



Clever Tree
Consultancy

Date: September 2024

Contract Ref: CTC 211127

BS5837:2012 ARBORICULTURAL SURVEY & IMPACT ASSESSMENT (AIA)

1 Church Cottages, Church Lane,
Horsted Keynes, Haywards Heath September 2024

for

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UPDATED BY DAVID JENKINS DESIGN

19th NOVEMBER 2025

Amendments on page 9, 10, 20 & 21 for updated
proposed plan

CONTROL SHEET

Mr Guy Bowen

**1 Church Cottages, Church Lane, Horsted Keynes,
Haywards Heath RH17 7AY**

BS5837:2012 Arboricultural Survey & Impact Assessment (AIA)

	Name	Position
Surveyor(s)	Edward Cleverdon BSc (Hons) MArborA	Principal Arboriculturist
Author	Edward Cleverdon BSc (Hons) MArborA	Principal Arboriculturist

Contract No.	Project Contact	Revision No.	Date of Issue
211127	Edward Cleverdon	01	10 th September 2024

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1. INTRODUCTION

1.1 Overview & Client Brief

Clever Tree Consultants were commissioned by Mr Guy Bowen to undertake an Arboricultural Survey and Impact Assessment (AIA) at 1 Church Cottages in relation to a proposed extension of the residential property, and in accordance with BS5837:2012 - *Trees in Relation to Design, Demolition and Construction*.

The following documents were supplied by the client:

- Proposed site layout by David Jenkins Design

1.2 Personnel & Quality Assurance

The site was originally surveyed by an experienced arboricultural consultant (Edward Cleverdon BSc (Hons) MArborA) on 26th November 2021 with details updated in September 2024.

1.3 Site Location

The site is located at 1 Church Cottages, Church Lane, Horsted Keynes, Haywards Heath RH17 7AY. The site is centred on Ordnance Survey grid reference TQ 38329 28615.



Figure 1: Location Plan, with approximate red-line survey boundary.

1.4 Planning Policy & Guidance

This report has been produced in accordance with the recommendations of British Standard 5837:2012 - *Trees in Relation to Design, Demolition and Construction*.

Trees are a material consideration in the UK planning system. This report provides an assessment to help facilitate the correct application of the Town and Country Planning Act 1990 (sections 197 and following).

1.5 Development Proposals

It is understood that the development proposals are for the demolition of an existing ground floor extension and replacement with a new extension of improved design and larger floor plan.

1.6 Assessment Method

Trees, groups and hedgerows onsite or immediately adjacent to the site have been assessed for their quality and value. This has been done according to the BS5837:2012 categorisation method (Annex 5.4).

The position of each tree, group and hedgerow with retention category, canopy spread, root protection area (RPA) and shade arc is shown on the Tree Constraints Plan (Annex 5.3).

Category 'A' and 'B' trees are usually considered to provide an important contribution to the landscape and should be retained as part of the proposed development, wherever possible. Category 'C' trees are not usually considered to be a constraint to the development. Category 'U' trees have been assessed as having a very limited future contribution due to their poor structural and/or physiological condition.

2. RESULTS

2.1 Tree Preservation Orders & Conservation Areas

A check has been made on 9th September 2024 with the Local Planning Authority (mid Sussex District Council) which confirmed that none of the trees on the site are subject to a TPO however the site is within a conservation area.

In the case of trees that are subject of TPO, Conservation Area controls or planning application procedures it is essential the Local Authority's advice is sought and where necessary consent obtained prior to undertaking any tree removal or pruning operations.

2.2 Site Description

The site is located within a highly verdant area where trees and greenspace make up for 70% of the landscape. The area for proposed development is comprised of the existing property extension and adjacent garden amenity space associated with No. 1 Church Cottages.

The wider garden contains a mix of trees and low-level shrubs, the most significant of which being the Norway spruce tree T1 which forms a notable landscape feature on the site a contributes to the Church Lane landscape.

The developable area is bounded by a Leyland cypress hedge that is regularly managed (H7), and a low-level mix shrub and scrub species within the lawn space. The garden scrub includes rose, bramble and blackthorn with no significant vegetation items.

2.3 Site Geology

2.3.1 Data Search

Geology of Britain viewer (GoBV) has been used to check the prevailing soil type in the area (<http://mapapps.bgs.ac.uk/geologyofbritain3d/index.html?>).

