BS 5837 Arboricultural Report

(Pre-Planning)

at
Minstead Gardens
Roehampton Gate
London
SW15 4EE

Dated
29th October 2024

CROWN
Tree Consultancy
Branching out through England and Wales

Contents

1. Introduction

1.1. Instruction

1.1.1. We are instructed by Andrew Gillick to:

- Undertake a Tree Survey to BS 5837 at Minstead Gardens 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).

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 inform the reader of the trees and how they might constrain any potential development of the site. It does not consider specific design proposals, so will not validate a full planning application.

1.2.2. 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. Author

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

2. The Survey

A visual ground-level assessment of all trees was undertaken on the 15th of October 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* 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

2.1.7. 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 survey. Our survey included all trees within the curtilage of the site and those adjacent to it.

2.3. Summary of Observations

2.3.1. Within the site there are a numerous two-story residential buildings used as halls of residence for Roehampton University. Mount Clare, a grade 1 listed building built in 1772 is also located within the site and used as halls of residence. These buildings are connected by hard-standing footpaths. Outdoor amenity areas of grassland and woodland surround the buildings.

2.3.2. The site is accessed via Minstead Gardens and is located north-west of Roehampton. The area is bounded by Richmond Golf Course to the south, Richmond Park to the west, university and residential buildings surround the site elsewhere.

2.3.3. Over 100 trees are included within our survey. These include Retention Category A, B C & U specimens. The majority of trees are situated adjacent to the southern and western boundaries.

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 in order to maintain the trees in an acceptable condition:

3.1.2. Trees that are potentially hazardous and will require removal in order to prevent potentially significant damage due to tree or limb failure are T016, T037, T057, T062 and T064. These works should be prioritised as indicated on the Tree Data Schedule.

3.1.3. Trees which are potentially hazardous and require works in order to make them safe are T002 and G058. These works should be prioritised as indicated on the Tree Data Schedule.

3.1.4. Trees which are considered to be in an acceptable condition at present, but which have defects that require monitoring include T001, T006, T034, G058 and T059. The Tree Data Schedule indicates the recommended inspection frequency.

3.1.5. G008 could not be fully inspected due to the presence of dense ivy or undergrowth. It is recommended that the ivy or undergrowth is removed.

3.1.6. 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	T002, G058, T059, T062, T064
Moderate	Within 1 year	T001, T006, T016, T034, G057, T057, G058
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
1	T002, T006, T012, T044, T046, G052, G056, T059, G060, G061, G063, T065, T069
1.5	T001, T004, T005, G008, T021, T026, T028, T029, T034, T040, G041, G058, G058, T068
3	T003, T009, T010, T011, T013, T014, T015, T016, T017, T018, T019, T020, T022, T023, T024, G025, T027, T030, T031, T032, T033, T035, T038, T039, T042, G043, G047, T048, T049, G050, T051, G053, T054, G055, G057, T062, T064, T066, T067, T070, T071, H072, T073, T074

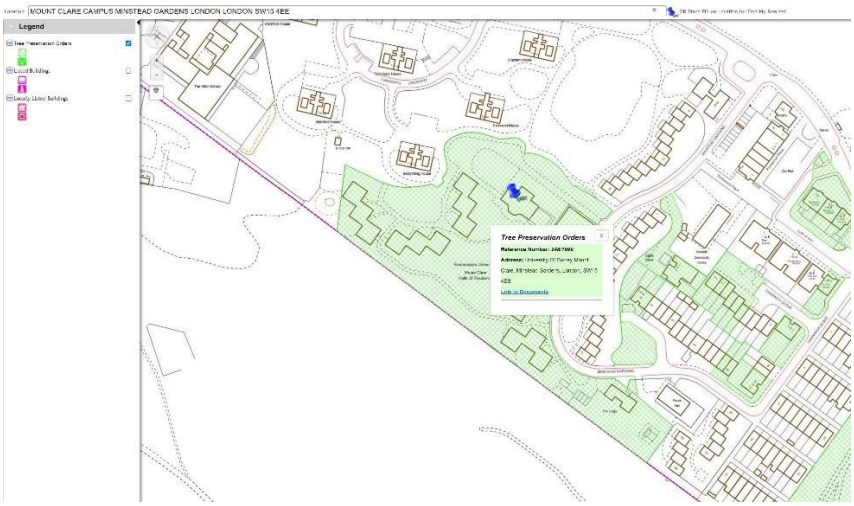
3.2.3. The trees should be inspected sooner if there is a noticeable decline in their condition or following extreme weather events.

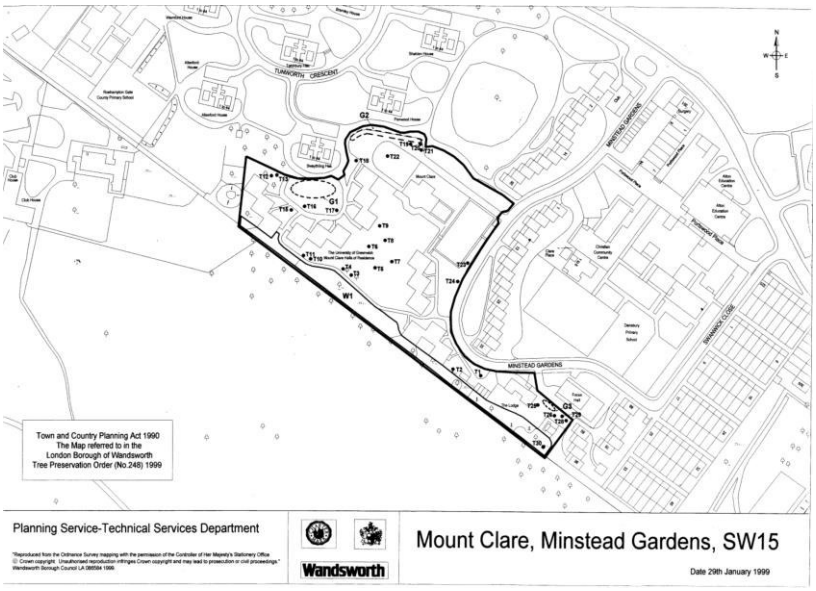
4. Statutory Protection – TPOs and Conservation Area Status

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 7th of October 2024, we accessed the local authority website. Two screenshots are produced below:





4.1.2. This indicates that:

The site is within the Alton Conservation Area.

There are numerous tree preservation orders affecting trees within the site.

[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.

4.2. 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.

