



PREPARED FOR
Mrs. Jane Bray

SITE LOCATION
Land adjacent to Braeside House, 49
Bishopstoke Road, Bishopstoke,
Southampton, SO50 6BF

ARBORICULTURAL IMPACT **ASSESSMENT**

August 2025

#WEARE**INNOVATORS**

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Site Summary

Description		
Site Name/Address	Land adjacent to Braeside House, 49 Bishopstoke Road, Bishopstoke, Southampton, SO50 6BF	
Site Ordnance Survey National Grid Reference	SU 46433 19196	
Local Planning Authority	Eastleigh Borough Council	
Planning Application Reference Number	NA.	
Statutory Constraints	Tree Preservation Order/s	Conservation Area
	Yes	Yes

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1. Introduction

1.1 Terms of instruction

- 1.1.1 Andrew Burgess Planning Limited on behalf of Mrs. Jane Bray (hereafter the 'Client') commissioned Arb Innovators Ltd ('Arb Innovators') to prepare an Arboricultural Impact Assessment (AIA) at Land adjacent to Braeside House, 49 Bishopstoke Road, Bishopstoke, Southampton, SO50 6BF (hereafter referred to as the 'Site') in accordance with *BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations* (The British Standards Institution, 2012), hereafter referred to as 'BS5837:2012'.
- 1.1.2 This assessment has been prepared by Callum Throw (*N. Dip Arb, MArborA, PTI*) Managing Director and Principal Arboricultural Consultant at Arb Innovators. Callum is an experienced Arboricultural Consultant possessing over 15 years' experience with specialism in Urban Forestry and trees in relation to development.

1.2 Purpose of this Arboricultural Assessment

- 1.2.1 The information provided is compliant with BS5837:2012 (Table B.1), national standard planning application validation requirements, and is prepared to accompany a Full planning application to Local Planning Authority (LPA), Eastleigh Borough Council (EBC).
- 1.2.2 This report describes the findings of a walkover survey, a desktop assessment of statutory constraints, the known and anticipated effects that granting planning permission would have on the existing trees, and subsequent recommendations and mitigation measures that should be incorporated in the Proposed Development.

1.3 Scope of this Arboricultural Assessment

- 1.3.1 Trees may form a constraint to the Proposed Development and therefore the methodology as set out in BS5837:2012 has been adhered to. This report broadly comprises four stages:
1. Undertake a survey of trees on the Site and those within the Study Area (a 15m buffer or "influencing distance" based on the surveyor's discretion) to fulfil the requirements of BS5837:2012.
 2. Provide a Tree Constraints Plan (TCP) demonstrating the above and below-ground constraints; including canopy extents and Root Protection Areas (RPA), of those trees recorded.
 3. Provide an AIA which includes a Tree Retention and Removals Plan (TRRP) to assess the impacts and effects which are likely to arise from the Proposed Development and identify mitigation for retained trees, where necessary.
 4. Provide an AMS and TPP outlining an overview of how retained trees will be protected and managed during on-site demolition and construction activities.
- 1.3.2 The results and recommendations in this report are valid for a maximum of two years from the date of the survey.

2. The Site and Proposed Development Description

2.1 Site Overview and Description

2.1.1 Table 1 provides a description of the Site and arboricultural Study Area, which is denoted by a yellow line on Figure 1.

Table 1 Site Location, Description and General Overview

	Description
Site Description	49 Bishopstoke Road fronts the B3037 on the eastern approach to Eastleigh, about 1km from the town centre. The plot occupies level ground on the Itchen floodplain; immediately north-west lie the council-managed Bishopstoke Recreation Ground. The River Itchen and River Itchen Way bounds the western boundary of the Site.
Date of walkover Tree Survey	15 July 2025

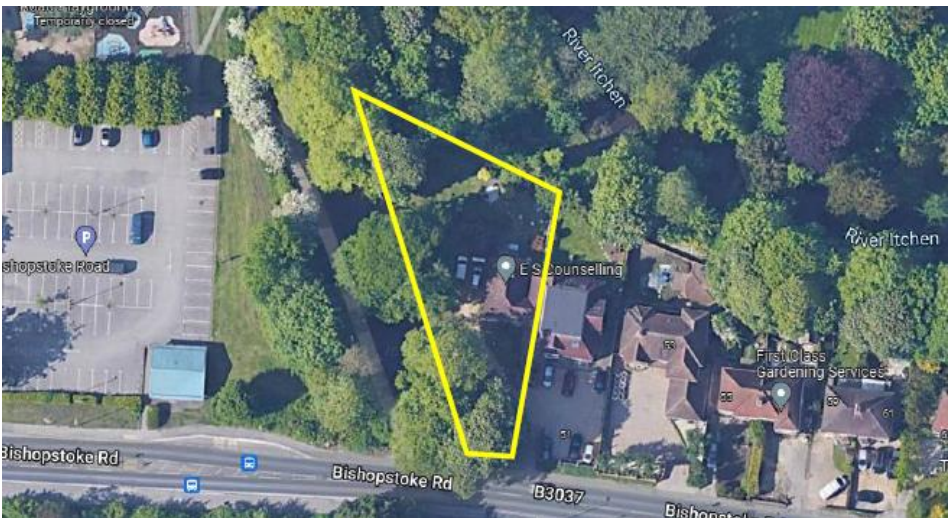


Figure 1 Approximate site boundary. Image taken from previous Arboricultural Report (Barrell Tree Consultancy, Ref. 22113-AA-LF) and is illustrative only.

2.2 Proposed Development Description

2.2.1 Table 2 provides a description of the Proposed Development which is shown on the TRRP at Appendix 3.

Table 2 Proposed Development Description and General Overview

	Description
Proposed Development Description	Proposed side and rear extension and conversion with associated car parking provision and driveway alterations.

3. Summary of Relevant Legislation and Planning Policy

3.1.1 This report has been compiled with reference to the following legislation and both national and local planning policy.

3.2 Legislation Relevant to Arboriculture

- The Town and Country Planning Act 1990.
- The Town and Country Planning (Tree Preservation) (England) Regulations 2012.
- The Forestry Act 1967
- The Occupiers Liability Act (1957 and 1984)

3.2.1 Other legislation that affords a lesser or indirect level of protection to trees includes the following:

- The Wildlife & Countryside Act 1981 (as amended).
- Conservation of Species and Habitat Regulations 2017 (as amended).
- Natural Environment and Rural Communities Act 2006 (Section 41 England and Section 42 Wales).
- Hedgerow Regulations (1997).

3.3 National Planning Policy

- National Planning Policy Framework (NPPF), 2023¹

3.4 Local Planning Policy Relevant to Arboriculture

- Eastleigh Borough Local Plan 2016-2036, Schedule of Main Modifications (Adopted May 2021), Policy SP12: Green Infrastructure²
 - **Strategic Policy S1** – Delivering Sustainable Development – Requires all new development to maintain, enhance, extend and connect natural habitats, securing an overall environmental (and canopy) net-gain.
 - **Trees & Development SPD (adopted April 2022)** - provides the borough-specific methodology for BS5837 tree surveys, protection measures and *on-site replacement ratios* where losses are unavoidable, forming the practical benchmark for arboricultural submissions.
 - **Eastleigh Tree Strategy 2022-2030 & Tree Replacement Policy** – Sets a borough-wide target to increase canopy cover and obliges applicants to *replace felled trees on-site before any off-site biodiversity offset is considered*.

3.5 Related Guidance

- British Standards Institution. (2010). British Standard 3998:2010, Tree Work - Recommendations. British Standards Institution, London.

¹ National Planning Policy Framework (2023) [Online]. Available at < https://assets.publishing.service.gov.uk/media/65a11af7e8f5ec000f1f8c46/NPPF_December_2023.pdf > (Last Accessed January 2025).

² Eastleigh Borough Local Plan 2016-2036, Schedule of Main Modifications, Eastleigh Borough Council [Online]. Available at < <https://www.eastleigh.gov.uk/media/9708/main-modifications-schedule.pdf> > (Last Accessed August 2025).

- Natural England and Forestry Commission. (2022). Guidance – Ancient woodland, ancient trees and veteran trees: advice for making planning decisions.
- Tree Council & Ancient Tree Forum Ancient Tree Forum, Lonsdale, D (ed.) (2013) Ancient and other Veteran Trees: Further Guidance on Management.
- Woodland Trust (n.d.) (2024) Recognising and categorising ancient and other veteran trees.
- Royal Institute of British Architects, RIBA Plan of Work 2020 Overview, RIBA (2020).

4. Baseline Arboricultural Data

4.1 Arboricultural Desk Study

- 4.1.1 A Desk Study has been undertaken as a means of identifying if any statutory and non-statutory constraints or designations are present within the Site and Study Area. This Desk Study includes consideration of the following environmental constraints:
- Tree Preservation Orders (TPO).
 - Conservation Areas.
 - Ancient Woodland.
 - Ancient, Veteran, or Notable trees.
- 4.1.2 An assessment of statutory and non-statutory constraints has been carried out using publicly accessible third-party information and aerial imagery. While this is deemed to be broadly accurate, in some instances no specific date is given for the information and images used and Arb Innovators cannot and will not accept liability for any deficiencies in third-party information.

Presence of Tree Preservation Orders and Conservation Areas

- 4.1.3 At the time of writing this assessment, a check was carried out through the Eastleigh Borough Council website³ which confirmed that there is a group TPO on the trees (LPA reference 69-H) and that the Site is within the Bishopstoke Conservation Area.
- 4.1.4 It should be noted that online interactive mapping is provided for reference only and is not intended to be definitive. Provisional Tree Preservation Orders (TPO) may be made whenever a local planning authority deems it appropriate and a TPO can be made at any time. The LPA should be contacted prior to commencement of any tree works or tree removals specified within this report.

Presence of Ancient Woodland

- 4.1.5 The presence of ancient woodland designation within or bordering the Site was checked using Natural England's Multi Agency Geographical Information for the Countryside (MAGIC) map⁴ on 03 August 2025. In accordance with NPPF, an ancient woodland is an area in England that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites.
- 4.1.6 The site does not contain Ancient and Semi-Natural Woodland (ANSW) nor Planation on Ancient Woodland Site (PAWS). The Site was absent of these non-statutory designations and it therefore not necessary to consider the requirements of paragraph 186(c) of the NPPF.

³ My Eastleigh, Eastleigh Borough Council [Online]. Available at: < https://my.eastleigh.gov.uk/s/quick-report-it?servShortRef=TREES_TPO&_gl=1*c2v62g*_ga*MTQ1MDE2NTAuMTc1NDIxNDI4NQ.*_ga_5PWZG3WNYJ*cZ3NTQyMjI3NzkkbZlkZzEkdDE3NTQyMjMwOTEkaYwJGwwJGQw > (Last Accessed 03 August 2025).

⁴ Magic (DEFRA), 2018. Multi Agency Geographic Information for the Countryside [Online]. Available at: < <https://magic.defra.gov.uk/MagicMap.aspx> > (Last Accessed 03 August 2025).

Presence of Ancient, Veteran and Notable trees

- 4.1.7 The presence of Ancient, Veteran, or Notable trees⁵ associated with the Site were checked using Woodland Trust's Ancient Tree Inventory on 03 August 2025. It should be noted that this inventory is based on volunteer-submitted records, and its limitations should be acknowledged.
- 4.1.8 The Site was absent of this non-statutory designation and it therefore not necessary to consider the requirements of paragraph 186(c)(d) of the NPPF.

⁵ Ancient Tree Inventory, 2018. Ancient Tree Inventory [Online]. Available at: < <https://ati.woodlandtrust.org.uk> > (Last Accessed 03 August 2025).

5. Arboricultural Walkover Survey

5.1 Brief BS5837:2012 Methodology

- 5.1.1 The BS5837:2012 Tree Survey Schedule at Appendix 2 provides specific details for each feature recorded, including height, stem diameter, crown spread, crown clearance, age class, physiological and structural conditions, and recommendations for preliminary management, where relevant. Trees located beyond the Site boundaries within up to 15m have also been included where they may influence development potential.
- 5.1.2 The tree numbers associated with each recorded feature are cross-referenced within the schedule and arboricultural plans at Appendix 2 and Appendix 3 respectively.
- 5.1.3 Full details of the walkover tree survey methodology used are provided in Appendix 1.

BS5837:2012 Quality Assessment

- 5.1.4 Trees were categorised by quality in accordance with BS5837:2012, section 4.5, using the quality categories A, B, C, and U. The objective of the tree categorisation method is to identify the quality and value (in a non-financial sense) of the arboricultural features recorded to make an informed decision about which features should be removed or retained if development occurs.
- Category A - Trees that are particularly good examples of their species, especially if rare or unusual. High quality trees with an estimated remaining life expectancy of at least 40 years.
 - Category B - Downgraded from category A because of impaired condition or lacking the quality necessary to merit category A. Moderate quality trees with an estimated remaining life expectancy of at least 20 years.
 - Category C - Unremarkable trees of limited merit which could be retained but are not a significant constraint. Low quality trees with an estimated remaining life expectancy of at least 10 years, or young trees with stem diameters below 150mm.
 - Category U - Trees in such an impaired condition that they should be removed and cannot realistically be retained as living trees for longer than 10 years.
- 5.1.5 The quality of each arboricultural feature is defined based on its sub-category. Sub-categories carry equal weight and should not be used to influence retention priority. Sub-categories 1, 2 and 3 are intended to reflect arboricultural, landscape and cultural values, respectively.
- 5.1.6 It should be noted that Table 1 of BS5837:2012 only includes suggestions for the remaining years. A tree may have a longer remaining life than stated, but it is nevertheless classified as a lower category due to its maturity, condition, or overall influence on the application site.

Ancient and Veteran Trees

- 5.1.7 BS5837:2012 does not reference a methodology for identifying and recording ancient, veteran, or notable trees. While 'Veteran' is defined in paragraph 3.12 of BS5837:2012, neither 'Ancient' nor 'Notable' are mentioned and owing to the complexity and subjectivity of this subject, there are various methods for defining and classifying Ancient, Veteran, and Notable trees.