2.3.2 Bedrock

The underlying bedrock consists of Lower Tunbridge Wells Sand - Sandstone, Siltstone And Mudstone with no superficial deposits recorded.

2.4 Tree Stock

The tree stock is made-up of two trees, one offsite group of trees and two hedgerows. This includes one Category 'B' and four Category 'C' items.

A categorised summary of the existing trees, groups and hedgerows situated on, and immediately adjacent to the site has been provided in accordance to BS5837:2012 (Table 1). The details of all surveyed trees, groups and hedgerows are listed in the Tree Survey Schedule (Annex 5.1).

Table 1: summary of tree stock with reference to BS5837:2012 retention categories.

	Total	A	B	C	U
Trees	2	0	1	1	0
Hedgerows	2	0	0	2	0
Groups	1	0	0	1	0
	5	0	1	4	0



Plate 1: exterior view of the cypress hedge H7 viewed for Church Lane.



Plate 2: internal view of H7 adjacent to existing extension.



Plate 3: internal view of shrub and scrub species immediately south of the property.



Plate 4: external view of the Norway spruce T1.

3. ARBORICULTURAL IMPACT ASSESSMENT (AIA)

3.1 Development Proposals

The following assessment only considers the impact of these proposals upon the surveyed trees, groups and hedgerows. This is with regard to the direct or indirect impacts of the proposals, including assessment of above and below ground constraints. The assessment is based on the surveyor's findings and drawings provided by the client's architect. This section of the report should be read in conjunction with the Plans at Annex 5.3.

3.2 Tree Removal

The removal of trees, hedgerows or large shrubs will not be required to facilitate the proposed development. The proposed extension has been cited sufficient distance from both from the Norway spruce tree T1 and the Leyland cypress tree H7 so as not to have any impact. Some clearance of ground level scrub vegetation (rose, bramble, blackthorn) will be required to facilitate access and construction around the extension but the development will not impact on the significant vegetation items retained around the site.

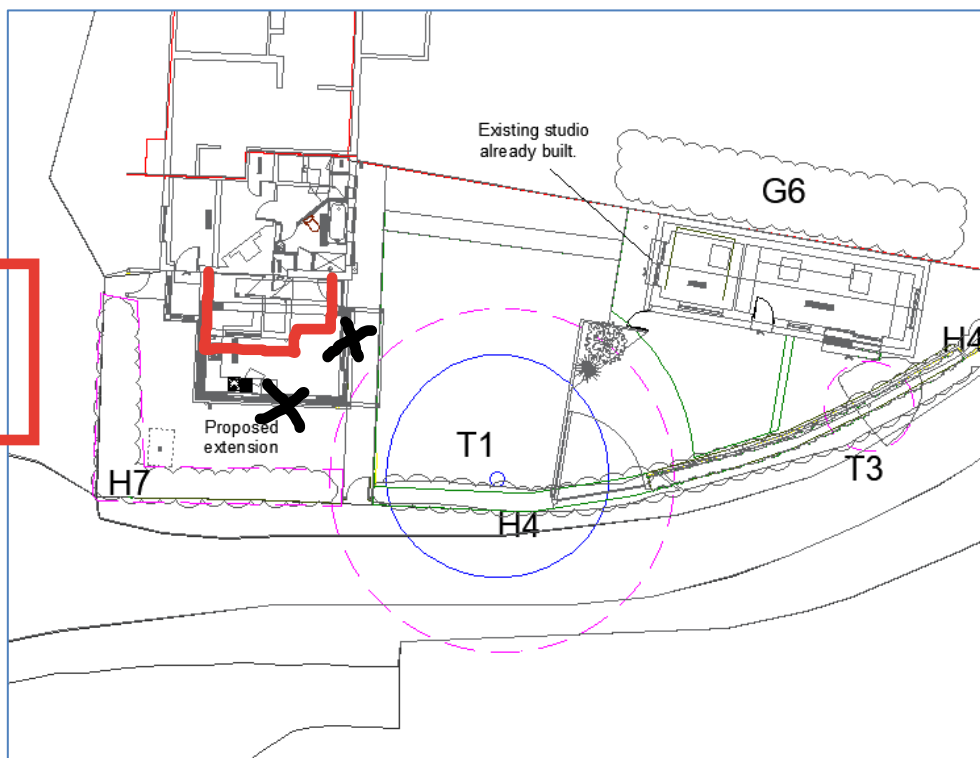


Figure 2: extract from the proposed layout plan.