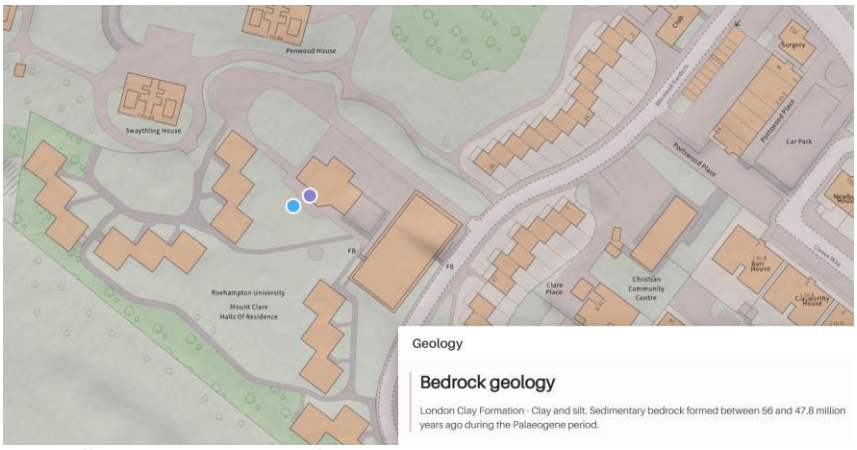
4.2.2. More detailed guidance can be found at https://www.gov.uk/government/publications/tree-felling-getting-permission

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

5. Local Geology and Soils

5.1. Desktop Research

5.1.1. Desktop research into local geology based on the postcode SW15 4EE 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 in Section 3.1, local soils are assumed to have a loamy and clay 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. Implications for Development

6.1. Site-Specific Issues

6.1.1. The site is largely populated with high quality Retention Category A and B trees. Many of these trees are also protected by tree preservation orders. The trees along the southern boundary are protected by a Woodland TPO, Ref: W1. Trees within the centre of the site are also protected, as well as trees to the west and east.

6.1.2. Furthermore, two trees, T42 and T48 are considered to have veteran status. Veteran trees have a larger Root Protection Area or 'buffer zone' than trees of less ecological value. The buffer zone should be at least 15 times larger than the diameter of the tree, or 5m from the edge of the canopy if that area is larger. This buffer zone is considered to be the minimum root protection area and generally works within this zone will not be tolerated. Government guidance states that planning should be refused if a development results in the loss or deterioration of ancient woodland, ancient trees and veteran trees unless both of the following applies; There are wholly exceptional reasons. There's a suitable compensation strategy in plan (this must not be a part of considerations of wholly exceptional reasons).

6.1.3. These protected and veteran trees are the largest constraint to any proposed development as their roots are likely to be present throughout much of the site. To gain the support of the local authority, development associated impact (foundations, excavation, new surfacing) to protected trees should be avoided wherever possible. Canopies also have to be considered when designing the proposal. Building too close to tree canopies may increase post-development pressure to prune or remove the trees. We recommend leaving a minimum distance of 2m between canopies and proposed buildings, and building so close to trees that pruning is required should be avoided.

6.1.4. Within the site there are numerous existing buildings that are likely to have relatively substantial foundations. Roots are not likely to be prolific below the existing foundations. Consequently, any buildings proposed within the footprint of the existing buildings are unlikely to have a significant impact on tree roots. We recommend utilising these areas when considering proposed building locations.

6.1.5. If the existing access route into the site can be re-used this will help to minimise arboricultural impact.

6.1.6. The remainder of this section offers general advice on dealing with tree-related constraints on construction sites. Persons familiar with BS 5837 Arboricultural Reports (e.g. tree officers) may wish to skip this section and go straight to the following Section.

6.2. Retention Categories

6.2.1. The Tree Constraints Plan indicates the BS 5837 Retention Categories for each tree. These should be taken into account during the design stage of any development proposals according to the following criteria:

6.2.2. Wherever possible, Category A trees should be retained. These are usually large trees with a relatively high amenity value. They are generally in good condition, well suited to their surroundings and with a significant life expectancy.

6.2.3. The retention of Category B trees is also desirable, though these trees are of lesser quality, or have a reduced life expectancy or are smaller than category A trees.

6.2.4. The retention of Category C trees should be seen as optional. These are usually small trees or trees of no particular merit and are not considered a material planning consideration.

6.2.5. Category U trees have been recommended for removal due to their poor condition and should be removed regardless of development proposals.

6.3. Root Protection Areas

6.3.1. The Tree Constraints Plan indicates the Root Protection Areas of each tree. This does not represent the maximum extent of rooting activity; instead, it defines the area within which the majority of roots are

expected to be confined. Wherever possible, this should be left undisturbed for all trees to be retained. In which case, the trees shall be unharmed. Significant disturbances such as changes in ground level, soil compaction, excavation of trenches, or interference with oxygen and rainwater exchange may have a substantial impact on the health of the tree. (Soil compaction may be caused by vehicles, plant machinery, excessive pedestrian usage, storing of materials/spoil or by the installation of a new vehicular surface.)

6.3.2. Some disturbance of the Root Protection Area may be acceptable but must be kept to a minimum. Construction methods should be adopted that are sympathetic to root requirements. These are discussed below:

6.3.3. Concrete strip foundations should be avoided except at the very extremity of the Root Protection Area. Instead, pile/pier and beam foundations or raft foundations should be utilised. These will minimise root severance.

6.3.4. Hard surfaces should be installed with a minimum of excavation. The majority of roots lie within the upper soil horizons and are relatively fine. Roots do not need to be as thick as branches since they do not have to combat gravity and high winds etc. A root as thin as a finger is able to transport a lot of nutrients. Thus, excavation as shallow as 30cm can have a significant impact on the health of a tree even though large roots might not be severed. Cellular confinement systems help to reduce the amount of excavation required to give a driveway adequate strength.

6.3.5. Hard surfaces should ideally be porous to allow rainwater and oxygen to pass into the soil. Gravel is the ideal medium and can be retained in a cellular system to prevent rutting. Block paving and flagstones without mortar joints are good alternatives. Tarmac is not very porous; the use of a no-fines tarmac is preferable.

6.3.6. Trenches for underground services are commonly overlooked but can cause major damage to trees. Further arboricultural advice should be sought if underground services are to pass within Root Protection Areas. Trenchless techniques can sometimes be utilised but are not usually practical for installing drains.

6.3.7. If ground levels are raised, this should always be done with a loose granular material such as gravel or coarse sand. Ground levels must never be raised against the trunks of trees as this may cause them to rot.

6.3.8. It is sometimes possible to mitigate against root disturbance, by above-ground pruning or by improving rooting conditions for existing roots. The introduction of mycorrhizal fungi and earthworms significantly improves rooting conditions, as does the removal of competing vegetation such as grass.

6.3.9. Soil compaction occurs when vehicles repeatedly pass over rooting areas without some kind of structure to disperse their weight. Healthy soils will contain approximately 25% airspace. When soils become compacted, these air spaces disappear, and roots are unable to respire. It is possible to de-compact soils, but this is an expensive operation. It is preferable to avoid compaction by spreading the load of traffic passing over Root Protection Areas with the use of metal road plates or suitable boards.

6.4. Tree Canopies

6.4.1. Where trees are to be retained, adequate space should be allowed between buildings and tree canopies. A minimum distance of 3m is recommended. For high-quality trees (Category A or B) which have not yet reached maturity, a further allowance should be made to allow the canopies to mature without the need for extensive pruning.

6.4.2. For residential dwellings, the shade cast by trees should also be considered, especially where buildings are located north or northeast of sizeable trees. Some species, e.g. birch, have light, airy canopies, so shade is less of an issue. Commonly occurring trees that cast dense shade include beech, oak, ash, chestnut, sycamore, lime and most evergreen species. Shade constraints are less of an issue for garages and other non-residential buildings.

6.4.3. Crown Tree Consultancy will gladly offer any further advice, and you are invited to contact the author of this report on 01422 316660.

6.5. Arboricultural Impact Assessment

6.5.1. When development proposals are available, we recommend carrying an Impact Assessment before submission to the Local Planning Authority. This will identify any potential issues so that they may be resolved or mitigated.