- 5.1.8
- The terms ‘ancient’ and ‘veteran’ are sometimes used interchangeably but it is important to understand that although all ancient trees are considered veteran trees, not all veteran trees are ancient.
- 5.1.9
- For this BS5837:2012 assessment, the methodology for defining and classifying these irreplaceable trees as set out by the Woodland Trust (n.d.) (2024) *Recognising and categorising ancient and other veteran trees* has been adopted.
- **Ancient trees** ‘have developed beyond maturity into the ancient life phase and/or are chronologically old in comparison to other trees of the same species.’
- **Veteran trees** ‘are mature trees which, due to their life or environment, have significant decay features (a physical attribute they share with ancient trees) but are neither developmentally nor chronologically ancient.’

5.2 Arboricultural Walkover Survey Summary

- 5.2.1
- A previous walkover tree survey was conducted by Barrell Tree Consultancy on 12 August 2022 and recorded 26no. arboricultural features. For this assessment and in the interests of consistency, the previously recorded data was updated on 15 July 2025. Since the previous survey, 1no. tree (T2) has been removed. A summary of the remaining 25no. features have been provided in Table 3 and in the following paragraphs.

Table 3 Arboricultural features recorded and their quality categories in accordance with BS5837:2012

	Category A	Category B	Category C	Category U
Trees	0	7	14	4

Structural condition of trees T3, T4, T5, T6, T8 and T13

- 5.2.2
- Trees T3, T4, T5, T6, T8 and T13 are all large trees of a similar age that form a prominent landscape feature along the westerly boundary adjacent to the River Itchen and are subject to a TPO (reference: 69-H). Each of the trees have structural issues, some of which more severe than others, and have been categorised as either Category C (low quality), or unsuitable for retention (Category U). Consideration should be given to retain the low-quality trees in the short term, but they will require risk-reduction pruning following a more advanced, detailed tree inspection. and to do so, and so in this context we have shown them for retention with the appropriate
- 5.2.3
- The Category U trees are unsuitable for retention in the long-term and are not considered a significant constraint to the Proposed Development.

5.3 Tree Preservation Orders and Conservation Areas

- 5.3.1
- The arboricultural features recoded on Site and afforded statutory protection by virtue of a TPO and/or conservation area, are listed in Table 4.

Table 4 Arboricultural Features subject to a Conservation Area

TPO and Conservation Area Name/Reference	Designation Date	Arb Innovators Tree Reference
Bishopstoke Conservation Area.	Unknown	All trees subject to this assessment
69-H	Unknown	All trees subject to this assessment

5.4 Tree Constraints Plan (TCP)

- 5.4.1 The location of each arboricultural feature and their associated constraints are illustrated on the TCP at Appendix 3. The purpose of the TCP is to visually identify the current above and below-ground constraints imposed by existing arboricultural features in terms of stem, crown, and roots, along with any other notable constraints or exiting Site features. When determining future land use or compiling an outline or detailed scheme design, this information must be considered.
- 5.4.2 All tree constraints were mapped using Quantum Geographic Information System (QGIS) and Qfield in the field, where a combination of on-site GPS, OS VectorMap (.dwg) and aerial imagery has been used to plot the location of trees and their surrounding context. A Topographical Survey has been provided and forms the base mapping of the TCP.

Root Protection Areas (RPA)

- 5.4.3 A theoretical RPA has been calculated for all arboricultural features in accordance with BS5837:2012 and are demonstrated as pink dashed circles on the TCP provided at Appendix 3. With reference to BS5837:2012, an RPA is defined as *“a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree’s viability, and where the protection of the roots and soil structure should be treated as a priority”*.
- 5.4.4 Numerical RPA data (radius and area in m²) is tabulated in the Tree Schedule at Appendix 2. All stem diameters were measured in accordance with BS5837:2012 Annex C, with RPA delineation guided by Annex D.
- 5.4.5 For single-stemmed trees, the RPA is calculated as a circle with a radius of 12× the stem diameter (measured at 1.5m above ground level). Multi-stemmed trees require one of two approaches:
- Dominant stem method: Use the diameter of the largest stem.
 - Aggregate method: Sum the diameters of all stems exceeding 25mm.
- 5.4.6 In other cases, root growth could have been impeded by existing, poor growing environments, built form comprising foundations, grey infrastructure such as retaining walls, or ditches and water courses, meaning that a simple circular root protection area may not be appropriate.
- 5.4.7 Paragraph 4.6.2 of BS5837:2012 states that, *“where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced”* noting that *“modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution”*.

- 5.4.8 There were existing incursions into trees several trees from the driveway, and further incursions from the garage within the notional RPA of T13. These were historic to the Site and are likely to have impeded root distribution in these areas. BS5837:2012 (paragraphs 4.6.2 & 4.6.3) makes provision for adjusting the nominal circular RPA, if justified by pre-existing Site conditions or other factors. In this instance, this cannot be reasonably applied to these trees because of the river that runs along the western boundary and consideration of the other structures which will have also likely affected root growth. Predicting where the roots are would not provide reliable information.

6. Arboricultural Impact Assessment (AIA)

6.1.1 This AIA is undertaken with reference to BS5837:2012 and considers the nature of the Proposed Development.

6.2 Purpose of the AIA

6.2.1 The purpose of the AIA is to assess the anticipated direct and indirect impacts and effects associated with construction of the Proposed Development on existing trees, as described and to the best of our knowledge with the information provided at the time of writing. Section 7.0 of this AIA also includes details on necessary protection, mitigation, and compensation measures where these are deemed appropriate.

6.3 Assumptions and Limitations of the AIA

6.3.1 This AIA has been compiled based on the following assumptions and limitations:

Assumptions

- It is assumed that trees T20-T25 are situated offsite, within third-party land, and will not be removed to facilitate the Proposed Development.
- All proposed demolition and construction activities will be restricted to the immediate application area and not into areas of third-party land.
- The storage of plant, machinery, and materials will be located outside of RPAs and away from tree crowns, soft verges, and grassed areas. Existing hard surfacing at the front of the Site will be used whenever possible for plant movement and material storage.
- The installation of new underground utilities, services, and surface water drains, as well as details on enabling works, such as the installation or diversion of services and utilities by statutory undertakers, is unlikely to be required within the perceived RPAs of retained trees.
- If deemed necessary, the methodology for the installation, maintenance or removal of any services within an RPA will be in accordance with *NJUG Volume 4 'Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees'*.

Limitations

- Foundation design, excavation requirements, and changes in ground levels have not been shared in detail.
- The assessment relies heavily on the accuracy and completeness of the information provided at the time of writing. Any discrepancies or omissions in this information could affect the validity of the assessment.
- This AIA does not consider the impacts, mitigation, or compensation measures for trees affected by other current or previous planning applications. It is recommended to cross-reference with such applications, where relevant, to assess any cumulative impacts on the site's arboricultural resources.

6.4 Reference Documents

6.4.1 As background information, the documentation listed in Table 5 below has been cited. This report should be read in conjunction with the reference materials listed.

Table 5 Reference Document and Plans Provided

Document/Drawing Description	Reference No.	Prepared By	Date
Topographical Survey	2078 survey 49 Bishopstoke Road	Unknown	Unknown
Proposed Development Layout	2238 ARB Master	Temple Ford Design Ltd Architects	Unknown

6.5 Anticipated Arboricultural Impacts from the Proposed Development

- 6.5.1 A TRRP is provided at Appendix 3 which illustrates the relationship between the above and below-ground constraints, including the RPAs of retained trees, and the direct and indirect impacts of the Proposed Development.
- 6.5.2 Where possible, a magnitude of impact has been assigned as per the definitions in Table 6, which balances the magnitude of physical change (e.g. RPA incursion, canopy, amenity, and perceived biodiversity loss) with the sensitivity and public value of the affected trees. Any residual effects are evaluated after mitigation in line with BS5837:2012 and current industry best practice.

Table 6 Arboricultural and Landscape Impact Scale

Magnitude	Definition	Typical Residual Effect*	Illustrative triggers**
Neutral	No feasible impact to any arboricultural feature or material changes in tree health, structure or the character of public/private views.	None.	Removal of Category U feature or understory shrubs with no street-scene contribution may be appropriate.
Negligible	Minor material changes unlikely to be at detriment to tree health, structure or the character of public/private views.	None.	Removal of several low-quality (C1, C2, C3) features/understory tree or shrub with no public amenity value.
Low	Canopy or roots impacts which do not meet the definitions of 'high' or 'moderate' and are unlikely to have a long-term impact on the condition of the arboricultural feature/s, with only a localised reduction in visual amenity.	< 5 yrs with normal management; mitigation feasible to limit impacts, no reduction in BS5837:2012 category. Compensatory planting recommended.	≤ 20% RPA incursion by low-impact surfacing or excavation to a low-quality feature; removal of visually prominent low quality C1 (individual) features and/or complete loss or > 40% canopy loss from low quality groups or woodlands (C2, C3).

Magnitude	Definition	Typical Residual Effect*	Illustrative triggers**
Moderate	Substantial canopy or root impacts that could lower retention value of the feature or result in the loss of arboricultural and biodiversity resource.	Mid-term (15+ years) but ultimately recoverable deficit if recommended mitigation succeeds. Compensatory planting essential.	≤ 20% RPA incursion by low-impact surfacing or excavation to moderate-quality features (B1, B2, B3); loss of Category B1, B2, B3 features screened from wider public views.
High	Major adverse change impacting long-term viability or pronounced degradation of arboricultural, amenity and biodiversity value. Irreversible loss of key arboricultural assets (Category B1, B2, B3 and A1, A2, A3) that conflicts with national and local planning policy objectives or statutory conservation designations.	Long-term (25+ years) deficit even with best-practice mitigation and compensation; could be grounds for refusal.	> 20% RPA incursion to a retained feature requiring extensive mitigation measures; removal of several visually prominent Category B1, B2, B3 features; removal of one or more Category A1, A2, A3 features.

*Residual effect = condition/amenity level after the mitigation specified (replacement planting, no-dig cellular-confinement paths, etc.). **Indicative only.

Arboricultural Features to be Removed

- 6.5.3 It is recommended that 1no. low-quality tree (T26) subject to this assessment is removed to facilitate the Proposed Development. Furthermore, it is recommended that several trees of poor overall physiological and structural condition (Category U) are heavily reduced the interests of sound arboricultural management and appropriate tree risk management.

Table 7 Summary of the features impacted by the Proposed Development

	Category A	Category B	Category C	Category U*
Retain (*subject to tree management)		T16, T18, T19, T20	T8, T10, T11, T17, T21, T22, T23, T24, T25	T5, T6, T9, T14
Retain using mitigation		T1, T7, T15	T3, T4, T12, T13	
TOTAL	0	7	13	4
Remove in full			T26	
TOTAL	0	0	1	0

- 6.5.4 The loss of 1no. low-quality tree (T26) to the rear of the Site will be removed, but it offers little to no visual amenity in the wider landscape owing to its small proportions, and so there will be no impact on local character. Furthermore, the significant boundary tree cover will remain intact, and no moderate quality (Category B) trees will be removed, subject to appropriate pruning and targeted tree management in response to their general condition, as discussed at 5.2.2. The the residual impact from T26's removal is likely to persist in the short-term only (10-15 years) and is considered **negligible**.

6.6 Direct Impacts to RPAs of Retained Trees

- 6.6.1 The default position under BS 5837:2012 is for all permanent and temporary structures to be positioned outside the RPAs of trees to be retained. This extends to earthworks, including cut-and-fill operations, excavation and trenching works. Where incursion is unavoidable its extent shall be reduced to the lowest practicable level (para. 5.3.1). BS5837:2012 further states that such incursion *"should not exceed 20 % of any existing unsurfaced ground within the RPA."*
- 6.6.2 The greatest constraint to the Proposed Development is presented by the nominal RPAs of low-quality trees T4 and T13, and moderate quality tree T15. No new encroachment into the RPAs of T4 or T15 is presently proposed however, excavation of soils will be required within the notional RPA of T13. The circular RPA calculated in accordance with BS5837:2012 is indicative only; historic compaction from the gravel driveway and detached garage (set to be converted) to the rear of the existing property, are likely to have modified the actual rooting area.

Excavation within the RPA of T13

- 6.6.3 It is assumed that the existing foundations/concrete base of the garage within the RPA of T13 will be altered to suitably facilitate the extension however no exact details have been shared. An area approximately 2.6m² (<3% of T13's total RPA area) will see new incursions from the footprint of the extension. Whilst this is considered a **low** impact, this minor new incursion is unlikely to have a long-term detrimental impact on T13's physiological or structural condition. The roots that emerge furthest from the tree are typically referred to as fine roots; they are fibrous / smaller in diameter and connect to a framework of long-lived, woody coarse roots (*syn. Structural roots*)⁶. Any future excavation is likely to encounter predominantly fine fibrous roots; coarse structural roots >25 mm diameter is considered unlikely but cannot be discounted without further investigation (trial-digs, ground investigation, etc.)
- 6.6.4 All earthworks, including excavation of soils for foundations or re-grading to achieve finished levels, will be undertaken under arboricultural supervision by an appointed Arboricultural Clerk of Works (ACoW) using low-impact techniques such as hand-digging.
- 6.6.5 Any tree roots encountered which measure <25mm diameter may be severed using hand tools only (secateurs) and only where necessary. Roots should be pruned to a suitable side shoot. Any exposed roots should be immediately wrapped with wet hessian whilst the excavation is open to mitigate against root desiccation and, as a temporary measure, surrounded with a loose granular infill prior to backfilling with appropriate topsoil. Wherever possible, as much rooting density as possible must be retained. An AMS has been provided at Section 7.0 of this report.

⁶ Hiron, Andrew D. Thomas, Peter A., 1957 (2018). Applied Tree Biology. West Sussex: John Wiley & Sons Ltd. 411. Pg. 146

Driveway widening and installation of new surfacing within the RPAs of trees T1, T3, T4, T7, T12, T13 and T15

- 6.6.6 To the front of the Site, the existing gravelled driveway which falls within the notional RPAs of trees T1, T3 and T7 will need to be altered and upgraded, this will include widening and the removal of an existing brick wall within the RPAs of T1 and T3, along with the installation of several car parking spaces. Whilst the existing driveway is currently suitable for the occasional small vehicle access, it will unlikely be robust to withstand both the development activity and the increased usage once the works are complete and the proposed dwelling is occupied. As a result, in addition to the exiting incursions into RPAs, the final position of the new driveway will fall within the RPAs of trees T4, T12, T13 and T15.
- 6.6.7 To mitigate the impacts to RPAs and reduce the risk of long-term detrimental impact on tree health post-development (rooting disturbance and compaction of soils), it is recommended that an aboveground, no-dig construction consisting of a cellular-confinement system, is installed. any, with the detail to be agreed as part of a planning condition. Given the existing levels across the extent of the Site are relatively flat, this type of surfacing would be appropriate in this situation.
- 6.6.8 The new driveway construction must be installed before any development works commence onsite, to prevent damage to the RPAs from the various activities. The AMS provided at Section 7.0 provides a working methodology for the construction of this driveway.