3.3 Below Ground Conflicts

3.3.1 Root Protection Area Breaches

The proposed development is located just outside the RPA for T1 and as such no specialist construction measures are proposed. The existing pedestrian access will be used and retained as ground protection during construction. Should the footpath be used for plant machinery, additional *Groundguard* construction boards will be required to compensate for the additional weight of machinery and prevent compaction of the underlying roots and soil structure.

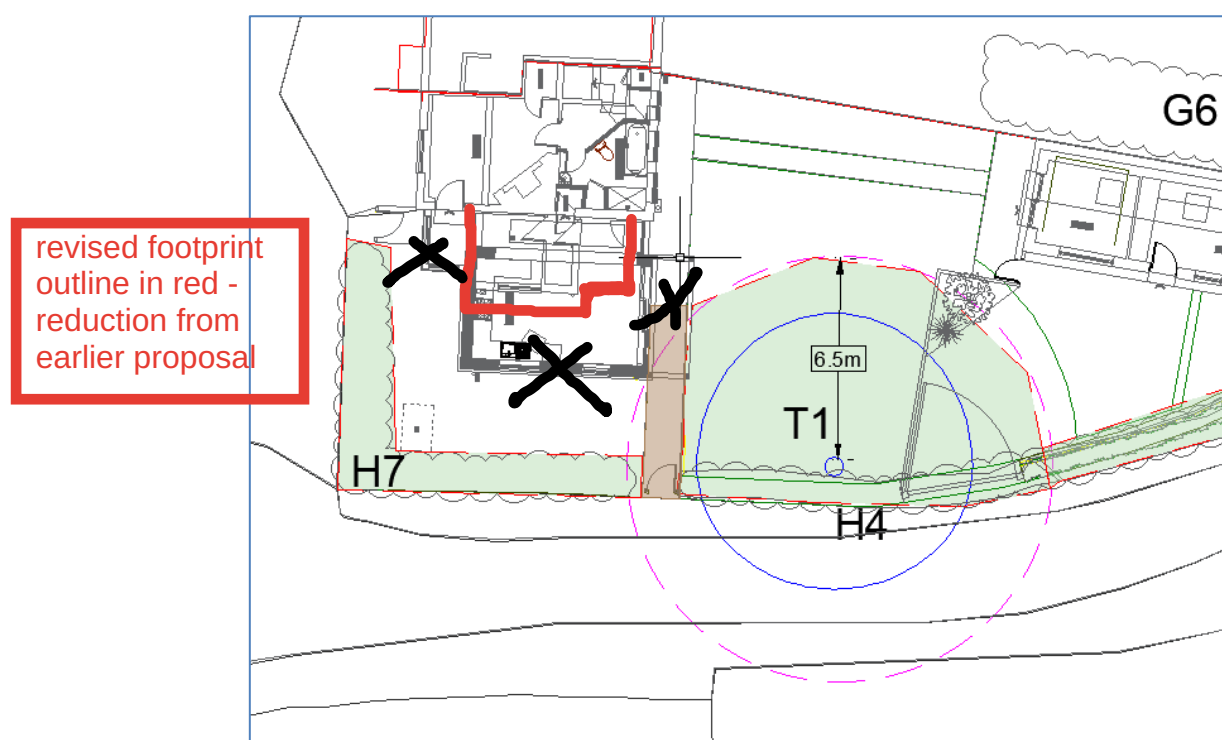


Figure 2: extract from the tree protection plan denoting areas for tree protective fencing (green hatching) and ground protection (brown).

3.4 Above Ground Conflicts

The crowns and branches of the retained trees do not conflict with the proposed development and the expected future growth and mature size of the retained trees is not considered to cause any conflicts with the proposed future use of the site.

3.5 Vegetation-Related Subsidence

The initial GoBV information suggests the presence of shrinkable clay-based soils onsite is possible (Section 2.3). The precise soil type can only be confirmed with further soil investigation/analysis.

If shrinkable clay-based soils are confirmed, the design and size of dwelling foundations proposed to be built within the vicinity of trees may need to be considered in line with NHBC Standards - *Chapter 4.2 'Building near trees'*. Structures built on shrinkable clay-based soils, within the proximity of trees and on inadequate foundations, could be left at risk from tree-related subsidence damage.