6.6. Tree Protection During Construction

6.6.1. A site-specific Arboricultural Method Statement will be required to ensure that trees are protected during the construction phase. This should specify tree protection barriers, ground protection boards, foundations and hard-surface design, services installation, materials storage, and plant machinery use.

7. Photographs

Refer also to the Tree Constraints Plan for photo locations

Photo 1.

Photo 2.

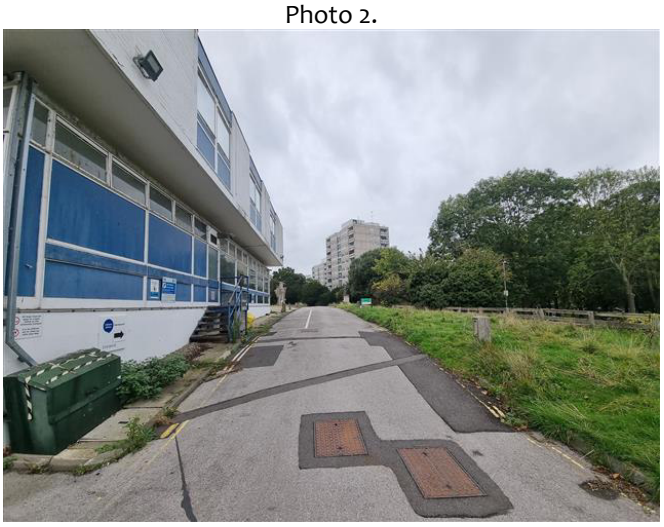


Photo 3.

Photo 4.

Photo 5.

Photo 6.

Photo 7.

Photo 8.

Photo 9.

Photo 10.

Photo 11.

Photo 12.

Photo 13.

Photo 14.

Photo 15.

Photo 16.

Photo 17.

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Photo 20.

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Photo 22.

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Photo 26.

Photo 27.

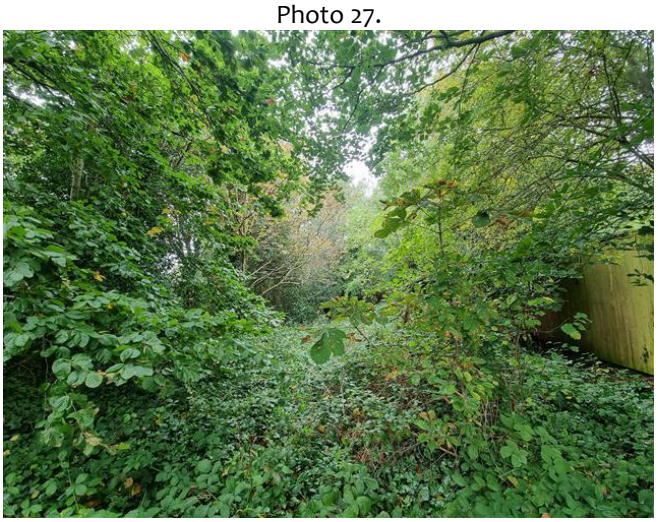


Photo 28.

Photo 29.

Photo 30.

Photo 31.

Photo 32.

Photo 33.

Photo 34.

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: Author'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 - 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.

Qualifications & Experience of Sarah Alway - TechArborA, FdSc (Arboriculture).

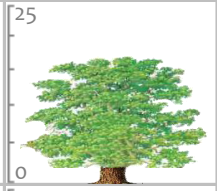
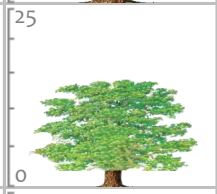
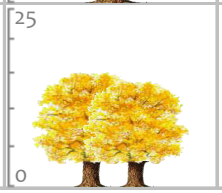
Sarah recently obtained an FdSc in Arboriculture and Tree Management at the University of Central Lancashire which she passed with distinction. She is a member of the Arboricultural Association and regularly attends seminars and events to keep abreast of developments in industry knowledge and current 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.

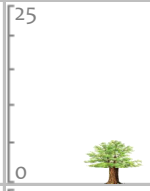
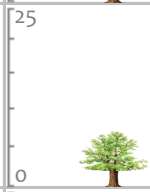
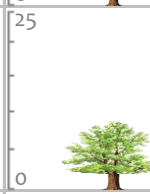
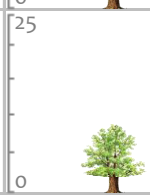
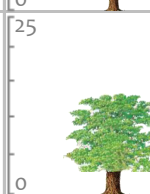
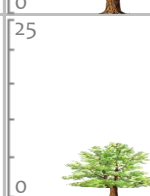
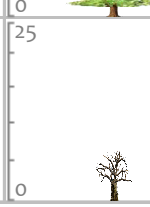
Qualifications & Experience of Carl Lothian – BSc (Hons) (Arboriculture).

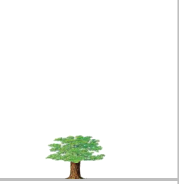
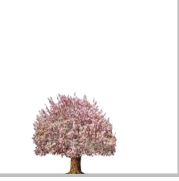
Carl began his career undertaking a Level 3 extended diploma in arboriculture and forestry at Merrist Wood College in 2015. Upon completion of his diploma, Carl worked with several tree surgery firms completing a range of arboricultural works. In 2018 Carl began his BSc (Hons) in arboriculture and urban 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.

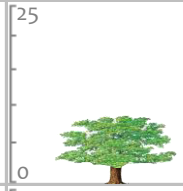
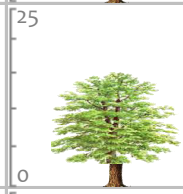
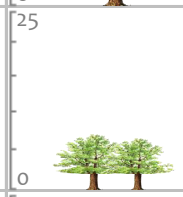
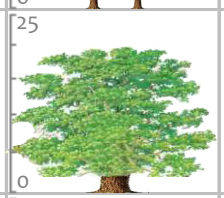
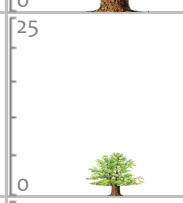
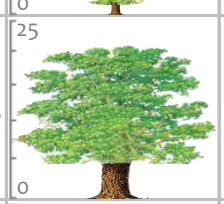
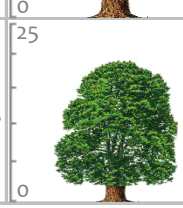
Appendix 4: Tree Data Schedule and Drawings

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.