Removal of Brick Wall within the RPA of T3

- 6.6.9 A section of an existing retaining wall within the RPA of T3, including the footings, will be removed. The arboricultural impacts arising from the removal of this section of wall are considered **low**. It is recommended that the following mitigation measures must apply:
- Use of minimal-dig construction techniques (e.g., hand-digging trenches, using hand tools only).
 - Installation of tree protection fencing beyond the developable area to form construction exclusion zones (CEZ).
 - Implementation of site-specific tree protection measures and continuous arboricultural supervision during works, where deemed necessary.
- 6.6.10 Overall, the potential for harm to occur to the rooting environment of T3 can be adequately controlled through the adoption of appropriate working methods (Section 7.0) and erection of low-intensity protective barriers to exclude access to the trees RPAs.

6.7 Anticipated Indirect from the Proposed Development

Indirect Impacts to RPAs of Retained Trees

- 6.7.1 During construction, contractors will require adequate space to work, and it is likely that the construction of the Proposed Development will require a 2m working corridor from the extent of its footprint to allow for the erection of scaffolding and passage of materials to construct the exterior walls. It is assumed that they will be able to concentrate most works within the areas of existing hardstanding and historically compacted ground to the front and rear of the existing property, and where this is sufficient space available beyond the RPAs of retained trees.

- 6.7.2 However, to facilitate the construction of the Proposed Development, it is recommended that the no-dig construction driveway is installed following the conversion of the garage, before works commence. The use of no-dig in this way will form a precautionary area (acting as suitable ground protection). A permeable and temporary wearing course can be placed onto the cellular-confinement system for the duration of the construction, which can then be removed and reinstated with the finishing surface as part of the final hard and soft landscaping provision.
- 6.7.3 The tree protection measures required specific to the development have been formally set out within the AMS at Section 7.0.

Installation of New Underground Services and Utilities

- 6.7.4 Retained trees may be adversely affected by the installation of new services and/or the upgrading of existing services if that work encroaches into their RPAs. No detailed service plans have been shared, nor do the referenced drawings demonstrate any new services or utilities. Where possible, new services should be placed beyond RPAs of retained trees. Where unavoidable, the following mitigation measures must apply:
- Careful routing of services. If deemed necessary within the RPA, the methodology for the installation, maintenance or removal of any services will be in accordance with *NJUG Volume 4 'Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees'*.
 - Trenchless installation, but if that is not feasible, any excavation must be carried out using minimal-dig construction techniques (e.g., hand-digging trenches, using hand tools only).
 - Installation of tree protection fencing beyond the developable area to form CEZs.
 - Implementation of site-specific tree protection measures and continuous arboricultural supervision during works, where deemed necessary.
- 6.7.5 NJUG is industry-standard good practice for all situations where utilities abut tree roots. BS5837:2012 7.1.3 defers to NJUG guidance *"as a minimum standard, such operations should be undertaken in accordance with NJUG Volume 4, issue 2 [N1]"*. The NJUG principles (hand excavation, root-zone backfill, protective boards, root-pruning diameter thresholds, ACoW supervision, etc.) are applicable irrespective of land ownership and use and is considered appropriate in relation to the Proposed Development.
- 6.7.6 If it becomes apparent that services are required inside the perceived RPAs of retained trees, a more thorough study of the arboricultural impacts will be necessary and the AMS at Section 7.0 will be subject to revision.

Concrete Leachate, Dust and Sediment Pollutants

- 6.7.7 The installation of a concrete foundations for the Proposed Development in the RPA of T13 and proximity to retained trees within c.10-15m, has the potential to indirectly impact their RPAs. Spilt solid or liquid chemicals that reach RPAs can kill existing roots which may result in long-term and potentially irreversible damage or death of trees and hedges. It is essential that measures are in place to minimise the risk of soil contamination.

- 6.7.8 It is recommended that where wet concrete is poured, an impermeable liner is used to prevent contamination of the soil from any leachate and prevent spillage and contamination beyond the area of installation. Other sediment and leachate mitigation detailed should include:
- Cut-off ditches or geotextile silt-fences, installed around excavations, exposed ground and stockpiles to prevent uncontrolled release of sediment.
 - Impermeable liners used to prevent contamination of the soil from any leachate and prevent spillage and contamination beyond the area of installation.
 - All potentially contaminated waters (for example washdown areas, stockpiles and other areas of risk for water contamination) to have separate drainage.
 - Any contaminated waters would be taken away by tanker from the Sites.
 - Vehicles carrying material off-Site will be sheeted to prevent the spread of dust.

6.7.9 A formal AMS should set out appropriate mitigation measures to be adhered to throughout both onsite demolition and construction. The feasibility and appropriateness of any proposed design modifications or mitigation measures should be assessed and recommended by a qualified Structural Engineer. Further, as part of the demolition works, an appropriate Dust Mitigation Plan will need to be developed.

6.8 Above Ground Constraints and Considerations

- 6.8.1 The above ground constraints predominantly refer to the impact of the crown or canopy of any retained tree/s and hedges on the Site either by size and form, shading, and nuisance factors. The above ground constraints imposed by trees should be considered in relation to the following:
- The crown's extent and its relationship to any structures. The primary consideration should be whether there will be enough space to prevent branches from damaging structures, post-construction, or increase the likelihood of unnecessary tree pruning to abate a nuisance.
 - The proportion of open space beneath the crown and if this will obstruct construction access or on-site activities and is it adequate for the passage of both vehicles and pedestrians.
 - Seasonal nuisance (e.g., leaf fall blocking gutters, fruit fall creating slippery patches and honey dew dripping on vehicles and surfaces).
- 6.8.2 Shade cast from mature trees along the western boundary of the Site will require careful consideration to avoid post-development pressure to unnecessary prune or remove trees. Whilst it is reasonable to suggest that the shade influence from retained trees will have a degree of impact, it wouldn't be seen as a significant constraint to any development providing this is addressed early, nor would it be recommended that further tree losses are incurred to negate the level of shade cast. Several trees have been recommended for pruning which will negate some of the impacts from shade cast, whilst a several trees are recommended for a more thorough tree inspection whereby further works may be recommended.

6.8.3 Alongside considering the effects from retained trees, the Proposed Development needs to also consider new tree planting which will form an integral part of any new development. Proposals for new tree planting should be appropriate for the future use of the site and not just aim to improve the existing tree population. Careful consideration would need to be given to the following:

- Ultimate height and canopy spread
- Tree form and habit
- Density of the crown
- Potential shading effect
- Foliage colour
- Water demand in relation to soil types
- Ongoing maintenance requirements

Tree Surgery and Tree Works (Preliminary Specification)

6.8.4 Alongside the removal of 1no. tree (T26) it is recommended that several trees, including 4no. trees (T5, T6, T9, T13) considered unsuitable for retention (Category U), are retained subject to targeted tree management. A preliminary specification of tree works is provided in Table 8.

Table 8 Preliminary Tree Works Specification

Tree Reference No.	Description of Tree Works	Reason	BS5837:2012 Category	Statutory Constraints
T5	Reduce the height of the tree to about 6m to create a standing stump for habitat. Reduce any lateral branches that remain after the height reduction to leave 1m stubs.	In the interests of sound arboricultural management and to reduce the risk to as low as reasonably practicable (ALARP).	U	TPO and Conservation Area
T6	Reduce the height of the tree to about 6m to create a standing stump for habitat. Reduce any lateral branches that remain after the height reduction to leave 1m stubs.	In the interests of sound arboricultural management and to reduce the risk to as low as reasonably practicable (ALARP).	U	TPO and Conservation Area

Tree Reference No.	Description of Tree Works	Reason	BS5837:2012 Category	Statutory Constraints
T9	Fell to ground level.	Evidence of drought stress, dying.	U	Conservation Area
T13	PiCUS above and below site of fungal infection.	To determine future tree works and work priorities.	C1	TPO and Conservation Area
T15	PiCUS Advanced Decay Detection Assessment.	To determine future tree works and work priorities.	B3	TPO and Conservation Area
All retained trees	Crown lift to 3m	To provide adequate clearance for construction traffic.	Various	TPO and Conservation Area

- 6.8.5 Whilst tree pruning will have an obvious impact on visual amenity in the immediate vicinity of the Site, this impact is only likely to persist in the short term, with the impacts considered **low** and in the interest of managing public risk, would be justified irrespective of the development.
- 6.8.6 If during the construction of the Proposed Development this position changes, a revised specification of works should be formally agreed with the acting LPA. The overriding aim will be to avoid unnecessary tree pruning wherever possible. Consideration should be given to any statutory protection afforded to these trees.
- 6.8.7 All tree works undertaken must comply with *British Standard 3998:2010 – Tree Work Recommendations* and should therefore be carried out by skilled tree surgery contractors, ideally Arboricultural Association Approved Contractors.
- 6.8.8 Prior to any tree removal being carried out, due regard must be given to any legal restrictions on tree pruning. All vegetation and, particularly, woody vegetation proposed for clearance, must be removed outside of the bird-breeding season (March - September inclusive). Birds are protected under the Wildlife and Countryside Act, 1981 (as amended) whilst on the nest. If this is not practicable, a qualified Ecologist should inspect the vegetation to be removed or pruned for the presence of nesting birds.
- 6.8.9 Consideration should also be given to roosting bats which are protected by Regulation 43 of The Conservation of Habitats and Species Regulations 2017 (as amended).

6.9 Hard and Soft Landscaping

- 6.9.1 To appease the requirements of Eastleigh Tree Strategy 2022-2030 & Tree Replacement Policy and Strategic Policy S1, it is recommended that replacement trees are provided to compensate for the loss of T26. New tree planting would also mitigate the loss of the poor-quality (Category U) trees as they gradually decline and require removal in future. The final selection of species, size, and location would be matters to be agreed with the LPA through a planning condition.

- 6.9.2 At this stage, no formal proposal for both hard and soft landscaping have been provided at the time of writing this assessment. It is recommended that a planned and coordinated approach to the management and upkeep of the development's soft landscape elements is formalised. This will guarantee the successful establishment of new vegetation and tree cover and, where practical, the integration of the existing trees into the surrounding landscape.
- 6.9.3 Along with native planting, additional ornamental species could be introduced to the Proposed Development. These species will enhance the urban environment by increasing biodiversity while also adding visual amenity. The careful selection of diverse trees will provide benefits such as seasonal colour, wildlife encouragement, enhanced screening of vistas or structures from adjoining public highways and reinforcing others.
- 6.9.4 Tree planting should be avoided where they may obstruct overhead power lines or cables. Any underground apparatus should be ducted or otherwise protected at the time of construction to enable trees to be planted without resulting in future conflicts.
- 6.9.5 Any new trees to be planted should be specified according to the recommendations in *BS 8545 (2014) Trees: from nursery to independence in the landscape –Recommendations*.

7. Arboricultural Method Statement (AMS)

7.1.1 This AMS describes the arboricultural protection measures identified as necessary for the protection of retained trees as part of the Proposed Development. It presents, in principle, the arboricultural protection measures which are appropriate to the intensity of the works, and which will be applied during demolition and construction. Reference should be made to the TPP provided at Appendix 3.

7.2 Scope of this AMS

- 7.2.1 The scope and level of detail included within this AMS is as follows:
- Provide an AMS outlining how retained trees will be protected and managed during on-site construction activities.
 - Provide a detailed TPP that illustrates details and specifications on tree protection measures.
 - Outline the key elements which require supervision of works by a suitably qualified and appointed Clerk of Works.

7.3 Implementation, Commitments and Limitations of the AMS

Key Project Contacts

7.3.1 Table 9 provides details of the names and roles of individuals involved in this project.

Table 9 Key Contacts from the Project Team

Contact Name	Company	Role	Contact Number
Callum Throw	Arb Innovators Ltd	AMS Principal Author	07837 794373
Mrs. Jane Bray	Client	Client	TBC
Andrw Burgess	Andrew Burgess Planning Limited	Architect/Planning Consultant	TBC

Construction Commitments

- 7.3.2 The details and requirements of this AMS include commitments to complete the construction phase in a specific manner. This AMS will inform the production of all relevant tender documents and/or contractor instructions. These commitments are essential to ensure the planning conditions can be discharged in full.
- 7.3.3 Failure to follow the correct sequence, manner, methods, and timing of operations outlined in this AMS may result in irreversible tree damage and eventual death, of retained trees protected by planning law. Irresponsible tree damage or removal may result in a stop notice or prosecution by the LPA.

Client and appointed Principal Contractor Responsibilities

- 7.3.4 The Client and their appointed Principal Contractor are responsible for ensuring that the Site works, and subsequent construction of the Proposed Development follow the measures detailed within this AMS.

- 7.3.5 The Client is to appoint a suitably qualified arboriculturist to act as an ACoW. The ACoW will be engaged to monitor and oversee the implementation of protection measures and supervision of works within RPAs, where deemed necessary, as set out in this AMS.
- 7.3.6 The Client and Principal Contractor have a responsibility to ensure that works at the Site comply with current legislation in respect of protected trees, as well as to ensure that works at the Site comply with any planning obligations/conditions given.
- 7.3.7 The Principal Contractor will be responsible for ensuring that all site personnel are made aware of the requirements of this AMS and that any future amendments are known and understood. The purpose of tree protection measures should be understood and well-considered from the start. They are enforced to protect trees to be retained within and adjacent to the Site while allowing adequate access for the implementation of the Proposed Development.
- 7.3.8 This AMS and the accompanying TPP should be printed in full colour. Copies of the approved AMS will be available onsite, the requirements of which will be incorporated into all relevant site management documents and site induction procedures.