4. DISCUSSION & RECOMMENDATIONS

4.1 Protection Measures

A Tree Protection Plan has been provided to indicate where tree protection fencing, and ground protection should be installed to safeguard the trees highlighted for retention (Annex 5.3).

4.2 Mitigation Planting

Given that the development will not have an adverse effect on trees or significant vegetation items, no formal mitigation planting has been recommended

5. ANNEXES

5.1 Tree Survey Schedule

5.2 Tree Survey Key

5.3 Plans

5.4 BS5837:2012 Cascade Chart for Tree Quality Assessment

5.5 Tree Protection Measures & Signage

5.6 Scope & Limitations

5.7 Survey Methods

5.8 Legislation, Planning Policy & Guidance

5.9 References & Bibliography

5.1 Tree Survey Schedule

CTC 211127-PD-10-Tree schedule (BS5837)

1 Church Cottage

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m ²)	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Tree T1	1 Picea abies (Norway Spruce)	15.0	58	1	5.0		4.5		4.0		4.5		2.0		Early Mature	Structural condition Fair. Physiological condition Fair. Extensive root development. Surface roots visible. Average crown height 3m. Landscape feature.	26/11/2021	152.2	7.0	10-20	B1/B2
Tree T3	1 Cerasus avium (Wild Cherry)	7.0	15	1	2.0		3.7		2.5		0.2		3.0		Semi Mature	Structural condition Poor. Physiological condition Fair. 10.7m from site corner. Tree not plotted on topo. Asymmetric crown due due to group pressure. Limited landscape value.	26/11/2021	10.2	1.8	10-20	C2
Hedge H4	1 Ligustrum ovalifolium (Privet/Garden Privet)	2.0	9 AVE	1									0.0		Semi Mature	Structural condition Fair. Physiological condition Fair. Informal gapped hedgerow.	26/11/2021	3.7	1.1	10-20	C2
	1 Ilex aquifolium (Holly)																				
	1 Corylus avellana (Common Hazel)																				
	1 Buxus sempervirens (Common Box)																				

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning

purposes. Where hazardous trees have been noted recommendations for works may have been

made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Generated By



church cottage

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m ²)	RPR (m)	Life expectancy (yrs)	BS Category
						N	NE	E	SE	S	SW	W	NW									
Group G6	1	Fagus sylvatica (Common Beech)	4.0	9	1								2.0		Semi Mature	Structural condition Fair. Physiological condition Fair. Offsite beech trees planted in close succession to form tall hedge. Historically topped and regrown.	10/12/2021	3.7	1.1	10-20	C2	
Hedge H6	1	Leyland cypress (Cuprocyparis leylandii)	4.0	10	1								0		Semi Mature	Structural condition Fair. Physiological condition Fair. Regularly managed.	09/09/2024	5	1.2	10-20	C2	

Stem green Estimated value

Stem AVE Average stem diameter for tree groups

Stem COM Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Table 1 of BS5837 (2012) Cascade chart for tree quality assessment