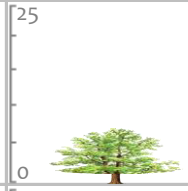
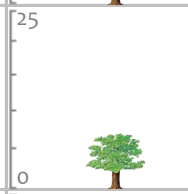
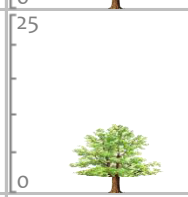
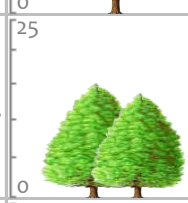
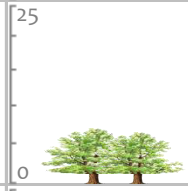
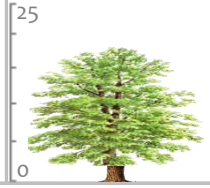
Reference (G = Group, H = Hedge)	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N / W / E / S	Scaled Tree Diagram (m)	Notes	Recommendations (Independent of any development proposals)	Vigour / Physiological Condition / Structural Condition	Amenity Value / Life Expectancy (yrs) / Retention Category
T001	Early-Mature **Holm Oak** Quercus ilex.	17	2	88	N 8.5, W 7, E 7, S 7.5		History: Crown lifted. **Defects: Significant bark wounds tobacco buttress, stem and limbs.**	Monitor. Priority: Moderate; Inspect Freq (yrs): 1.5	Moderate Good Good	Moderate 40+ **B**
T002	Mature **Pedunculate Oak** Quercus robur.	18	2.5	124	N 8, W 11, E 12, S 10		History: Reduced. **Defects: Significant tear wound to main stem c. 4-7m high with c. 0.5m diameter (healing well). Occasional pruning wounds with minor cavities developing. Significant deadwood over road.**	Monitor and deadwood. Priority: High; Inspect Freq (yrs): 1	Moderate Good Fair	Moderate 40+ **A -**
T003	Early-Mature **Holm Oak** Quercus ilex.	14	2.5	55	N 5.5, W 5.5, E 7, S 8		Position: Off site. **Defects: No significant defects observed.** Other: Vegetation prevented detail inspection at base.	No action required. Priority: n/a; Inspect Freq (yrs): 3	Moderate Good Good	Moderate 40+ **B**
T004	Early-Mature **London Plane** Platanus x hispanica.	17	1.5	66	N 8.5, W 11, E 11, S 8		**Defects:** No significant defects observed.	No action required. Priority: n/a; Inspect Freq (yrs): 1.5	Moderate Good Good	Moderate 40+ **B +**
T005	Early-Mature **London Plane** Platanus x hispanica.	17	1.5	60	N 5.5, W 11, E 11, S 8		**Defects:** No significant defects observed.	No action required. Priority: n/a; Inspect Freq (yrs): 1.5	Moderate Good Good	Moderate 40+ **B +**
T006	Early-Mature **Holm Oak** Quercus ilex.	16	1.5	100	N 9.5, W 10, E 8, S 10		**Defects: Significant included bark.** Other: Vegetation prevented a detailed inspection. Sheltered location. Recorded stem diameter is equivalent to 2 stems (80cm, and 60cm).	Monitor. Priority: Moderate; Inspect Freq (yrs): 1	Moderate Good Fair	Moderate 40+ **B +**
G008	Early-Mature **Robinia** Robinia sp.	av 15	av 3	av 55	N av 4.5, W 4.5, E 4.5, S 6 each		Form: Two close growing specimens. **Defects: Trees in fair to poor condition.** Other: Vegetation prevented detailed inspection.	Arrange tree condition assessment. Priority: ; Inspect Freq (yrs): 1.5	Moderate Fair Fair	Moderate 20-40 **B**

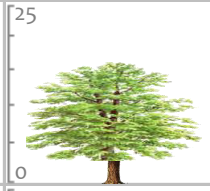
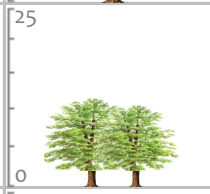
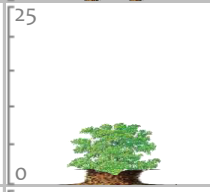
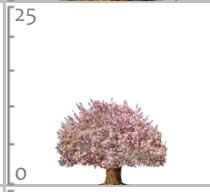
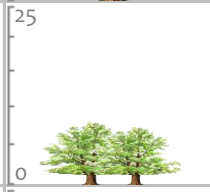
Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m) 9 0 9	Notes	Recommendations (Independent of any development proposals) Priority / Inspect Freq (yrs)	Vigour Physiological Condition Structural Condition	Amenity Value Life Expectancy (yrs) Retention Category
T009	Semi-Mature **Common Holly** Ilex aquifolium.	4.5	2	27	N 2 W 2 E 2 S 2		**Defects:** **No significant defects observed.** Other: Ivy prevented a detailed inspection. Restricted access.	No action required. n/a / 3	Moderate Fair Fair	Low 20-40 C
T010	Semi-Mature **Laurel Cherry** Prunus laurocerasus.	6.5	1.5	23	N 2.5 W 2 E 3 S 3		**Defects:** **No significant defects observed.** Other: Restricted access.	No action required. n/a / 3	Moderate Good Good	Low 40+ C
T011	Semi-Mature **English Yew** Taxus baccata.	8	2	32	N 3.5 W 3.5 E 3.5 S 3.5		**Defects:** **No significant defects observed.** Other: Restricted access.	No action required. n/a / 3	Moderate Good Good	Low 40+ B -
T012	Semi-Mature **Common Ash** Fraxinus excelsior.	7.5	2.5	25	N 2 W 3 E 2 S 2		Position: Adjacent boundary. **Defects:** **No significant defects observed.** Other: Growing against metal rail fence. Recorded stem diameter is equivalent to 2 stems (20cm, and 15cm).	No action required. n/a / 1	Moderate Good Good	Low 10-20 C
T013	Early-Mature **Pedunculate Oak** Quercus robur.	13	3	45	N 2 W 4 E 4.5 S 5		**Defects:** **No significant defects observed.** Other: Ivy and vegetation prevented a detailed inspection.	No action required. n/a / 3	Moderate Good Good	Moderate 40+ B
T014	Young **English Yew** Taxus baccata.	6	0	20	N 3.5 W 3.5 E 3.5 S 3.5		**Defects:** **No significant defects observed.**	No action required. n/a / 3	Moderate Good Good	Low 40+ C
T015	Semi-Mature **Not Identified** Not identified.	5	2	20	N 1 W 1 E 1 S 1		**Defects:** **Dead tree.**	No action required. n/a / 3	Dead Dead Dead	Dead Dead U