7.4 Limitations of the AMS

- 7.4.1 The AMS is for the sole use of the Client and its reproduction or use by anyone else is forbidden unless written consent is given by the author.
- 7.4.2 This AMS is only concerned with arboricultural issues pertaining to the referenced location, development and referenced documentation outlined in Table 5 at Section 6.4.1.
- 7.4.3 The correct sequence, manner, methods, and timing of operations outlined in this AMS are not absolute. The timetables outlined in Table 10 of this AMS are subject to change and are based on all preliminary information available at the time of writing. As a result, the AMS processes may need to be reviewed and modified as needed.
- 7.4.4 Any changes in ground level or excavations near tree roots that are not specified in this AMS may have a negative impact on the stability and physical condition of the retained trees, necessitating additional assessments and protection measures.
- 7.4.5 This is an AMS and as such no reliance should be given to comments relating to buildings, engineering, or soil. Further, this report does not consider ecological or archaeological issues, or any other matter beyond the assessment of the trees.

7.5 Sequence of Works

- 7.5.1 Effective tree protection can only be achieved by adherence to a logical sequence of works combined with effective arboricultural monitoring. It is anticipated that arboricultural tree protection measures will require a degree of pre-planning so that conflicts with earthworks and construction activities can be avoided.
- 7.5.2 The sequence of works will need to remain dynamic throughout the project to respond to resource availability and external factors beyond the control of all parties.

Table 10 Anticipated Phase of Works and Tree Protection Methodology

Phase/Timing	Trees and hedges Affected	Brief Summary of Works	Section/Appendix to Reference
Prior to any Site works commencing	All retained trees	Pre-commencement Site meeting between the appointed Principal Contractor, Client, and the appointed ACoW to agree protective measures, as described in this AMS. Implement reporting process for all unforeseen arboricultural incidents and implement use of progress sheet to build up evidence base of good practice on-site.	7.6.4
	T5, T6, T9, T13	Carry out tree works including tree removals.	7.8.1 and Table 11
PRE-COMMENCEMENT Prior to any Site construction works commencing	All retained trees	Commence with conversion of the garage and excavations for new foundations. Contractor to utilise the existing driveway for construction staging and removal of debris.	
PRE-COMMENCEMENT Prior to any Site works commencing	All retained trees subject to this assessment	Installation of barriers to act as Tree Protection Fencing (TPF), as specified within this AMS and the TPP. TPF is to be installed prior to work commencing. Precise timing for installation to be agreed as part of a pre-commencement Site meeting with the appointed Contractor.	Section 7.8.5 and TPP

Phase/Timing	Trees and hedges Affected	Brief Summary of Works	Section/Appendix to Reference
		The appointed ACoW will request photographic evidence to ensure that all protection measures are in place as per the AMS.	
PRE-COMMENCEMENT Prior to any Site works commencing	T1, T3, T4, T7, T12, T13 and T15	Installation of aboveground, no-dig construction driveway within RPAs. Works to commence prior to any other works onsite. The ACoW will provide supervision of works throughout.	Section 7.9 and TPP
PRE-COMMENCEMENT Prior to any Site works commencing	T3	Removal of Brick Wall within the RPA of T3. Hand tools and hand-digging only during excavation. The ACoW will provide supervision of works throughout. The use of machinery within the indicated CEZ is prohibited.	Section 7.8.12
EXCAVATION OF SOILS WITHIN RPA OF T13			
DURING CONSTRUCTION Excavation of soils to install foundations	T13	Excavation of soils for foundations within the RPA of T13 to facilitate the rear extension. Hand tools and hand-digging only during excavation. The ACoW will provide supervision of works throughout. The use of machinery within the indicated CEZ is prohibited.	Section 7.8.12

Phase/Timing	Trees and hedges Affected	Brief Summary of Works	Section/Appendix to Reference
DURING CONSTRUCTION	T5	Pollution control measures. Pollution control measures relevant to the project will include physical barriers (puncture resistance laminated composite construction with a HDPE core laminated, to a UV stabilised LDPE carrier layer) to contain spills and procedures for cleaning them up if they occur.	Section 7.9.5
POST-CONSTRUCTION	All retained trees subject to this assessment	Remove TPF once construction works have been completed and there is no risk of damage to retained trees. Annual post-construction tree inspection for a period of no less than 2 years.	Section 7.8.11

7.6 Arboricultural Clerk of Works (ACoW)

The Role of an ACoW

- 7.6.1 The Client or Principal Contractor will appoint a suitably qualified arboriculturist to act as an ACoW. The ACoW will be engaged to monitor and oversee the implementation of the works required. The ACoW will:
- Be aware of their arboricultural responsibilities.
 - Have the authority to stop any work that is causing or has the potential to cause harm to any retained tree.
 - Be responsible for ensuring that all site operatives are aware of their responsibilities toward retained trees and the consequences of any failure to observe those responsibilities.
- 7.6.2 The following occasions are where the ACoW will be required:
- **Initial meeting** (usually referred to as the pre-commencement meeting) to discuss any required amendments with the Contractor and representatives of the Project Team. This will be held virtually.
 - **Installation of aboveground, no-dig construction driveway within RPAs.** ACoW to visit the Site to provide supervision of works and record evidence of adherence.
 - **Removal of Brick Wall within the RPA of T3.**

- **Excavation of soils for foundations within the RPA of T13 to facilitate the rear extension.** ACoW to visit the Site to provide supervision of works and record evidence of adherence.
- **Request evidence for the installation of tree protection measures** as outlined in this AMS and as indicated on the TPP provided.
- **Provide ad hoc arboricultural support** for all unforeseen arboricultural incidents.

7.6.3 The ACoW will also be the first contact for arboricultural advice for any issues that arise that are not detailed in this AMS, such as additional tree works, work required within the RPA of the retained trees on-site, any damage that has occurred to any of the retained trees, or any breach of the tree protection measures on-site.

Pre-commencement Site Meeting

7.6.4 A Pre-commencement Site Meeting will be undertaken with the client, appointed Principal Contractor, and the ACoW prior to any on-site works commencing. The purpose of this meeting will be to ensure that all aspects of the tree protection measures are clear and understood and that any future sequencing and supervisory arrangements are agreed.

7.6.5 The key matters to be addressed include:

- Identification of persons present and exchange of contact information.
- Familiarisation with all aspects of the AMS.
- Familiarisation with the Site in relation to the AMS.
- Installation of TPF.

7.6.6 The details and key discussion points from this meeting will be recorded in writing so it can be circulated to all interested parties and provided upon request to the LPA Tree Officer as evidence that the meeting has occurred and that specified matters have been addressed.

Ongoing Toolbox Talks

7.6.7 The Principal Contractor will be responsible for providing a toolbox talk to any on-site operatives following the meeting. The purpose of this toolbox talk will be to inform the operatives of how to ensure protection of all retained trees.

7.6.8 The toolbox will be repeated by the Principal Contractor when new external trades/contractors commence work on site. The toolbox talk shall focus on informing contractors on the following topics:

- The protection of trees is a requirement of planning approval and failure to comply could result in stop notices being applied or fines.
- How trees can be harmed on development sites.
- Discussion on methods of working near the trees as outlined in this Method Statement.
- How to report an issue before it becomes a problem.

7.6.9 Evidence of the toolbox being carried out shall be recorded.

Progress Reporting

- 7.6.10 During the construction, a record of completion for the various tree protection measures will be kept between the Principal Contractor and ACoW. This may include phone and email contact with the Principal Contractor, Site visits and direct monitoring of sensitive works, where required.
- 7.6.11 Where requested, these reports will be provided to the Local Planning Authority with sufficient evidence to demonstrate that all practicable steps have been taken to prevent damage to the trees, thereby ensuring compliance to the Planning Approval/Conditions.

7.7 General Tree Protection Guidance

General Requirements and Protection Measures for Retained Trees

- 7.7.1 During construction, retained trees within influencing distance of the proposed works must be adequately protected. The tree-protection measures will adhere to the recommendations in BS5837:2012.
- 7.7.2 Typically, this protection will include the installation of mandatory tree protection barriers at the extent of the calculated Root Protection Areas (RPAs). When barriers are installed, the enclosed area is designated as a construction exclusion zone (CEZ). Barriers will be erected prior to the start of any demolition and/or construction work unless they already exist.

Site Compounds, Portakabins, Containers, and other Temporary Structures

- 7.7.3 Site compounds, Portakabins, Containers, and other temporary structures must be sited away from trees.
- 7.7.4 Where spatial working room is limited, site compounds, portakabins, containers, and other temporary structures may be used in root protection areas if prior consent is obtained from the acting local planning authority. Prior to installation, the method for installing the buildings and an assessment of whether temporary ground protection is required must be agreed upon and specified with the project ACoW.

7.8 Project Specific Tree Protection Measures and Requirements

Tree Surgery and Tree Works

- 7.8.1 Alongside the removal of 1no. tree (T26) it is recommended that several trees, including 4no. trees (T5, T6, T9, T13) considered unsuitable for retention (Category U), are retained subject to targeted tree management. A preliminary specification of tree works is provided in Table 11.

Table 11 Preliminary Tree Works Specification

Tree Reference No.	Description of Tree Works	Reason	BS5837:2012 Category	Statutory Constraints
T5	Reduce the height to about 6m to create a standing stump for habitat. Reduce any lateral branches to leave 1m stubs.	In the interests of sound arboricultural management and to reduce the risk to as low as reasonably practicable (ALARP).	U	TPO and Conservation Area

Tree Reference No.	Description of Tree Works	Reason	BS5837:2012 Category	Statutory Constraints
T6	Reduce the height of the tree to about 6m to create a standing stump for habitat. Reduce any lateral branches that remain after the height reduction to leave 1m stubs.	In the interests of sound arboricultural management and to reduce the risk to as low as reasonably practicable (ALARP).	U	TPO and Conservation Area
T9	Fell to ground level.	Evidence of drought stress, dying.	U	Conservation Area
T13	PiCUS above and below site of fungal infection.	To determine future works and work priorities.	C1	TPO and Conservation Area
T15	PiCUS Advanced Decay Detection Assessment.	To determine future tree works and work priorities.	B3	TPO and Conservation Area
T26	Fell to ground level	To facilitate the Proposed Development	C1	TPO and Conservation Area
All retained trees	Crown lift to 3m	To provide adequate clearance for construction traffic.	Various	TPO and Conservation Area

- 7.8.2 If during the construction of the Proposed Development this position changes, a revised specification of works should be formally agreed with the acting LPA. The overriding aim will be to avoid unnecessary tree pruning wherever possible. Consideration should be given to any statutory protection afforded to these trees.
- 7.8.3 All tree works undertaken must comply with *British Standard 3998:2010 – Tree Work Recommendations* and should therefore be carried out by skilled tree surgery contractors, ideally Arboricultural Association Approved Contractors.
- 7.8.4 All vegetation and, particularly, woody vegetation proposed for clearance, must be removed outside of the bird-breeding season (March - September inclusive). Birds are protected under the Wildlife and Countryside Act, 1981 (as amended) whilst on the nest. If this is not practicable, a qualified Ecologist should inspect the vegetation to be removed or pruned for the presence of nesting birds.

Tree Protection Fencing (TPF) and Temporary Ground Protection

- 7.8.5 TPF and barriers are used to protect trees to be retained, as per the TPP. The TPF will be robust enough to restrict being breached from the type of demolition and construction activity taking place on Site and suitable for the degree and proximity of works to retained trees.
- 7.8.6 Once erected, the TPF will remain in-situ until all construction activities are complete. Barriers to be installed must be periodically inspected to ensure that they remain fit for purpose and, where required, maintained, or improved throughout the duration of demolition and construction activities on Site.

Establishing a Construction Exclusion Zone (CEZ)

- 7.8.7 For this project, the CEZ is defined as the areas of the RPAs beyond the working area which are to be fenced off or the areas of ground where existing incursions are to be left unaltered. The following must be carefully followed when planning site operations:
- No materials, machinery, temporary structures, chemicals, or fuel shall be stored within the CEZ.
 - Unless explicitly outlined in this AMS, excavations or increases in soil level are not permitted within the CEZ without prior written approval from the ACoW and acting LPA.
 - It is critical to avoid injurious contact with retained trees with wide or tall loads or plants equipped with booms, jibs, and counterweights. Any plant transit or traverse near trees should be supervised by a banksman or similar, to ensure adequate clearance from trees is always maintained.
 - No parking/use of tracked or wheeled machinery or vehicles of any description.
 - Concrete mixing, diesel oil, and vehicle washing are examples of materials that should not be discharged within 10 metres of tree stems (see Section 7.8.15).
 - Fires must not be lit in such a way that their flames can reach within 5m of foliage, branches, or a trunk/stem. Consideration should be given to the size of the fire and the direction of the wind.
- 7.8.8 As the standard CEZ (construction exclusion zone) cannot be maintained and construction activity cannot be fully or permanently excluded from the RPA of T4 (BS5837:2012 - clause 5.5.2), an alternative specification for tree protection will be followed.

TPF Specification

- 7.8.9 To protect the retained trees along the western boundary, TPF will be necessary. The TPF will be constructed of a rigid wire mesh, metal fencing panel (Heras™ HSG151) as shown in Figure 1. It is considered appropriate to use rubber feet/blocks in the RPAs of retained trees to minimise the level of impact or potential root damage from driven poles. The feet/blocks will need to be pinned in position with metal rebar or wooden stakes to prevent the fencing being moved or removed during construction.
- 7.8.10 The fencing should be affixed with visible, all-weather signs (provided as part of this AMS) to the protective fencing with the following "Construction Exclusion Zone - No Access".

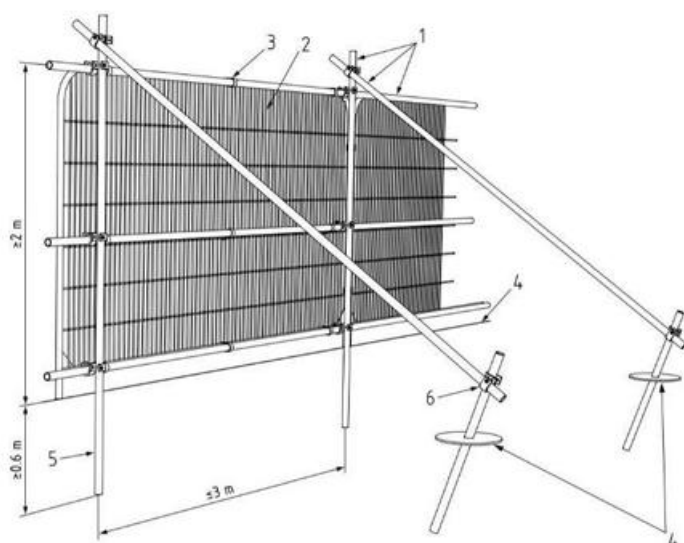


Figure 2 Protective fencing recommendations taken from figure 2 of BS5837:2012

Removing Tree Protection Fencing Post-construction

- 7.8.11 Following the completion of construction works (post-development), the TPF will be carefully removed to avoid causing root disturbance. It is imperative that the RPA is still respected, and that no machinery is used to remove or transport the TPF away from the immediate area. This can be carried out prior to soft landscaping works such as new tree and shrub planting, mulching and grass sowing.