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

5.2 Tree Survey Key

Table 4: Tree Survey Key

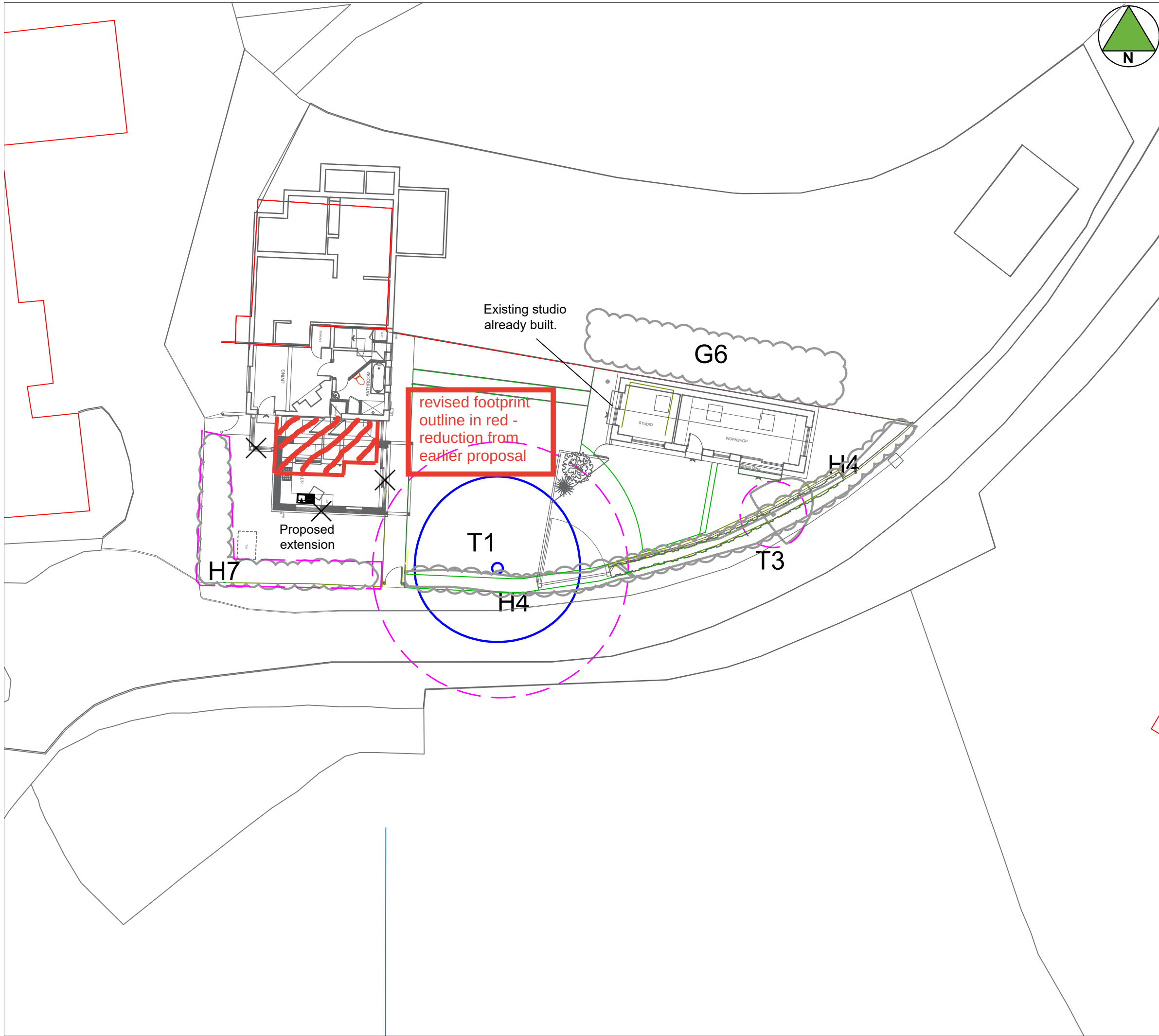
Reference Code	Description
ID	Each plotted position has been allocated a sequential reference number: T1, G1, H1, W1.
Species	Listed by common name and scientific name.
Maturity	Young – not yet established, can be moved or replaced relatively easily and less than 1/3 of their potential mature size. Semi-mature – established in the landscape and approximately 1/3 of their potential mature size. Early-mature – approximately 2/3 of their potential mature size. Mature – considered to have reached mature size. Veteran – by recognized criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned. Dead – Dead specimen.
Height (m)	Measured in metres from ground level.
Stem Diameter (mm)	Diameter is measured at 1.5m above ground level (DBH – diameter at breast height). For multi-stemmed (M/S) trees, the diameter of each stem is measured and the squares of the stems are added together. The square root of this figure is then calculated to give the equivalent single stem diameter. In some instances, this method may provide a misleading figure (e.g. for coppiced trees). The diameter at ground level may be recorded instead, or a diameter that provides a more appropriate RPA.
Crown Spread (m)	The spread of the crown is measured in metres on the north, east, south and west sides. This has been recorded either with a laser or by pacing, depending upon site conditions.
Ground Cl (m)	This is the clearance of the first significant branch from ground level, measured in metres.