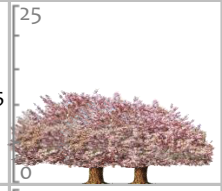
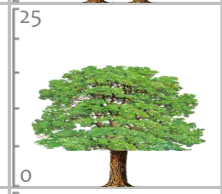
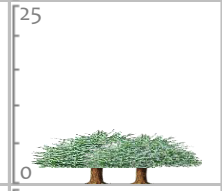
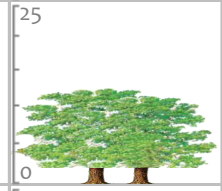
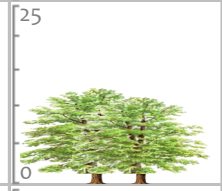
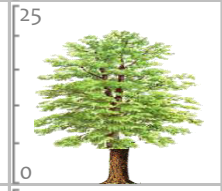
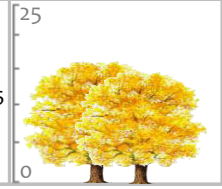
Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m)	Notes	Recommendations (Independent of any development proposals) Priority	Inspect Freq (yrs)	Vigour / Physiological Condition / Structural Condition	Amenity Value / Life Expectancy (yrs) / Retention Category
T016	Mature **Common Ash** Fraxinus excelsior.	20	3.5	80	N 5, W 5, E 5, S 5		**Defects:** **Ash Dieback (60% affected).**	Remove. Moderate	3	Moderate / Poor / Poor	Moderate / <10 / **U**
T017	Semi-Mature **English Yew** Taxus baccata.	7.5	3	34	N 5.5, W 5.5, E 4, S 2		**Defects:** **Significant Included bark.**	No action required. n/a	3	Moderate / Good / Fair	Low / 40+ / C +
T018	Semi-Mature **English Yew** Taxus baccata.	5	1	32	N 5.5, W 3.5, E 5, S 2.5		**Defects:** **No significant defects observed.** Other: Recorded stem diameter is equivalent to 2 stems (20cm, and 25cm).	No action required. n/a	3	Moderate / Good / Good	Low / 40+ / C
T019	Semi-Mature **Holm Oak** Quercus ilex.	4	1.5	28	N 0.5, W 2.5, E 2.5, S 4		Form: Leaning with unbalanced crown. **Defects:** **No significant defects observed.**	No action required. n/a	3	Moderate / Good / Good	Low / 20-40 / C
T020	Semi-Mature **Sycamore** Acer pseudoplatanus.	12	3.5	25	N 3.5, W 3.5, E 3.5, S 3.5		**Defects:** **No significant defects observed.** Other: Ivy prevented a detailed inspection.	No action required. n/a	3	Moderate / Good / Good	Low / 40+ / B -
T021	Mature **Pedunculate Oak** Quercus robur.	17	2.5	99	N 6.5, W 9, E 9, S 9		**Defects:** **No significant defects observed.**	No action required. n/a	1.5	Moderate / Good / Good	Moderate / 40+ / A
T022	Semi-Mature **Cherry** Prunus sp. 'cherry'.	10	2	30	N 4.5, W 3, E 5.5, S 0.5		Form: Leaning. **Defects:** **No significant defects observed.** Other: Ivy prevented a detailed inspection.	No action required. n/a	3	Moderate / Good / Fair	Low / 40+ / C +

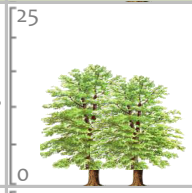
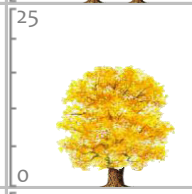
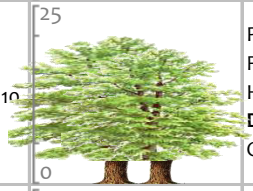
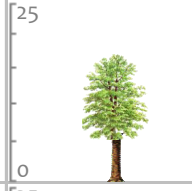
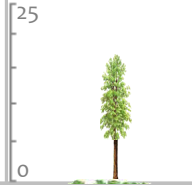
Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m) 9 0 9	Notes	Recommendations (Independent of any development proposals) Priority / Inspect Freq (yrs)	Vigour Physiological Condition Structural Condition	Amenity Value Life Expectancy (yrs) Retention Category
T023	Semi-Mature **Holm Oak** Quercus ilex.	8	2	32	5 3 5 5.5		**Defects:** **No significant defects observed.**	No action required. n/a / 3	Moderate Good Good	Low 40+ **B -**
T024	Early-Mature **Common Ash** Fraxinus excelsior.	15	3	40	5 5 5 5		**Defects:** **No significant defects observed.**	No action required. n/a / 3	Moderate Good Good	Low 40+ C
G025	Semi-Mature **Mixed Species** Mixed species.	av 6.5	av 2	av 20	av 3 3 3 3 each		Form: Group of young to semi mature retention category C specimens including holly, cherry , yew and horse chestnut. **Defects:** **No significant defects observed.**	No action required. n/a / 3	Moderate Good Good	Low 40+ C
T026	Mature **Pedunculate Oak** Quercus robur.	20	1.5	102	8.5 11 7 11		**Defects:** **Significant deadwood. Minor cavities developing at old pruning wounds.**	No action required. n/a / 1.5	Moderate Good Good	Moderate 40+ **A**
T027	Young **English Yew** Taxus baccata.	4	0	22	2.5 2.5 2.5 2.5		**Defects:** **No significant defects observed.**	No action required. n/a / 3	Moderate Good Good	Moderate 40+ C
T028	Mature **Pedunculate Oak** Quercus robur.	21	5	96	8.5 8.5 8.5 10		History: Reduced. **Defects:** **No significant defects observed.**	No action required. n/a / 1.5	Moderate Good Good	High 40+ **A -**
T029	Early-Mature **Lime** Tilia sp.	20	2	67	5.5 5 4.5 4		**Defects:** **No significant defects observed.** Other: Vegetation prevented a detailed inspection.	No action required. n/a / 1.5	Moderate Good Good	High 40+ **B +**

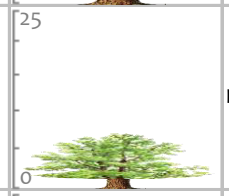
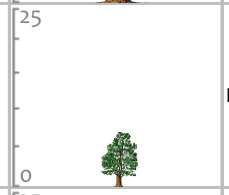
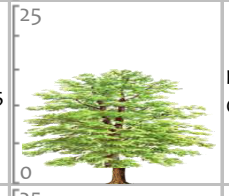
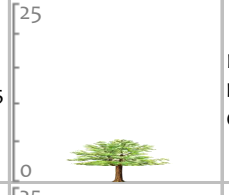
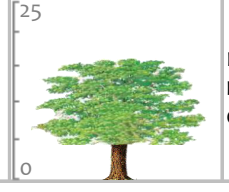
Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m) 9 0 9	Notes	Recommendations (Independent of any development proposals) Priority / Inspect Freq (yrs)	Vigour Physiological Condition Structural Condition	Amenity Value Life Expectancy (yrs) Retention Category
T030	Semi-Mature **Common Holly** Ilex aquifolium.	4.5	0	11	N 2 W 2 E 2 S 2		**Defects:** **No significant defects observed.**	No action required. n/a / 3	Moderate Good Good	Low 40+ C
T031	Semi-Mature **Lime** Tilia sp.	7	1.5	19.8	N 3.5 W 4 E 4 S 3		Form: Multiple stemmed. **Defects:** **No significant defects observed.** Other: Vegetation prevented a detailed inspection. Recorded stem diameter is equivalent to 5 stems (10cm, 10cm, 8cm, 8cm, and 8cm).	No action required. n/a / 3	Moderate Good Good	Low 40+ C +
T032	Semi-Mature **Elm** Ulmus sp.	6	2	16	N 2 W 2 E 2 S 2		**Defects:** **No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required. n/a / 3	Moderate Good Good	Low 10-20 C
T033	Semi-Mature **English Yew** Taxus baccata.	4.5	0	31.3	N 5.5 W 4 E 5 S 4.5		**Defects:** **No significant defects observed.** Other: Recorded stem diameter is equivalent to 4 stems (23cm, 18cm, 8cm, and 8cm).	No action required. n/a / 3	Moderate Good Good	Low 40+ C
T034	Mature **Horse Chestnut** Aesculus hippocastanum.	20	5	173.4	N 13 W 10 E 10 S 10		**Defects:** **Perished fungal fruiting bodies around base (likely fallen from tree). Significant historic branch failures, now decaying stubs. Significant bark wounds to stem.** Other: Recorded stem diameter is equivalent to 2 stems (141cm, and 101cm).	Monitor. Moderate / 1.5	Moderate Good Fair	Moderate 20-40 B
T035	Early-Mature **Pedunculate Oak** Quercus robur.	10	1.5	35	N 4 W 2 E 6 S 5		**Defects:** **No significant defects.** Other: Ivy and vegetation prevented a detailed inspection.	No action required. n/a / 3	Moderate Good Good	Low 40+ B -
T037	Semi-Mature **Common Ash** Fraxinus excelsior.	7	2	25	N 4 W 4 E 4 S 4		**Defects:** **Ash Dieback (50% affected).**	Remove. n/a / 0	Moderate Poor Fair	Low <10 U