Excavation of Soils within the RPA of T3 and T13

- 7.8.12 The impact arising from these works is considered minimal providing that a sympathetic methodology of work as outlined below, is adhered to during the works.
1. Toolbox talk provided to all contractors by the ACoW as part of site inductions.
 2. Tree protection measures as per this AMS and TPP in place.
 3. Commence with excavation of soils inside the RPA from one side only (to the east and south), staging machinery and materials on the upgraded, no-dig, driveway (away from the retained trees).
 4. Excavation will be carried out using a combination of micro-diggers (small plant machinery) and hand tools (including powered hand tools), with the preferred method being hand digging and compressed air soil displacement. Whatever the method of digging, the priority will be to remove soil without damaging the bark and wood of significant (>25mm diameter) woody roots.
 5. All excavation carried out under supervision of the appointed ACoW.

NB. at all stages, it will be necessary to apply appropriate damping-down to reduce potentially harmful pollutants affecting nearby air quality and avoid dust from damaging long-term tree health). This should be done in the presence of the ACoW.

Note a. Any tree roots encountered which measure **<25mm diameter** may be cut cleanly using hand tools only (secateurs) and only where necessary. The ACoW will provide guidance. Roots should be pruned to a suitable side shoot. Wherever possible, as much rooting density as possible must be retained.

Note b. If tree roots are encountered that are **>25mm diameter** and with potential to be broken, stop excavation and consult the ACoW. Any roots with a diameter >25mm encountered, shall be left in situ and should be immediately wrapped with wet hessian whilst the excavation is open to mitigate against root desiccation. The ACoW will photograph the nature and extent of the damage and then prune back any torn ends using a sharp tool (such as secateurs/pruning saw) removing as little as possible and leaving a neat cut that is as small as possible.

6. Any exposed roots should be immediately wrapped with wet hessian whilst the excavation is open to mitigate against root desiccation and, as a temporary measure, surrounded with a loose granular infill prior to backfilling with appropriate topsoil.
7. Where roots to be retained will be exposed for longer than a few hours and there is a risk of drying out, the hessian covering should be kept damp.

7.9 Installation of CellWeb® TRP cellular confinement system

- 7.9.1 A new section of driveway and pedestrian footpath will be installed within the RPAs of trees T1, T3, T4, T7, T12, T13 and T15, as demonstrated by a pink, honeycomb hatched area on the TPP at Appendix 3.
- 7.9.2 A no-dig construction methodology has been outlined the CellWeb® TRP cellular confinement system, finished with a permeable block-paved surface suitable for pedestrian and light-vehicle loading. It is prepared in accordance with BS 5837:2012 Section 7.4.2 Note 1 and Arboricultural Practice Note 12 (APN 12).

Recommended Materials and Equipment

- CellWeb® TRP panels: HDPE geo-cellular confinement modules (100 mm depth).
- Non-woven geotextile ("Treetex" or equivalent): separation and filtration layer.
- Clean angular stone infill: 20–40 mm graded, free-draining crushed aggregate.
- Permeable block pavers: minimum 80 mm thickness for pedestrian areas, 100 mm for light vehicular use.
- Laying course: 5 mm clean grit, BS 882 compliant.
- Edge restraints: 50 × 150 mm concrete channel units (BS 7263 Type EF) with C20 concrete bed & haunch.
- Hand-operated compaction plate to lightly tamp aggregate (no mechanical rollers within the RPA).

Methodology

- 7.9.3 All work is to be undertaken using hand-tools and low-load-bearing Micro Diggers sat atop existing areas of hardstanding, paths, etc. using a pull-back technique. It is also appropriate to use larger high reach plant machinery with extendable booms if positioned outside of the RPA on the sections of driveway which are to be unmodified.

7.9.4 The following methodology should be used as a guideline and may need to be adapted as the work progresses.

1. Toolbox talk to all contractors as part of Site inductions.
2. Carefully remove existing driveway and grassed areas/turf and surface vegetation by hand, storing topsoil outside the RPAs.
3. Level surface by hand-digging to the depth of the chosen CellWeb® TRP module.

Note a. Any tree roots encountered which measure **<25mm diameter** may be cut cleanly using hand tools only (secateurs) and only where necessary. The ACoW will provide guidance. Roots should be pruned to a suitable side shoot. Wherever possible, as much rooting density as possible must be retained.

If tree roots are encountered that are **>25mm diameter** and with potential to be broken, stop excavation and consult the ACoW. Any roots with a **diameter >25mm encountered, shall be left in situ** and should be immediately wrapped with wet hessian whilst the excavation is open to mitigate against root desiccation. The ACoW will photograph the nature and extent of the damage and then prune back any torn ends using a sharp tool (such as secateurs/pruning saw) removing as little as possible and leaving a neat cut that is as small as possible.

Note b. Where it is deemed that roots **>25mm diameter** cannot be severed, an alternative approach will be required.

Additional Guidance: Levelling Minor Undulations

4. Use a clean, coarse “sharp” sand or grit (e.g. BS EN 13139-compliant 2–5 mm aggregate) rather than fine masonry sand. This ensures good drainage and avoids creating a mortar like layer.
5. Limit the bedding layer to 25 mm maximum. Thicker fills risk smothering roots and may lead to differential settlement.
6. Scatter the sharp sand evenly over the prepared soil (or geotextile, if already laid), focusing on hollows and low spots.
7. Use a straight edge (screeding bar or straight timber) to strike off the sand, working in one direction to achieve a uniform plane. Tamp very lightly by hand (not with powered plate) to bed in the sand without compaction of the underlying soil.
8. Once the surface is level, continue with geotextile placement, CellWeb® module installation and granular infill.
9. Lay Treetex non-woven geotextile across the prepared area, with a 300 mm overlap between sheets, extending 500 mm beyond the outermost modules. Secure overlaps with staples at 500 mm centres.
10. Unroll panels to full length (8.1 m) and width (2.56 m), securing each corner and junction with J-pins at 500 mm centres to create cells of 259 × 224 mm fully tensioned.
11. Staple adjacent panels at every cell wall junction to prevent movement.

Note c. For curved alignments, cut panels when flat, ensuring each remaining cell is complete.

12. Deposit 20–40 mm clean angular stone directly into each cell, allowing free-fall to minimise disturbance below.
13. Overfill cells by 10 mm to allow finishing; lightly tamp with a hand-operated plate until flush with surrounding geotextile. No mechanical compaction equipment shall enter the RPA.
14. Lay a 50 mm bed of 5 mm clean grit over the compacted CellWeb® TRP surface.
15. Place permeable block pavers in the specified pattern (e.g. herringbone for vehicular areas), maintaining 2–4 mm joint widths.
16. Install edge restraints: use timber boards or set concrete channel blocks on C20 concrete bed & haunch; embed geogrid ends 250 mm into the concrete to lock the pavers.
17. Sweep clean 1–3 mm kiln-dried silica sand into joints until full.
18. Lightly tamp pavers to seat them; remove surplus sand. Wash surface with low-pressure water to remove fines without displacing jointing material.

Pollution Control

- 7.9.5 Pollutants pose a risk of contaminating the RPAs of retained trees (included perceived rooting areas within the CEZ and soils beyond) during both demolition and construction works.
- 7.9.6 There is a risk if concrete leachate during:
 - The installation of concrete footings and foundations during the construction of the new extension.
- 7.9.7 Spilt solid or liquid chemicals that reach RPAs can kill existing roots and will result in long-term and potentially irreversible damage or death of trees. It is essential that measures are in place to minimise the risk of soil contamination.
- 7.9.8 Pollution control methods relevant to the project will include physical barriers (puncture resistance laminated composite construction with a HDPE core laminated, to a UV stabilised LDPE carrier layer) to contain spills and procedures for cleaning them up if they occur. The following methods will be employed:
 - The use of bunding or a frame sealed with heavy-duty plastic sheeting sufficient to prevent contamination will be used to contain accidental spillages. This specifically applies to refuelling areas, cement mixing areas, and vehicle washing facilities.
 - Where wet concrete is poured, an impermeable liner will be used to prevent contamination of the soil from any leachate and prevent spillage and contamination beyond the installation.
 - When pouring concrete for new foundations within the RPA of T5, impermeable liners must be used to keep leachate from contaminating the soil after the installation.
 - Pollution control measures will remain in place until there is no significant risk of perceived RPA contamination.

Ongoing Arboricultural Monitoring of Retained Trees

- 7.9.9 Retained trees with potential to be affected by demolition or construction shall be inspected by the ACoW:
- pre-start,
 - at critical stages (e.g. groundworks, service installation), and
 - post-completion.
- 7.9.10 The monitoring regime ensures that tree-protection measures remain effective, newly arising issues are addressed promptly, and the landowner's duty of care is satisfied (BS 5837:2012 Clause 8.8.3).

8. Conclusions and Recommendations

- 8.1.1 Andrew Burgess Planning Limited on behalf of Mrs. Jane Bray (hereafter the 'Client') commissioned Arb Innovators Ltd ('Arb Innovators') to prepare an Arboricultural Impact Assessment (AIA) at Land adjacent to Braeside House, 49 Bishopstoke Road, Bishopstoke, Southampton, SO50 6BF (hereafter referred to as the 'Site') in accordance with *BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations* (The British Standards Institution, 2012), hereafter referred to as 'BS5837:2012'.
- 8.1.2 A previous walkover tree survey was conducted by Barrell Tree Consultancy on 12 August 2022 and recorded 26no. arboricultural features. For this assessment and in the interests of consistency, the previously recorded data was updated on 15 July 2025. Since the previous survey, 1no. tree (T2) has been removed. A summary of the remaining 25no. features have been provided in Table 3 and in the following paragraphs.
- 8.1.3 It is recommended that 1no. low-quality tree (T26) subject to this assessment is removed to facilitate the Proposed Development. It is further recommended that several trees, including 4no. trees (T5, T6, T9, T13) considered unsuitable for retention (Category U), are retained subject to targeted tree management. A preliminary specification of tree works has been provided.
- 8.1.4 The loss of 1no. low-quality tree (T26) to the rear of the Site will be removed, but it offers little to no visual amenity in the wider landscape owing to its small proportions, and so there will be no impact on local character. The the residual impact from T26's removal is likely to persist in the short-term only (10-15 years) and is considered **negligible**.
- 8.1.5 The greatest constraint to the Proposed Development is presented by the nominal RPAs of low-quality trees T4 and T13, and moderate quality tree T15. No new encroachment into the RPAs of T4 or T15 is presently proposed however, excavation of soils is required within the notional RPA of T13. It is recommended that all earthworks, including excavation of soils for foundations or re-grading to achieve finished levels, will be undertaken under arboricultural supervision by an appointed Arboricultural Clerk of Works (ACoW) using low-impact techniques such as hand-digging.
- 8.1.6 To the front of the Site, the existing gravelled driveway which falls within the notional RPAs of trees T1, T3 and T7 will need to be altered and upgraded, this will include widening and the removal of an existing brick wall within the RPAs of T1 and T3, along with the installation of several car parking spaces.
- 8.1.7 To mitigate the impacts to RPAs and reduce the risk of long-term detrimental impact on tree health post-development (rooting disturbance and compaction of soils), it is recommended that an aboveground, no-dig construction consisting of a cellular-confinement system, is installed. any, with the detail to be agreed as part of a planning condition. Given the existing levels across the extent of the Site are relatively flat, this type of surfacing would be appropriate in this situation.
- 8.1.8 An Arboricultural Method Statement (AMS) appropriate for this development has been formalised and is provided at Section 7.0.



TREE SURVEY METHODOLOGY

APPENDIX 1

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BS5837:2012 Methodology

The tree survey was carried out with reference to the methodology set out in BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.

Stage 1: Tree Constraints & Feasibility Study - for most planning applications where there are trees on or adjacent to a site, an initial assessment of the tree population and tree constraints will be required. This should be instructed as early as possible in the planning process and includes:

- Tree Survey Schedule: Presents data collected during the tree survey which is made to identify & categorise all trees that may be impacted by a proposal.
- Tree Constraints Plan: Tree locations, retention categories and consideration of associated above and below ground constraints.
- Tree Constraints and Opportunities Assessment: A preliminary report written to inform the design and layout of future development of the site.

Stage 2: Arboricultural Impact Assessment & Outline Mitigation Measures. This will be normally be required following a Stage 1 survey and report. Components will vary depending on design complexity, but may include:

- Arboricultural Impact Assessment (AIA): An assessment of the anticipated impact of the proposed development on the tree population (existing & proposed).
- Draft Tree Protection Plan (where appropriate): Indicative plan of tree protection measures.
- 'Heads of Terms' Arboricultural Method Statement: Outlines principles of the methodology required to mitigate impact on existing trees.

BS5837:2012 outlines guidance on how to assess an arboricultural feature's quality and advises on assessing both direct and indirect impacts. Neither a methodology for defining impacts nor specific criteria for determining an arboricultural feature's perceived sensitivity are provided.

Stage 3: Detailed Tree Protection & Discharge of Conditions. This is sometimes required following a Stage 2 report if the tree protection requirements are complex; or if there is a planning condition or reserved matters requirement to do so. The stage three report may include the following components:

- Detailed Tree Protection Plan (TPP).
- Arboricultural Method Statement (AMS): detailed methodology to include arboricultural supervision and site monitoring schedule (if required).

Stage 4: Arboricultural Supervision & Post-Construction. This may include:

- Written report as evidence of arboricultural supervision, site monitoring, reinstatement, and planting and aftercare (as required).