Reference Code	Description
Structure/form	An assessment of the form of the tree, with reference to any significant defects found (e.g. decay, weak forks, exposed roots). Good – No obvious major defects observed Fair – Minor defects present Poor – Major defects present
Physical condition	This refers to how well the tree is functioning as a living organism. Factors including: leaf size and condition; shoot growth; and presence of deadwood have provided an indication of its overall health. Good – Appears a healthy example of this species Fair – Early signs of stress present Poor – Not a healthy example of this species, with substantial signs of stress/decline evident Dead – No remaining contribution.
Life expectancy	The approximate remaining contribution in years has been assessed with consideration of the species and site. <10 – less than 10 years remaining contribution 10 – 20 years remaining 20 – 40 years remaining >40 – greater than 40 years remaining
Retention category	BS5837:2012 Table 1 categories (Annex 5.4) have been used to assess the quality and value of tree, tree groups and hedgerows. A – High B – Moderate C – Low U – 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.
RPA (m ²)	Root Protection Area (in m ²) calculated as a circle with a radius of 12 x the stem diameter.
RPA (m)	The radius in metres of the Root Protection Area.

5.3 Plans

5.3.1 Tree Survey and Proposed Layout

5.3.2 Tree Protection Plan



The original of this drawing was produced in colour -a monochrome copy should not be relied upon.

BS 5837:2012 TREE RETENTION CATEGORIES

- Category A**
Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B**
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
- Category C**
Trees of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm.
- Category U**
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
- BS5837 Root Protection Areas**
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work.

REV	DATE	DESCRIPTION	DRAWN
-	XX.XX.XX	-	XX

-	-	Base Drawing	-
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Title
Tree Survey and Proposed Layout

Client
Mr Guy Bowen

Project
Church Cottages

Date	September 2024	Drawn by	EC	Checked by	-
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Drawing No	211127-P-11	Rev	-	Scale	1:200@A3
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ARBORICULTURAL METHOD STATEMENT

TREE WORKS

Only the tree works specified within this report may be undertaken, after the appropriate planning consents have been acquired and in order to implement the consent. In the event of any uncertainty regarding tree works, the retained arboricultural consultant will be consulted and where appropriate the Local Planning Authority.

All tree works will be undertaken, in accordance with the best-practice recommendations provided in BS 3998:2010. The statutory responsibilities as outlined in the Wildlife and Countryside Act 1981 (as amended) and the Habitat Regulations 2010 will also be complied with.

TREE PROTECTION FENCING

The tree protection fencing and (where appropriate) ground protection, will be installed as specified within this plan, prior to the commencement of any demolition and construction works. No plant or materials will be delivered to site prior to the construction of the tree protective fencing other than those required to install the tree protection fencing. On every third panel, a sign will be fixed that states "Tree Protection Zone (TPZ). Keep out. Any incursion into this area must be agreed in advance with the retained arboricultural consultant and Local Planning Authority." An example of this sign is provided within this plan.

The position of the tree protection fencing must not be amended and no individual panels will be uncoupled, without the agreement of the retained arboricultural consultant and/or Local Planning Authority.

SERVICES AND DRAINAGE

The installation of drainage runs, manholes, storage tanks, and utilities will be positioned outside the root protection areas of retained trees. If the installation of new services and drainage runs are required within the root protection areas (RPAs) of retained trees, all methods of working will follow the guidance within Table 3 of BS 5837 or the National Joint Utilities Group's (NIUG) Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees (volume 4, issue 2).

Excavation works within the RPAs of retained trees will be undertaken manually with the use of hand tools only (under the supervision of the retained arboricultural consultant), unless otherwise agreed in advance by the retained arboricultural consultant. It is recommended that an air lance - and if required a soil vacuum - is used, to excavate service trenches within RPAs. If soil conditions are not suitable for this method of excavation, alternative hand tools can be used once agreed in advance by the retained arboricultural consultant.

All roots greater than 25mm in diameter will be retained and will immediately be wrapped in hessian or another appropriate material, to prevent desiccation and temperature fluctuations. Roots will be pushed aside to allow for runs to be installed, where this is practical and without causing root damage.

No machinery will be permitted within the TPZ, at any time, unless agreed in advance with the retained arboricultural consultant.

NO-DIG CONSTRUCTION AREAS

Areas that will require no-dig methods of construction are shown within this plan. Working methods within these areas will comply with the details outlined in the main report and in advance of works being undertaken will be agreed with the retained arboricultural consultant.

ARBORICULTURAL CLERK OF WORKS

The monitoring of activities at the Site will occur, at the following points:

- To sign-off the tree protection measures;
- To sign-off the tree works;
- At other points as specified within this Report and the TPP.