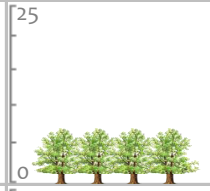
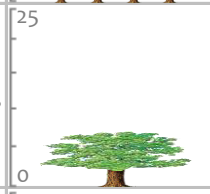
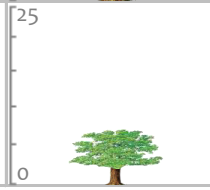
Reference (G = Group, H = Hedge)	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m)	Notes	Recommendations (Independent of any development proposals) Priority	Inspect Freq (yrs)	Vigour / Physiological Condition / Structural Condition	Amenity Value / Life Expectancy (yrs) / Retention Category
T038	Semi-Mature **English Yew** Taxus baccata.	6	0.5	22.6	N 6 W 5.5 E 5.5 S 3		**Defects:** **No significant defects observed.** Other: Limited inspection, dimensions estimated. Recorded stem diameter is equivalent to 3 stems (12cm, 13cm, and 14cm).	No action required. n/a	3	Moderate Good Good	Moderate 40+ C +
T039	Semi-Mature **Holm Oak** Quercus ilex.	6	1.5	19	N 2.5 W 2.5 E 2.5 S 2.5		**Defects:** **No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required. n/a	3	Moderate Good Good	Moderate 40+ C
T040	Semi-Mature **Common Ash** Fraxinus excelsior.	8	2	19	N 4.5 W 3 E 4 S 3		**Defects:** **No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required. n/a	1.5	Moderate Good Good	Moderate 40+ C
G041	Early-Mature **Leyland Cypress** X Cuprocyparis leylandii.	av 15	av 0.5	av 20	N av W 4.5 E 4.5 S 4.5 each		Form: Row of 3 similar specimens. **Defects:** **Dieback to upper canopies**.	Monitor. n/a	1.5	Moderate Fair Good	Moderate 10-20 C
T042	Veteran **Pedunculate Oak** Quercus robur.	18	2.5	147	N 8 W 7 E 8.5 S 8		History: Previously heavily reduced. **Defects:** **Significant deadwood to inner canopy. Cavities present to old wounds. Tear wounds to scaffold limbs. Fungal brackets (likely beefsteak fungus) to stem at c.4m.**	Monitor. n/a	3	Moderate Good Fair	High 40+ A
G043	Semi-Mature **Mixed Species** Mixed species.	av 6	av 1	av 25	N av W 3.5 E 3.5 S 3.5 each		Position: Boundary trees. **Defects:** **No significant defects observed.** Other: Growing against and through metal railing fence.	No action required. n/a	3	Moderate Fair Fair	Low 10-20 C
T044	Early-Mature **Common Ash** Fraxinus excelsior.	18	2.5	56	N 7 W 7 E 7 S 7		**Defects:** **No significant defects observed.**	No action required. n/a	1	Moderate Good Good	Moderate 40+ C +

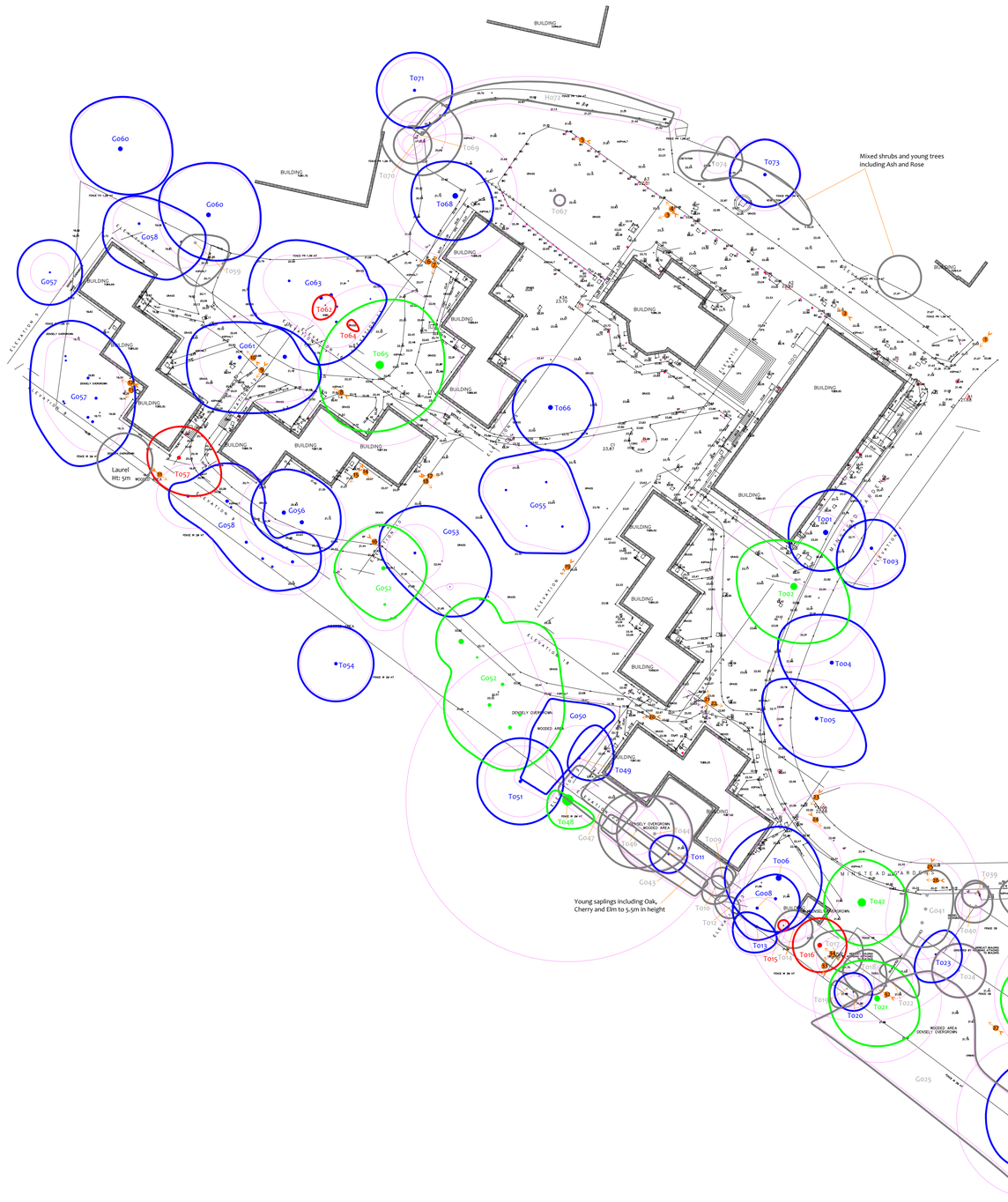
Reference (G = Group, H = Hedge)	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m)	Notes	Recommendations (Independent of any development proposals) Priority	Inspect Freq (yrs)	Vigour / Physiological Condition / Structural Condition	Amenity Value / Life Expectancy (yrs) / Retention Category
T046	Semi-Mature **Common Ash** Fraxinus excelsior.	16	3	37.2	N 7, W 7, E 7, S 7		Form: Leaning. **Defects: No significant defects observed.** Other: Ivy prevented a detailed inspection. Recorded stem diameter is equivalent to 2 stems (22cm, and 30cm).	No action required. n/a	1	Moderate Good Good	Moderate 40+ C
G047	Semi-Mature **Mixed Species** Mixed species.	av 11	av 2	av 20	av 5 each: N 3, W 3, E 3, S 3		Form: Row of close growing specimens including ash and elm. **Defects: Occasional dead tree.**	No action required. n/a	3	Moderate Fair Fair	Low 40+ C
T048	Veteran **Pedunculate Oak** Quercus robur.	7	1	200	N 0.5, W 3, E 6, S 5		Position: Situated on third party land. **Defects: Extensive decay to stem. Little foliage remains.** Other: Very limited inspection due to access and dense vegetation, dimensions estimated.	No action required. n/a	3	Moderate **Very Poor** Poor	Low 10-20 A
T049	Early-Mature **Cherry** Prunus sp. 'cherry'.	11	2.5	50	N 7, W 2, E 6, S 3		**Defects: No significant defects observed.** Other: Ivy prevented a detailed inspection.	No action required. n/a	3	Moderate Fair Good	Moderate 20-40 B -
G050	Semi-Mature **Mixed Species** Mixed species.	av 7	av 0	av 27	av 3.5 each: N 3.5, W 3.5, E 3.5, S 3.5		Form: Group of young to semi mature trees including, ash and oak with brambles and rhododendron. **Defects: No significant defects observed.** Other: Vegetation prevented a detailed inspection.	No action required. n/a	3	Moderate Good Good	Moderate 40+ B -
T051	Early-Mature **Norway Maple** Acer platanoides.	18	2	55	N 8, W 8, E 8, S 8		Position: Situated on third party land. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required. n/a	3	Moderate Good Good	Low 40+ B
G052	Early-Mature **Mixed Species** Mixed species.	av 15	av 2	av 45	av 7 each: N 7, W 7, E 7, S 7		Form: Group of approx 25 trees including oak, ash hawthorn and sycamore. **Defects: No significant defects observed.** Other: Ivy prevented a detailed inspection.	No action required. n/a	1	Moderate Good Good	High 40+ A

Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) W N 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)		
G053	Early-Mature **Bird Cherry** Prunus padus.	av 12	av 1.5	av 44	av 7.5 9.5 6.5 5.5 each		Form: Two close growing specimens. **Defects: No significant defects observed.**	No action required. n/a	3	Moderate Good Good	Moderate 40+ **B**
T054	Early-Mature **Sycamore** Acer pseudoplatanus.	16	5	55	7 7 7 7		Position: Situated on third party land. **Defects: No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required. n/a	3	Moderate Good Good	Low 40+ **B +**
G055	Semi-Mature **Apple** Malus sp.	av 6	av 2	av 36	av 5 6 5 5 each		Form: Group of 4 trees. **Defects: No significant defects observed.**	No action required. n/a	3	Moderate Good Good	Moderate 20-40 **B -**
G056	Early-Mature **Holm Oak** Quercus ilex.	av 12	av 1.5	av 47	av 6 8 7 5.5 each		Form: Two close growing specimens. **Defects: No significant defects observed.**	No action required. n/a	1	Moderate Good Fair	Moderate 40+ **B**
G057	Early-Mature **Mixed Species** Mixed species.	av 12	av 1	av 30	av 6 6 6 6 each		Form: Group of approx 10 trees. **Defects: Occasional dead specimens.** Other: Limited inspection, dimensions estimated.	Remove dead trees. Moderate	3	Moderate Good Fair	Moderate 40+ **B -**
T057	Early-Mature **Common Ash** Fraxinus excelsior.	21	5	64	6 6 6 9 6		**Defects: Ash Dieback (30% affected).**	Remove. Moderate	0	Low Poor Fair	Moderate <10 **U**
G058	Early-Mature **Robinia** Robinia sp.	av 16	av 1.5	av 40	av 6 5 4.5 8 each		Form: Two close growing specimens. History: Reduced. **Defects: Significant bark wounds.**	Monitor. Moderate	1.5	Moderate Good Good	High 40+ **B**

Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) W N 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
						9 0 9		Priority	Inspect Freq (yrs)		
G058	Early-Mature **Mixed Species** Mixed species.	av 16	av 2	av 30	av 4.5 4.5 4.5 4.5 each		Form: Group of approx 15 mixed semi and early mature trees including Robin in, norway maple and ash. **Defects:** **Significant deadwood over footpath.**	Remove deadwood.	High 1.5	Moderate Good Good	Moderate 40+ **B**
T059	Early-Mature **Robinia** Robinia sp.	16	2	50	1.5 2.5 6 8		Form: Leaning. **Defects:** **Major bark wound to main stem.**	Monitor.	High 1	Moderate Good Fair	High 10-20 **C**
G060	Mature **Common Ash** Fraxinus excelsior.	av 20	av 3	av 78	av 10 10 10 8 each		Position: Situated on third party land. Form: Row of three trees (two mature). History: Reduced. **Defects:** **No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required.	n/a 1	Moderate Good Good	High 40+ **B**
G061	Early-Mature **Common Ash** Fraxinus excelsior.	av 20	av 1.5	av 55	av 4.5 9 8 11 each		Form: Two close growing specimens. **Defects:** **Significant Included bark and minor cavities too east specimen. Minor deadwood throughout.**	No action required.	n/a 1	Moderate Fair Good	High 20-40 **B -**
T062	Semi-Mature **Common Ash** Fraxinus excelsior.	17	6	21	2 2 2 3		**Defects:** **Symptoms of ash Dieback and a significant decay column with Inonotus hispidus.**	Remove.	High 3	Low Poor Poor	Moderate <10 **U**
G063	Early-Mature **Common Ash** Fraxinus excelsior.	av 18	av 2	av 40	av 7 7 7 7 each		Form: Group of approximately 12 trees, mainly early mature ash with c.4 hawthorn. **Defects:** **Occasional significant deadwood (low target occupancy).**	No action required.	n/a 1	Moderate Fair Fair	High 40+ **B -**
T064	Semi-Mature **Common Ash** Fraxinus excelsior.	17	6	4	1 0.5 2 0.5		**Defects:** **Symptoms of ash dieback and a significant cavity.**	Remove.	High 3	Low Poor Poor	Moderate <10 **U**