RIBA Design Guidance

The approach adopts the guidelines set out in the British Standard BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations.

The process is broken down to coordinate broadly with the key elements within both the RIBA Plan of Work (2013) and British Standard 5837:2012 as set out in the table below:

Information Stage	RIBA Stage	BS5837:2012
Stage 1: Tree Survey	2: Concept	4: Feasibility
Stage 2: Arboricultural Impact Assessment	3: Developed Design	5: Proposals
Sage 3: Arboricultural Method Statement and Tree Protection Plan	4: Technical Design	6: Technical Design
Arboricultural Supervision & Post-Construction.	5: Construction	7: Demolition and construction

The trees on the Site were originally surveyed without reference to site layout as detailed in paragraph 4.4.1.1 of BS5837:2012. However, for the purposes of the Arboricultural Impact Assessment the Proposed Development for the Site has been considered.

The survey includes all trees with an estimated stem diameter of 75mm or more measured at 1.5m above ground level that are located within the site or that overhang the site.

Trees were surveyed individually or as groups where it was considered that they had grown together to form cohesive arboricultural features either aerodynamically (trees that provide companion shelter), visually (e.g. avenues or screens) or culturally (including for biodiversity). However, where it was considered that there was an arboricultural need to differentiate between attributes trees within groups and / or woodlands were also surveyed as individuals.

Within the tree survey schedule, each surveyed Tree (T), Group (G), Hedge (H), Woodland (W) on or adjacent to the site is given a reference number. Metal tags have not been used for this survey as identification on-site does not require this. The tree numbers associated with each tree are cross referenced within the schedule and plans at Appendix 2 and 3 respectively.

Full details of the dimensions and measurements recorded including detailed definitions, can be found at Appendix 2.

Tree condition, health and structural integrity were inspected in accordance with the Visual Tree Assessment (VTA) method (*Mattheck 2007*), which provides a systematic framework for formal tree inspection, as summarised:

1. VTA Stage 1 - Inspection of the tree for visual evidence of internal defects.
2. VTA Stage 2 – Confirmation of defects and measuring their extent.
3. VTA Stage 3 – Assessment of defects and estimation of residual strength.

Ancient Woodland, Ancient, Veteran and Notable trees

BS5837:2012 does not reference a methodology for identifying and recording ancient, veteran, or notable trees. While 'Veteran' is defined in paragraph 3.12 of BS5837:2012, neither 'Ancient' nor 'Notable' are mentioned. Due to the complexity and subjectivity of this subject, there are various methods for defining and classifying Ancient, Veteran, and Notable trees.

For this BS5837:2012 assessment, the methodology set out by the Woodland Trust (n.d.) (2024) *Recognising and categorising ancient and other veteran trees* has been adopted.

The Forestry Commission (FC) and Natural England (NE) have published guidance and recommendations to safeguard Ancient Woodland, Ancient, and Veteran trees against development. In summary this guidance advises on the use of semi-natural buffer zones as a means of protection with minimum distances identified as:

- Fifteen metres between any development and ancient woodland.
- Fifteen times the diameter of its stem or 5m from the edge of its canopy, if that's greater, around any ancient or veteran tree.



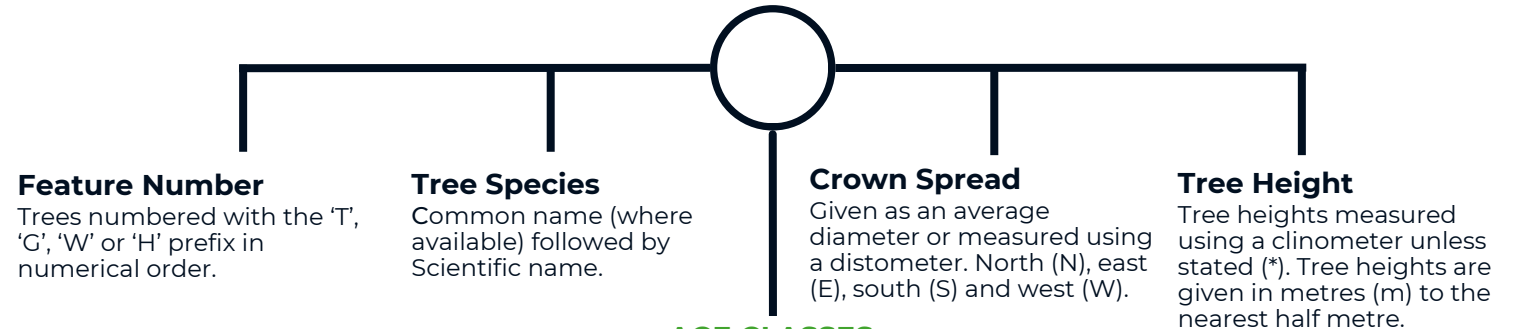
BS5837 TREE SURVEY SCHEDULE

■ **APPENDIX 2**

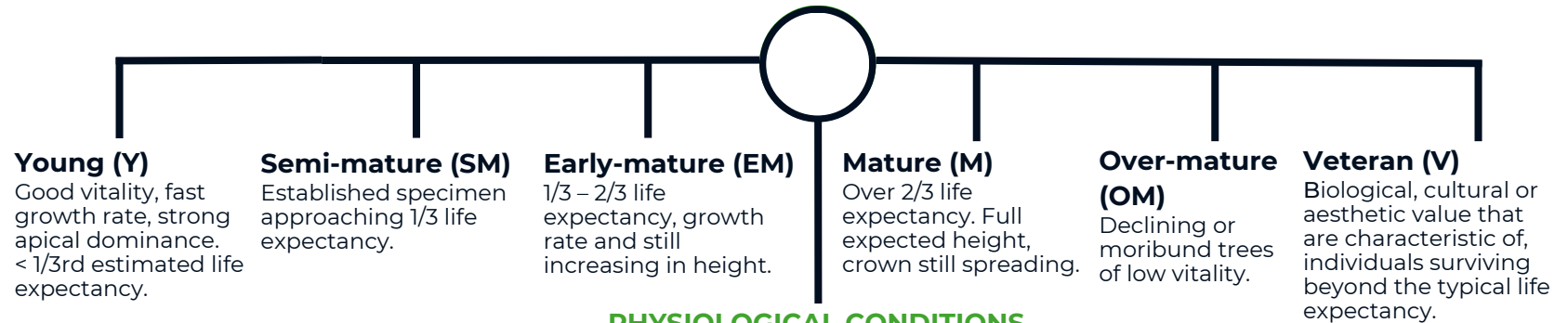
#WEARE**INNOVATORS**

MEASUREMENTS AND DEFINITIONS

MEASUREMENTS AND IDENTIFICATION



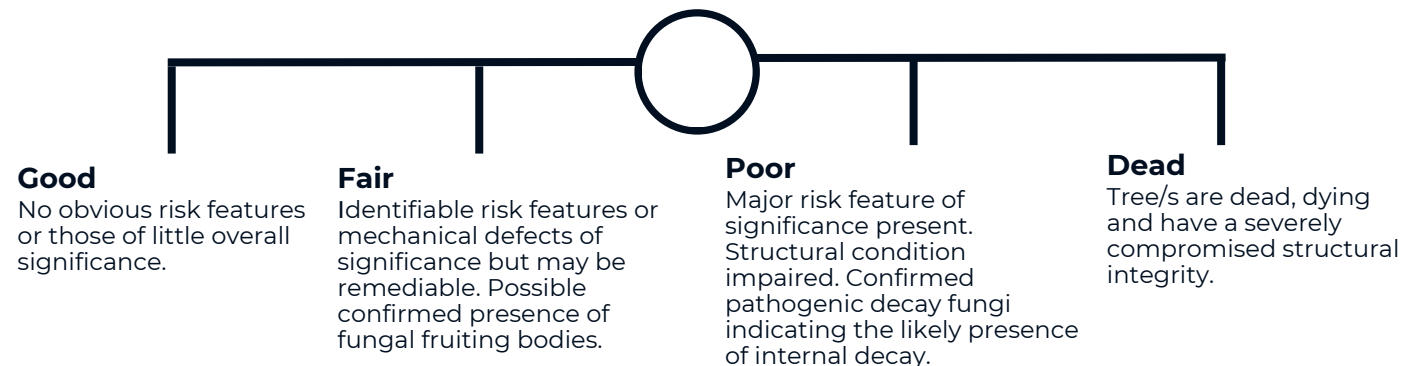
AGE CLASSES



PHYSIOLOGICAL CONDITIONS



STRUCTURAL CONDITIONS



Root Protection Area (RPA)

The below ground constraints are generally summarised as the RPA. The RPA is an area equivalent to a circle with a radius 12 times the diameter of the trees measured at 1.5 metres for single stemmed trees. For trees with more than one stem, one of two calculation methods should be used. In all cases, the stem diameter(s) should be measured in accordance with Annex C, and the RPA should be guided from Annex D of BS5837:2012. Both RPA radius in metres from the main stem and total area for the RPA as square metres are provided.

Where veteran trees have been identified the RPA has been calculated in accordance with Natural England guidance i.e. 15x the stem diameter or 5m beyond the crown whichever is greater. An average stem diameter is provided for tree groups, wooded areas and hedges.

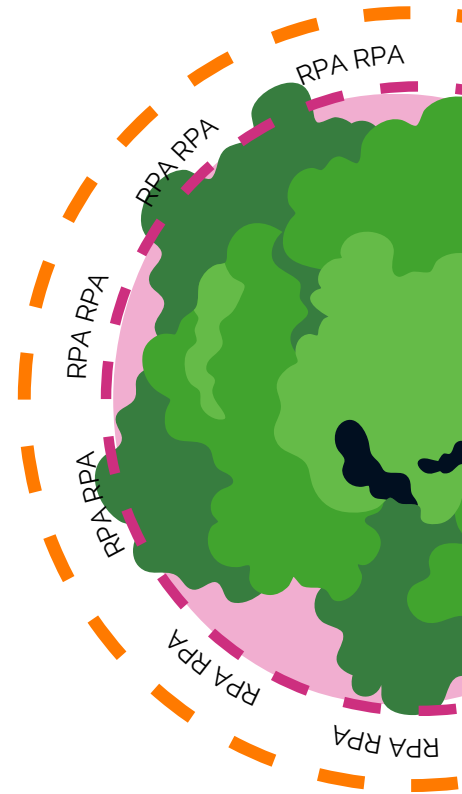
General Notes

Metal tags have not been used for this survey as identification on-site does not require this. Where they are present, they may have been recorded.

The tree numbers associated with each feature recorded are cross-referenced within the schedule and plans at Appendix 3. Small trees with a stem diameter less than 75mm were not surveyed as they would either be easily replaced or relocated.

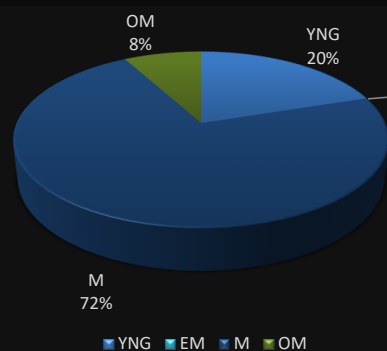
Abbreviations

- est - Estimated stem diameter
- avg - Average stem diameter for multiple stems
- upto - Maximum stem diameter of a group



Age Distribution of the Tree Population.

The distribution of the tree populations age is useful for understanding expected longevity which can help inform the BS5837 useful life expectancy, and help homeowners or property managers to make informed decisions on mitigation, tree management and replacement.



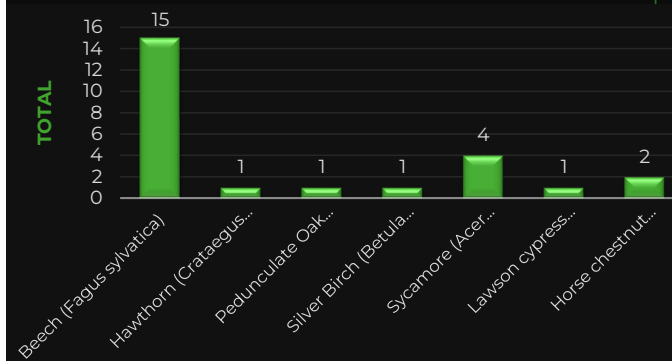
Distribution of Physiological and Structural Conditions across the Tree Population.

Physiological condition provides an indication of the vitality of the tree. Structural condition is related to the presence of defects that can lead to failures.



Species Composition of the Individual Tree Population.

The proportions of any given family, genus, species, and cultivar which make up the total individually recorded tree population across the Site.



Ancient Woodland and Ancient, Veteran and Notable Trees

Ancient Tree - A tree that has passed beyond maturity and is old, or aged, in comparison with trees of the same species. Characterised by biological, cultural, or aesthetic features of interest.

Ancient Woodland - Any wooded area that has been continuously wooded since 1600 AD

Veteran Tree - Exhibiting features of biological, cultural, or aesthetic value characteristic of species surviving beyond the typical age range.

Notable Tree - mature trees which may stand out in the local environment because they are large in comparison with other trees around them.

Forestry Commission and Natural England Guidance for the protection of ancient woodland, ancient trees and veteran trees from development and the use of semi-natural buffer zones:

- Fifteen metres between any development and ancient woodland.

- Fifteen times the diameter of its stem or 5m from the edge of its canopy, if that's greater, around any ancient or veteran tree.

ANCIENT WOODLAND

0

ANCIENT TREES

0

VETERAN TREES

0

NOTABLE TREES

0

BS5837:2012 TREE SURVEY SCHEDULE

CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY U
Trees with an estimated remaining contribution 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.	Trees 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 or trees lacking the special quality necessary to merit the category A designation.	Trees with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Trees 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.
Sub-categories	Mainly arboricultural value 1	Mainly landscape value 2	Mainly cultural or conservation value 3
Summary of Individual trees, Groups, Woodlands and Hedges			
	T1, T7, T15, T16, T18, T19, T20	T3, T4, T8, T10, T11, T12, T13, T17, T21, T22, T23, T24, T25, T26	T5, T6, T9, T14
0	7	14	4
Estimated Remaining Contribution (ERC)			
> 40 years	> 20 years	< 20 years	< 10 years
Breakdown of Arboricultural Features for each BS5837:2012 Category			
Trees 0	Trees 7	Trees 14	Trees 4
Groups 0	Groups 0	Groups 0	Groups 0
Woodlands 0	Woodlands 0	Woodlands 0	Woodlands 0
Hedgerows 0	Hedgerows 0	Hedgerows 0	Hedgerows 0
Percentage of tree population 0.0%	Percentage of tree population 28.0%	Percentage of tree population 56.0%	Percentage of tree population 16.0%
In assigning the BS5837:2012 Category, particular consideration has been given to the presence of any structural defects for each feature, the size and form of each feature, its suitability within the context of a proposed development, and the location of each feature relative to existing site features e.g. its screening value or landscape amenity value.			

