.

Soil Amelioration: Compost or other organic matter may be added to aid establishment if the soils are relatively infertile. However, this should not be confined to the planting hole. The vast majority should be dug into the soils immediately adjacent to the planting hole, and the mix should always be at least 50% of the excavated site soil.

Staking: *Standard* trees shall be single staked at 30 - 50cm above ground level and attached with adjustable and flexible tree ties and spacers. Stakes shall be driven into the ground such that they avoid the root ball. Stakes shall be of tanalised timber with a minimum diameter of 75mm.

Protection: Spiral rabbit guards (60cm x 50mm, clear recycled PVC) to be affixed around the base of any tree not protected by tree shelters. The use of strimmers shall be avoided due to the risk of bark stripping.

Mulching: Seasoned woodchip or medium-grade bark mulch to be installed to a depth of 10cm around each tree to deter weed competition. A 1m radial diameter of mulch should be installed around each stem and periodically topped up.

If any existing or newly planted trees become moribund, soils shall be aerated, and soil inoculants applied.

Long Term Management Plan

Watering: Trees shall be regularly watered during the first growing season and during prolonged dry spells for at least two further seasons, in accordance with British Standard 8545 (2014). The following is a guide to watering requirements, though in practice these are heavily dependent upon climatic conditions:

- All trees watered three times per month from April through to September inclusive. During October, November and March, the frequency may be reduced to twice per month. During December, January and February, the frequency may be reduced to once per month.
- At each watering session, heavy standards should receive 20 gallons, standards should receive 15 gallons, and light standards should receive 10 gallons. This equates to approximately 10 minutes, 7.5 minutes and 5 minutes from a domestic hose at moderate pressure.
- The entire area beneath the canopy should be watered.
- After two years, the trees should only require watering during periods of extended dry weather.

Ties and Stakes: The tree ties and spacers shall be inspected and adjusted/loosened annually by an appointed arborist. The stakes shall be removed (or loosened) after three to five years, as is deemed fit by the appointed arborist.

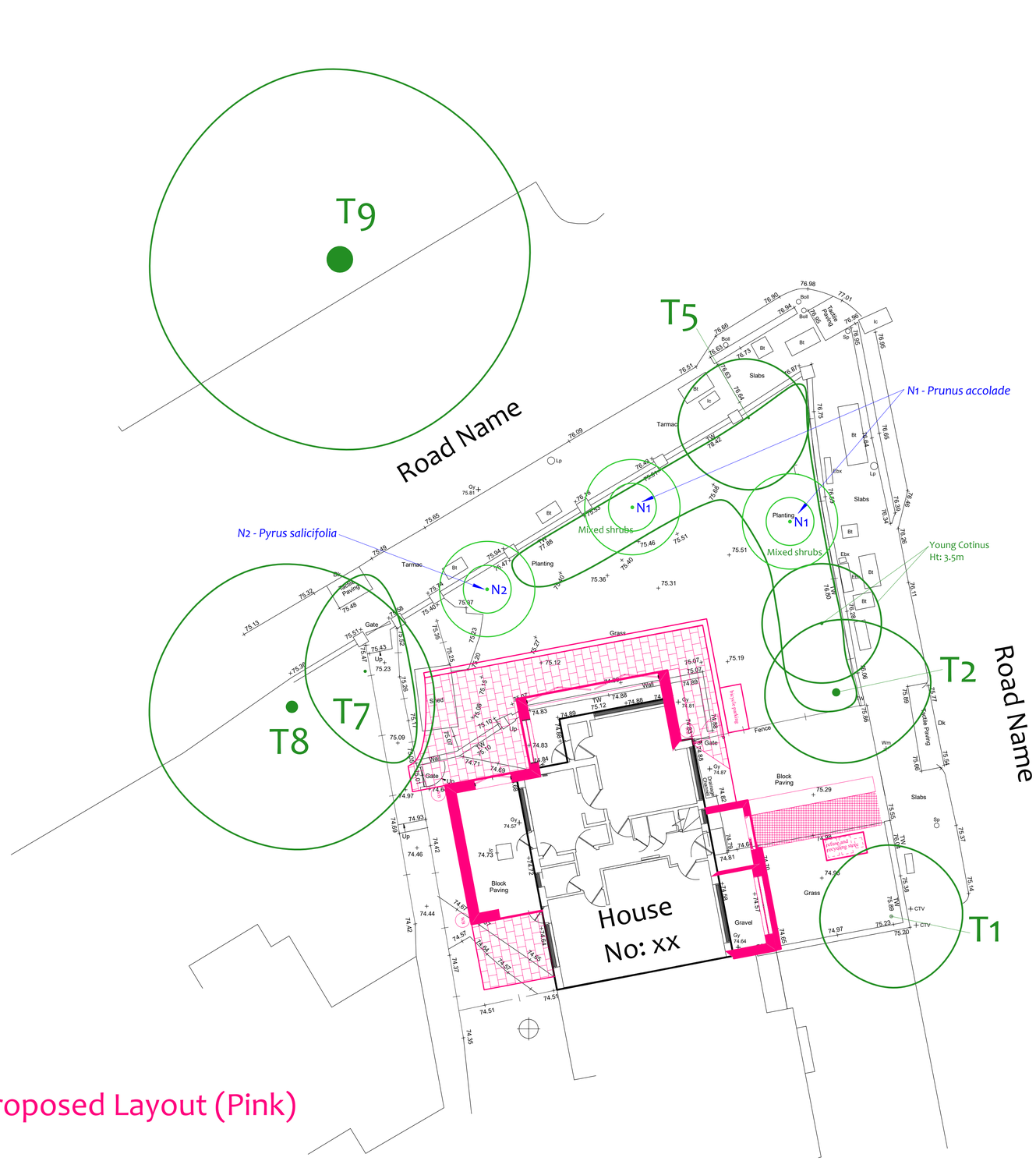
Formative Pruning: Formative pruning of new trees should be undertaken where appropriate, including progressive crown lifting, leader selection and minimum / maximum heights of crown lifting.

Two-year Inspection: After two years from the planting date, the appointed arborist shall assess the condition of the trees and undertake any remedial/formative pruning required to encourage the trees to develop with good structure screening value.

Five-year Inspection: After five years from the date of planting, the appointed arborist shall assess the condition of the trees and undertake any remedial/formative pruning required to encourage the trees to develop with good structure screening value.

Ten-year inspection: After ten years from the date of planting, the appointed arborist shall assess the condition of the trees and undertake any remedial/formative pruning required to encourage the trees to develop with good structure screening value.

Replacement: Any trees that fail to become established shall be removed and replaced with a new tree of the same species and specification as the original. Planning conditions may apply.



Proposed Planting Plan

Drawing No:	CCL 12xxx / PPP Rev: 1
Title:	Proposed Planting Plan (After Vegetation Removal)
Site:	123 Street Lane, London, Postcode
Scale:	1:100
Paper Size:	A1

CROWN Tree Consultancy 08000 14 13 30

Existing Retained Trees

Proposed Tree Planting

Proposed new tree reference N1, showing future canopy at 2m and 4m (radius)

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

BS 5837 Shade Pattern

Photo 1

Tree to be removed to facilitate the proposal

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.

Tree Ref.	Species	Height (m)	Root Protection Area		
			Radius (m)	m²	Square (m)
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