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
T065	Mature **London Plane** Platanus x hispanica.	26	1.5	146	N 13, W 11, E 12, S 13		History: Reduced. **Defects:** **Occasional minor cavities.**	No action required. n/a / 1	Moderate Good Fair	High 40+ **A**
T066	Early-Mature **English Yew** Taxus baccata.	6.5	1	80	N 8, W 7, E 8, S 8		**Defects:** **No significant defects observed.**	No action required. n/a / 3	Moderate Good Good	Moderate 40+ **B**
T067	Semi-Mature **Cedar** Cedrus sp.	6	0	10	N 1, W 1, E 1, S 1		**Defects:** **No significant defects observed.**	No action required. n/a / 3	Moderate Good Good	Low 40+ **C**
T068	Early-Mature **Holm Oak** Quercus ilex.	14	2	96	N 6, W 8, E 8, S 8.5		History: Reduced. **Defects:** **Minor cavity.**	No action required. n/a / 1.5	Moderate Good Good	Moderate 40+ **B**
T069	Semi-Mature **Common Ash** Fraxinus excelsior.	15	2	37.7	N 7, W 7.5, E 7.5, S 7.5		**Defects:** **No significant defects observed.** Other: Recorded stem diameter is equivalent to 2 stems (32cm, and 20cm).	No action required. n/a / 1	Moderate Fair Good	Moderate 20-40 **C**
T070	Semi-Mature **Cockspur Hawthorn** Crataegus crus-galli.	4	1.5	15.7	N 3.5, W 3.5, E 3.5, S 3.5		Position: Situated on third party land. **Defects:** **No significant defects observed.** Other: Recorded stem diameter is equivalent to 3 stems (8cm, 9cm, and 10cm).	No action required. n/a / 3	Moderate Good Good	Moderate 40+ **C**
T071	Early-Mature **Oak** Quercus sp.	16	5	50	N 7, W 7, E 7, S 7		Position: Situated on third party land. **Defects:** **No significant defects observed.** Other: Limited inspection, dimensions estimated.	No action required. n/a / 3	Moderate Good Good	High 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
H072	Semi-Mature **English Yew** Taxus baccata.	6.5	0	15	2.5 2.5 2.5 2.5		Form: Row of trimmed yew. **Defects: No significant defects observed.** Other: Vegetation prevented a detailed inspection.	No action required. n/a / 3	Moderate Good Good	Moderate 40+ C
T073	Early-Mature **Holm Oak** Quercus ilex.	6.5	1.5	55.7	6.5 6.5 6.5 6		**Defects: No significant defects observed.** Other: Ivy prevented a detailed inspection. Recorded stem diameter is equivalent to 4 stems (20cm, 30cm, 30cm, and 30cm).	No action required. n/a / 3	Moderate Good Good	Moderate 40+ B
T074	Semi-Mature **Holm Oak** Quercus ilex.	6.5	1.5	28.3	4 0.5 5 5		**Defects: No significant defects observed.** Other: Ivy prevented a detailed inspection. Recorded stem diameter is equivalent to 2 stems (20cm).	No action required. n/a / 3	Moderate Good Good	Moderate 40+ C



Drawing No:	CCL 12056 / TCP	Rev: 1
Title:	Tree Constraints Plan (Existing Layout)	
Site:	Minstead Gardens SW15 4EE	
Scale: 1:500	0 5 10 15 20m	Paper Size: A1

CROWN
Arboricultural Consultants
01422 316660

Tree Retention Categories
Stems & canopies shown

- Category A tree
- Category B tree
- Category C tree
- Category U 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.

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

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

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.

Tree Ref.	Species	Height (m)	Root Protection Area		
			Radius (m)	m²	Square (m)
T001	Holm Oak	17	10.6	350	18.7
T002	Pedunculate Oak	18	14.9	696	26.4
T003	Holm Oak	14	6.6	137	11.7
T004	London Plane	17	7.9	197	14.0
T005	London Plane	17	7.2	163	12.8
T006	Holm Oak	16	12.0	452	21.3
G008	Robinia	15	6.6	137	11.7
T009	Common Holly	4.5	3.2	33	5.7
T010	Laurel Cherry	6.5	2.8	24	4.9
T011	English Yew	8	3.8	46	6.8
T012	Common Ash	7.5	3.0	28	5.3
T013	Pedunculate Oak	13	5.4	92	9.6
T014	English Yew	6	2.4	18	4.3
T015	Not Identified	5	2.4	18	4.3
T016	Common Ash	20	9.6	290	17.0
T017	English Yew	7.5	4.1	52	7.2
T018	English Yew	5	3.8	46	6.8
T019	Holm Oak	4	3.4	35	6.0
T020	Sycamore	12	3.0	28	5.3
T021	Pedunculate Oak	17	11.9	443	21.1
T022	Cherry	10	3.6	41	6.4
T023	Holm Oak	8	3.8	46	6.8
T024	Common Ash	15	4.8	72	8.5
G025	Mixed Species	6.5	2.4	18	4.3
T026	Pedunculate Oak	20	12.2	471	21.7
T027	English Yew	4	2.6	22	4.7
T028	Pedunculate Oak	21	11.5	417	20.4
T029	Lime	20	8.0	203	14.3
T030	Common Holly	4.5	1.3	5	2.3
T031	Lime	7	2.4	18	4.2
T032	Elm	6	1.9	12	3.4
T033	English Yew	4.5	3.8	44	6.7
T034	Horse Chestnut	20	20.8	1360	36.9
T035	Pedunculate Oak	10	4.2	55	7.4
T037	Common Ash	7	3.0	28	5.3
T038	English Yew	6	2.7	23	4.8
T039	Holm Oak	6	2.3	16	4.0
T040	Common Ash	8	2.3	16	4.0
G041	Leyland Cypress	15	2.4	18	4.3
T042	Pedunculate Oak	18	17.6	978	31.3
G043	Mixed Species	6	3.0	28	5.3
T044	Common Ash	18	6.7	142	11.9
T046	Common Ash	16	4.5	63	7.9
G047	Mixed Species	11	2.4	18	4.3
T048	Pedunculate Oak	7	24.0	1810	42.5
T049	Cherry	11	6.0	113	10.6
G050	Mixed Species	7	3.2	33	5.7
T051	Norway Maple	18	6.6	137	11.7
G052	Mixed Species	15	5.4	92	9.6
G053	Bird Cherry	12	5.3	88	9.4
T054	Sycamore	16	6.6	137	11.7
G055	Apple	6	4.3	59	7.7
G056	Holm Oak	12	5.6	100	10.0
G057	Mixed Species	12	3.6	41	6.4
T057	Common Ash	21	7.7	185	13.6
G058	Robinia	16	4.8	72	8.5
G058	Mixed Species	16	3.6	41	6.4
T059	Robinia	16	6.0	113	10.6
G060	Common Ash	20	9.4	275	16.6
G061	Common Ash	20	6.6	137	11.7
T062	Common Ash	17	2.5	20	4.5
G063	Common Ash	18	4.8	72	8.5
T064	Common Ash	17	0.5	1	0.9
T065	London Plane	26	17.5	964	31.1
T066	English Yew	6.5	9.8	290	17.0
T067	Cedar	6	1.2	5	2.1
T068	Holm Oak	14	11.5	417	20.4
T069	Common Ash	15	4.5	64	8.0
T070	Cockspur Hawthorn	4	1.9	11	3.3
T071	Oak	16	6.0	113	10.6
H072	English Yew	6.5	1.8	10	3.2
T073	Holm Oak	6.5	6.7	140	11.8
T074	Holm Oak	6.5	3.4	36	6.0