INDIVIDUAL TREES																		
TREE NO.	TAG NO.	SPECIES (COMMON & SCIENTIFIC NAME)	HEIGHT (m)	NO. OF STEMS	STEM DIA (mm)	CROWN SPREAD (m) N E S W				CROWN CLEAR (m)	AGE CLASS	PHYS COND	STRUC COND	ASSESSMENT OBSERVATIONS AND PRELIMINARY RECOMMENDATIONS	ESTIMATED REMAINING CONTRIBUTION (erc)	BS5837 CATEGORY	RPA (m²)	RPA RADIUS (m)
T1	0	Horse chestnut (Aesculus hippocastanum)	19	1	1150	10	10	10	6.5	3	M	Fair	Fair	Asymmetric crown. River to west, large stem cavity at 1 m southeast, several cavities in upper canopy, heavily weighted stems over highway.	20+ years	B1	598.3	13.8
T2														Stump. Removed - tree number no longer in use.				
T3	0	Beech (Fagus sylvatica)	18	1	880	0.5	0.5	2.5	4	3	M	Fair	Fair	Bifurcated at 1.5 m. River directly west, localised stem decay at base, storm damage, significant stem decay and hollowing of upper stem west, heavily imbalanced and asymmetric canopy. Crown reduce the height by about 4 m, the southerly canopy extent by about 2-3 m, and the westerly canopy extent by about 3-4 m. The resulting height of the tree should be about 14 m, and the canopy extents about 3 m north, 1 m east, 3 m south, and 3 m west.	10+ years	C1	346.4	10.5
T4	0	Beech (Fagus sylvatica)	18	1	590	0.5	1.5	5.5	9.5	3	M	Fair	Poor	River directly west. Stem cavity at 0.5 m south with decaying fungal fruiting bodies within (possibly Kretzschmaria deusta), co-dominant stems at 5m with significant decay in both stems above. Crown reduce the height by about 4 m, the northerly canopy extent by about 1-2 m, and the westerly canopy extent by about 3-4 m. The resulting height of the tree should be about 14 m, and the canopy extents about 3 m north, 4 m east, 3 m south, and 4 m west.	10+ years	C1	162.9	7.2
T5	0	Beech (Fagus sylvatica)	17	1	600	1.5	1	3	8	3	M	Poor	Poor	Reduce any lateral branches that remain after the height reduction to leave 1 m stubs. River directly west, significant stem decay, heavily imbalanced. Reduce the height of the tree to about 6 m to create a standing stump for habitat.	<10 years	U	162.9	7.2
T6	0	Beech (Fagus sylvatica)	20	1	610	1.5	1	3	8	3	M	Poor	Poor	Reduce the height of the tree to about 6 m to create a standing stump for habitat. Reduce any lateral branches that remain after the height reduction to leave 1 m stubs. River directly west, significant stem decay from base up to about 8 m with multiple fungal fruiting bodies of Kretzschmaria deusta within cavity, heavily imbalanced.	<10 years	U	162.9	7.2

Individual Trees																		
Tree No.	Tag No.	Species (Common & Scientific Name)	Height (m)	No. of Stems	Stem Dia (mm)	Crown Spread (m)				Crown Clear (m)	Age Class	Phys Cond	Struc Cond	Assessment Observations and Preliminary Recommendations	Estimated Remaining Contribution (erc)	BS5837 Category	RPA (m²)	RPA Radius (m)
						N	E	S	W									
T7	0	Beech (Fagus sylvatica)	22	1	710	2	2	3	7	3	M	Good	Good	Crown beginning to dieback at extremities. River directly west, small stem cavity at about 10 m north.	20+ years	B1	221.7	8.4
T8	0	Beech (Fagus sylvatica)	18	1	460	2.5	5	3.5	5.5	3	M	Fair	Fair	Crown reduce the height by about 4m, and the westerly canopy extent by about 3–4m. The resulting height of the tree should be about 14m, and the canopy extents about 3m north, 1m east, and 4m west. River directly west, large stem cavity at 8 m north with bees' nest within, heavily imbalanced and asymmetric canopy.	10+ years	C1	91.6	5.4
T9	0	Silver birch (Betula pendula)	4	1	200	2.5	0.5	0.5	4	1	YNG	Poor	Poor	Limited future value. Dying, apparent drought stress.	< 10 years	U	18.1	2.4
T10	0	Beech (Fagus sylvatica)	17	1	460	2.5	2.5	1	1	3	M	Fair	Fair	Beginning to dieback at extremities. River directly west, heavily imbalanced and asymmetric canopy, weak union at 3 m.	20+ years	C1	91.6	5.4
T11	0	Beech (Fagus sylvatica)	17	1	400	5	5	3.5	3.5	3	M	Fair	Fair	Crown heavily imbalanced. River directly west, poor form.	20+ years	C1	72.4	4.8
T12	0	Beech (Fagus sylvatica)	19	1	670	1	6	5	2	3	M	Fair	Fair	Large diameter (>35mm) deadwood in the crown. River directly west, localised stem decay, partial failure of lower limb east now resting in river, heavily imbalanced and asymmetric crown.	20+ years	C1	206.1	8.1

INDIVIDUAL TREES																		
TREE NO.	TAG NO.	SPECIES (COMMON & SCIENTIFIC NAME)	HEIGHT (m)	NO. OF STEMS	STEM DIA (mm)	CROWN SPREAD (m) N E S W				CROWN CLEAR (m)	AGE CLASS	PHYS COND	STRUC COND	ASSESSMENT OBSERVATIONS AND PRELIMINARY RECOMMENDATIONS	ESTIMATED REMAINING CONTRIBUTION (erc)	BS5837 CATEGORY	RPA (m²)	RPA RADIUS (m)
T13	0	Beech (Fagus sylvatica)	22	1	1030	7	6	6	10	3	OM	Fair	Poor	Picus above and below fungal infection. Depending on results, crown reduce the height by about 5–6 m, the northerly canopy extent by about 2–3 m, the easterly canopy extent by about 1–2 m, the southerly canopy extent by about 1–2m, and the westerly canopy extent by about 4–5 m. The resulting height of the tree should be about 16 m, and the canopy extents about 4 m north, 4 m east, 4 m south, and 5 m west. River directly west, several large layered fungal fruiting bodies (Ganoderma sp.) on main stem at about 4m north although unable to quantify significance from ground level, weeping cavities on main stem. Leaf minor. Flooding has exposed buttress roots. Crown dieback noted.	10+ years	C1	475.3	12.3
T14	0	Pedunculate Oak (Quercus robur)	6	1	1000	1	1	1	1	1	M	Poor	Poor	Habitat value. Dead stem/stump.	< 10 years	U	452.4	12.0
T15	0	Horse chestnut (Aesculus hippocastanum)	25	1	1360	4	4	3	3	2	OM	Fair	Fair	Several wildlife/PRF attributes. River directly west, significant basal decay and hollowing up to at least 3 m with Ganoderma sp fungal fruiting bodies within. Further, advanced decay detection assessment required.	20+ years	B3	824.5	15.0
T16	0	Beech (Fagus sylvatica)	25	1	820	6	4	3	6	0	M	Good	Fair	Sever 1m section of ivy to leave clear stem. River directly west, on edge of bank, slightly asymmetric canopy, tight stem union at about 6 m obscured by ivy.	20+ years	B1	307.9	9.9
T17	0	Hawthorn (Crataegus monogyna)	4	1	150	0.5	2.5	1	0.5	0	YNG	Fair	Fair	Sever 1m section of ivy to leave clear stem. Small and heavily suppressed.	10+ years	C1	10.2	1.8
T18	0	Beech (Fagus sylvatica)	24	1	500	3	2.5	3.5	4.5	0	M	Good	Fair	Measurements approximated. River directly west, on edge of bank, ivy clad, slightly asymmetric canopy.	20+ years	B1	113.1	6.0
T19	0	Beech (Fagus sylvatica)	24	1	550	3	2.5	3.5	4.5	0	M	Good	Fair	Measurements approximated. River directly west, on edge of bank, ivy clad, slightly asymmetric canopy.	20+ years	B1	136.8	6.6
T20	0	Beech (Fagus sylvatica)	24	1	550	2	3.5	3.5	4.5	0	M	Good	Fair	Measurements approximated. On boundary, river directly west and on edge of bank, ivy clad, slightly asymmetric canopy.	20+ years	B1	136.8	6.6

Individual Trees																		
Tree No.	Tag No.	Species (Common & Scientific Name)	Height (m)	No. of Stems	Stem Dia (mm)	Crown Spread (m) N E S W				Crown Clear (m)	Age Class	Phys Cond	Struc Cond	Assessment Observations and Preliminary Recommendations	Estimated Remaining Contribution (erc)	BS5837 Category	RPA (m²)	RPA Radius (m)
T21	0	Sycamore (Acer pseudoplatanus)	14	1	300	3	3	3	3	0	M	Good	Fair	Off site - needs access but these are small trees and part of a greater woodland. Offsite, tall and thin (etiolated).	10+ years	C1	40.7	3.6
T22	0	Beech (Fagus sylvatica)	3	1	150	2.5	2.5	2.5	2.5	0	YNG	Fair	Poor	Off site - needs access but these are small trees and part of a greater woodland. Poor form, small and suppressed.	10+ years	C1	10.2	1.8
T23	0	Sycamore (Acer pseudoplatanus)	14	1	300	3	3	3	3	0	M	Good	Fair	Off site - needs access but these are small trees and part of a greater woodland. Offsite, ivy clad, tall and thin (etiolated).	10+ years	C1	40.7	3.6
T24	0	Sycamore (Acer pseudoplatanus)	6	1	200	1	2.5	3	2.5	0	YNG	Fair	Fair	Young tree. Offsite, small and suppressed.	10+ years	C1	18.1	2.4
T25	0	Sycamore (Acer pseudoplatanus)	14	1	300	2	2	2	4	0	M	Fair	Fair	Ivy clad tree. Offsite, one side of canopy historically lost and subsequently regrown.	10+ years	C1	40.7	3.6
T26	0	Lawson cypress 'Elwoodii'	2	1	100	1.5	1.5	1.5	1.5	0	YNG	Fair	Fair	Young tree. Small proportions.	10+ years	C1	4.5	1.2



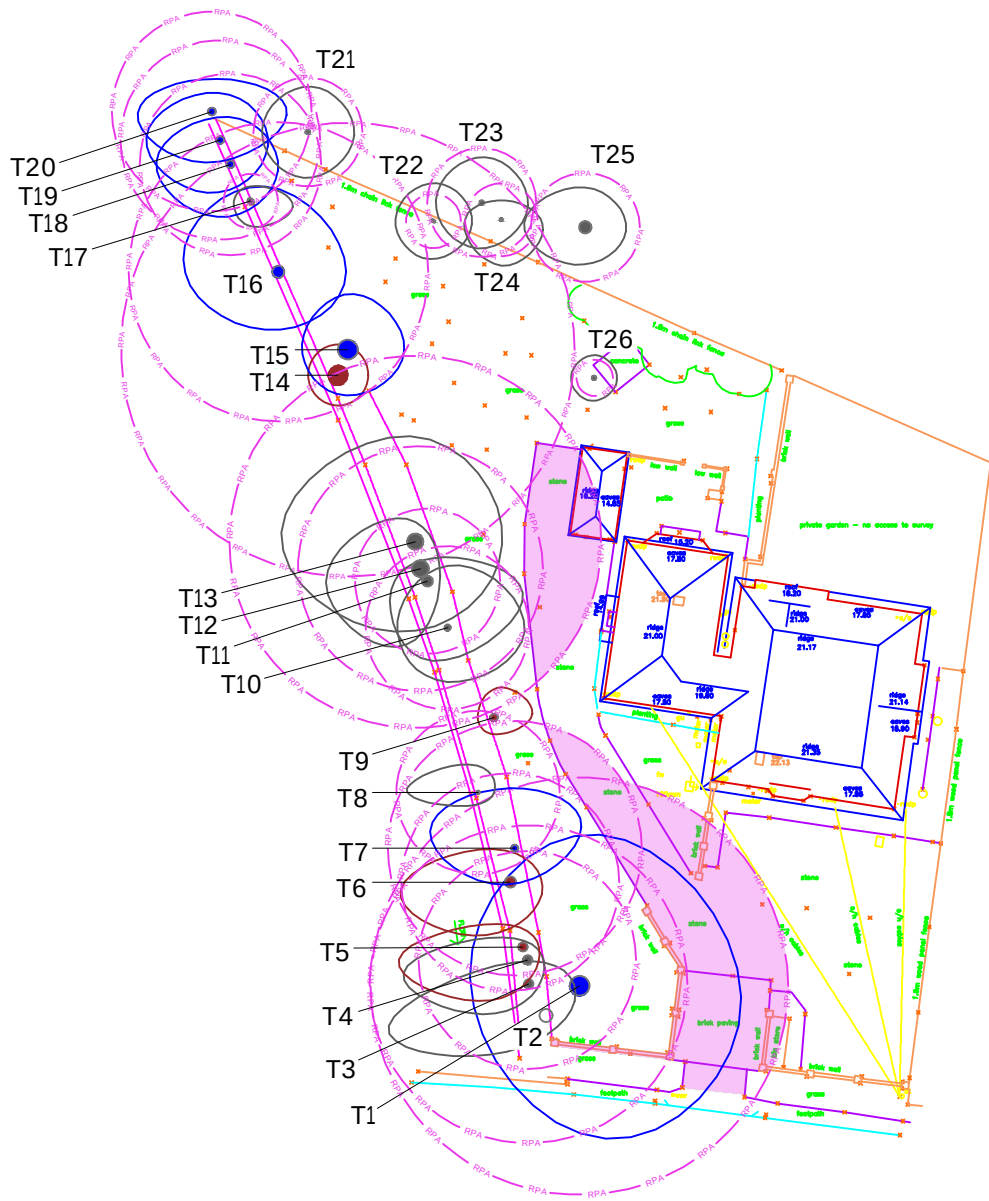
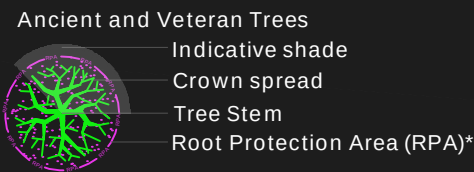
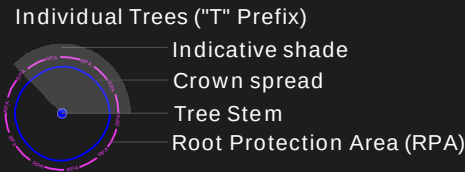
ARBORICULTURAL PLANS

APPENDIX 3

#WEAREINNOVATORS

ARBORICULTURAL FEATURES.

Crown colour in accordance with BS5837:2012 Category. *In accordance with Ancient and other Veteran Trees: Further Guidance on Management.



DRAWING TITLE.

Tree Constraints Plan

DRAWING NO.

250731 ARBI 1114 TCP V1

REVISION NO.

1

CLIENT.

Jane Bray

PROJECT NAME.

49 Bishopstoke Road, SO50 6LA

PROJECT NO.

1114

NOTES.

This TCP is created as a design tool and does not make an assessment of the impacts or subsequent effects of the Proposed Development to trees. Therefore, the TCP must not be submitted solely to inform the planning application. This drawing should be viewed in conjunction with the accompanying BS5837:2012 Tree Survey Schedule.

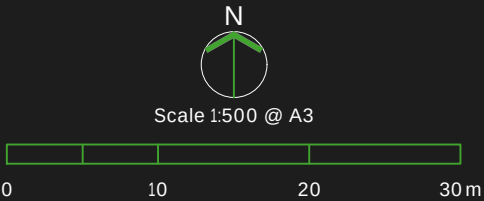
All dimensions should be checked on site. No dimensions are to be scaled from this drawing. This drawing was produced in colour - a monochrome copy should not be relied upon. This drawing was produced digitally using a combination of GIS, GPS and Topographical base mapping (dwg) where provided. Arb Innovators Ltd cannot be held responsible for inaccuracies in the base drawing in which this plan is based.

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DRAWN.

APPROVED BY. CTT
01.08.2025

SCALE AND BEARING.



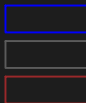
BS5837:2012 CATEGORIES

In accordance with Table 1 – Cascade chart for tree quality assessment

Category B (Moderate Quality)

Category C (Low Quality)

Category U (Unsuitable for Retention)



SITE FEATURES AND EXISTING CONSTRAINTS

Uncategorised Woody Shrubs

Existing RPA Incursions



T18
T17

T16

T15
T14

T24

T26

T13

T12

T11

T10

T9

T8

T7

T6

T5

T4

T3

T1

T2

T20
T19
T18
T17

T16
T15
T14

T21

T23

T25

T22

T24

T26

Viewpoint Inset

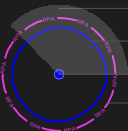
GROUND FLOOR PLAN

NOTES:

ARBORICULTURAL FEATURES.

Crown colour in accordance with BS5837:2012 Category. *In accordance with Ancient and other Veteran Trees: Further Guidance on Management.

Individual Trees ("T" Prefix)
Indicative shade
Crown spread
Tree Stem
Root Protection Area (RPA)



DRAWING TITLE.

Tree Retention Removals Plan

DRAWING NO.

250731 ARBI 1114 TRRP V1

REVISION NO.

1

CLIENT.

Jane Bray

PROJECT NAME.

49 Bishopstoke Road, SO50 6LA

PROJECT NO.

1114

NOTES.

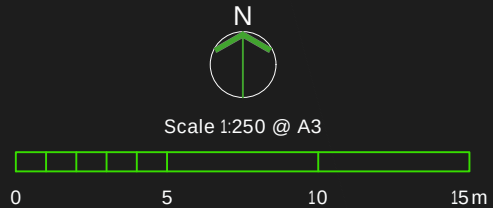
This Tree Retention and Removals Plan (TRRP) is created as a design tool and makes an assessment of the impacts or subsequent effects of the Proposed Development to trees. This drawing should be viewed in conjunction with the accompanying BS5837:2012 Tree Survey Schedule and Arboricultural Impact Assessment (AIA) prepared by Arb Innovators Ltd.

All dimensions should be checked on site. No dimensions are to be scaled from this drawing. This drawing was produced in colour - a monochrome copy should not be relied upon. This drawing was produced digitally using a combination of GIS, GPS and Topographical base mapping (.dwg) where provided. Arb Innovators Ltd cannot be held responsible for inaccuracies in the base drawing in which this plan is based. Arb Innovators Ltd, 3.15 Hollinwood Business Centre, Albert Street, Oldham, England, OL8 3QL. T. 07837 794373 E. support@arbinnovators.co.uk W. www.arbinnovators.co.uk

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DRAWN.

APPROVED BY. CTT
03.08.2025

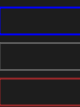
SCALE AND BEARING.



BS5837:2012 CATEGORIES

In accordance with Table 1 – Cascade chart for tree quality assessment

Category B (Moderate Quality)
Category C (Low Quality)
Category U (Unsuitable for Retention)



SITE FEATURES AND EXISTING CONSTRAINTS

Uncategorised Woody Shrubs
Existing RPA Incursions



ARBORICULTURAL IMPACTS

Features to be Removed
New RPA Incursions
Cellular Confinement Construction



T18
T17

T16
T15
T14

T24

T13
T12
T11
T10

T9
T8
T7
T6

T5
T4
T3
T1

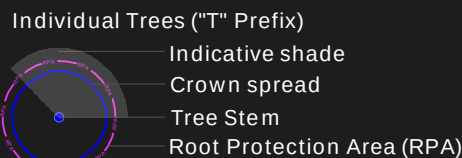
T2

T20
T19
T18
T17

T21
T22
T23
T24
T25

ARBORICULTURAL FEATURES.

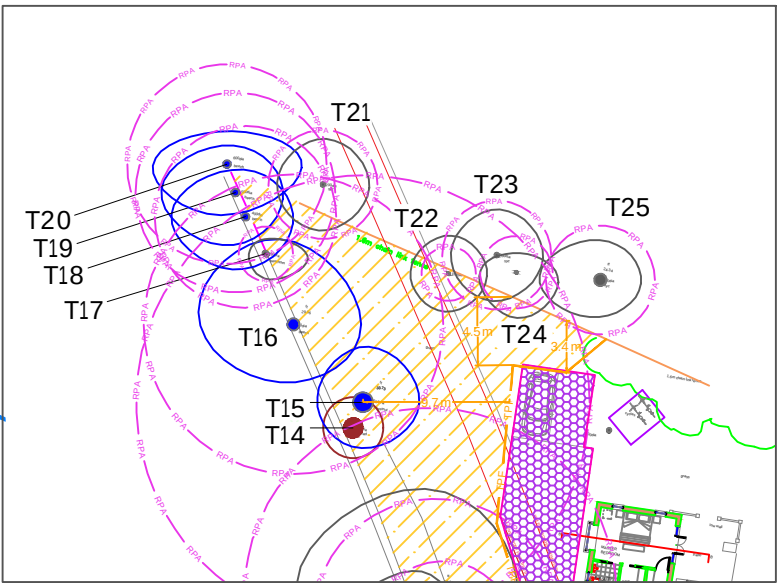
Crown colour in accordance with BS5837:2012 Category. *In accordance with Ancient and other Veteran Trees: Further Guidance on Management.



Excavation of soils within the RPA to be conducted under supervision by the appointed ACoW.

Existing driveway must be upgraded using a no-dig specification before the development works begin. A permeable temporary wearing course can be placed onto the cellular-confinement for the duration of the development activity, which can then be removed and reinstated with the finishing surface as part of the final landscaping works. AMS to be adhered to throughout.

Existing brick wall to be demolished, excavation of walls footings to be carried out under ACoW supervision and in accordance with the AMS..



DRAWING TITLE.

Tree Protection Plan

DRAWING NO.

250731 ARBI 1114 TRRP V1

REVISION NO.

1

CLIENT.

Jane Bray

PROJECT NAME.

49 Bishopstoke Road, SO50 6LA

PROJECT NO.

1114

NOTES.

This Tree Protection Plan (TPP) should be viewed in conjunction with the accompanying BS5837:2012 Tree Survey Schedule and Arboricultural Method Statement (AMS) prepared by Arb Innovators Ltd.

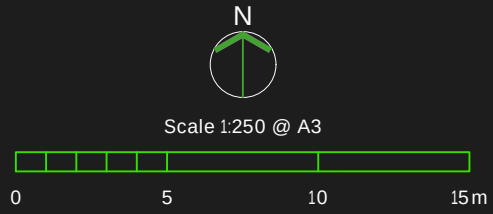
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APPROVED BY. CTT
03.08.2025

SCALE AND BEARING.



BS5837:2012 CATEGORIES

In accordance with Table 1 - Cascade chart for tree quality assessment

Category B (Moderate Quality)

Category C (Low Quality)

Category U (Unsuitable for Retention)

SITE FEATURES AND EXISTING CONSTRAINTS

Uncategorised Woody Shrubs

Existing RPA Incursions

TREE PROTECTION AND MITIGATION

Tree Protection Fencing (and annotation)

Construction Exclusion Zone (CEZ)

Cellular Confinement Construction





CAVEATS, LIMITATIONS AND REFERENCES

APPENDIX 4

#WEAREINNOVATORS

Caveats and Limitations

The contents of this report are valid for a period of one year **(24 months)** from the date cited.

Trees are growing dynamic structures. Whilst reasonable effort has been made to identify tree-risk features (defects) within the trees inspected, no guarantee can be given as to the absolute safety or otherwise of any individual tree. No tree is ever safe due to the unpredictable laws and forces of nature. As a result of this, natural failure of intact trees will occur; extreme climatic conditions can cause damage to even apparently healthy trees.

Arb Innovators have provided this report solely for the use of the recipient and accepts no liability to any third parties or any other party using or reviewing the report or any part thereof. Arb Innovators makes no warranties or guarantees, actual or implied, in relation to this report, or the ultimate commercial, technical, economic, or financial effect on the project to which it relates, and bears no responsibility or liability related to its use other than as set out within the scope of the contract under which it was supplied.

This is a report which should be used to accompany a planning application and provides no detail specifically in relation to the condition or quantification of risk posed by trees. This report in no way constitutes a tree risk-benefit survey nor should it be used exclusively to assign remedial management to trees.

This inspection was undertaken from ground level and in accordance with stage one VTA, involving the use of non-invasive methods to identify tree health issues and structural defects by visual observation. Should a more detailed inspection be required then this will be highlighted in the recommendations. This may involve the use of decay detection tools or aerial inspection (stage two VTA) and interpretation of findings to form a prognosis (stage three VTA).

The survey has only been undertaken from land within the Client's ownership, from public land or from areas where formal access has been arranged. Where trees have been captured beyond the Site boundary, all dimensions of trees and their associated parts are based on estimation unless otherwise stated.

This is an arboricultural report and as such no reliance should be given to comments relating to buildings, engineering, or soil. Trees and woody vegetation were not assessed for their potential impact upon future construction issues such as foundation designs (NHBC. 'Chapter 4.2- Building Near Trees'. NHBC Standards 2016. 2016).

Further, this report does not rely on ecological or archaeological data. If either is commented upon within the report further professional advice should be sought.

Technical References

This Arboricultural Assessment was prepared in accordance with or following the guidance contained within the following technical references:

- Town and Country Planning Act 1980
- National Planning Policy Framework (NPPF), 2023
- British Standards Institute. BS 5837 (2012) *Trees in relation to design, demolition and construction - Recommendations*, London: BSI.
- British Standards Institute. BS 3998:2010 *Tree Works - Recommendations*, London: BSI.
- British Standards Institute. BS 8545 (2014) *Trees: from nursery to independence in the landscape - Recommendations*, BSI
- Royal Institute of British Architects, RIBA Plan of Work 2020 Overview, RIBA (2020).
- Fay, N., Dowson, D., Helliwell, R. (2005) *Tree Surveys: A Guide to Good Practice*, The Arboricultural Association
- Mattheck, C. (2007) *Updated Field Guide for Visual Tree Assessment*
- Mattheck, C & Breloer, H (2006) *The Body Language of Trees: A Handbook for Failure Analysis*. Research for Amenity Trees No. 4. DETR
- Weber, K., Mattheck, C. (2003) *Manual of Wood Decays in Trees*, The Arboricultural Association
- R.G. Strouts & T. G. Winter, *Diagnosis of Ill- Health in Trees* (7th Impression, TSO - 2013)
- Forestry Commission and Natural England, *Ancient woodland, ancient trees, and veteran trees: protecting them from development* (2018).
- Tree Council & Ancient Tree Forum *Ancient Tree Forum*, Lonsdale, D (ed.) (2013) *Ancient and other Veteran Trees: Further Guidance on Management*.
- Woodland Trust (n.d.) (2024) *Recognising and categorising ancient and other veteran trees*.
- National Joint Utilities Group (2007) Volume 4, Issue 2: *Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees*

GENERAL NOTICE

The following must be observed:

- This fencing must not be moved or removed.
- The area inside the fencing is regarded a Construction Exclusion Zone (CEZ).
- No plant, machinery, materials or spoil are to pass through or be stored in this area.
- Any incursion into the CEZ must be prior agreed with the acting local authority (LPA).

CONTACT DETAILS

Arb Innovators Ltd
Arboricultural (Tree)
Consultants



KEEP OUT



TREE PROTECTION AREA

TOWN & COUNTRY PLANNING ACT (1990)

**THIS FENCING MUST REMAIN IN PLACE AND BE
MAINTAINED IN ACCORDANCE WITH THE APPROVED
PLANS FOR THIS DEVELOPMENT.**

**TREES ENCLOSED ARE PROTECTED BY PLANNING
CONDITIONS AND/OR TREE PRESERVATION ORDERS
(TPO). CONTRAVENTION OF A TPO MAY LEAD TO
CRIMINAL PROSECUTION.**