It will be the responsibility of the main contractor (or other managing individual or organisation) to confirm the date and time of attendance, providing at least five working days of notice so that the project arboriculturist can confirm attendance.

GENERAL PROTECTION METHODS

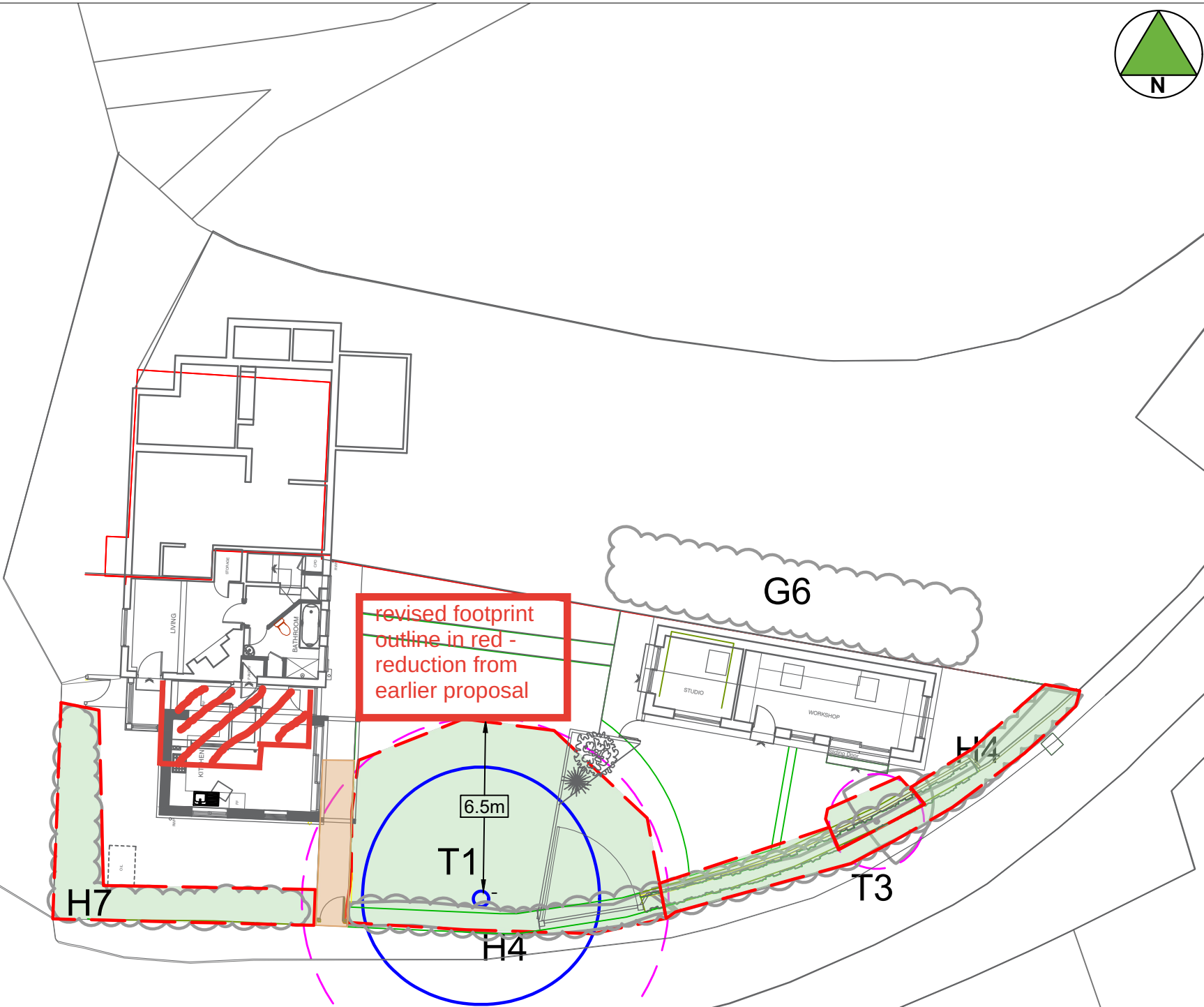
No fires will be permitted, within 20m of the crown of any tree or other area of vegetation that includes hedgerows and groups of trees.

No changes in soil level will occur, within the TPZs and RPAs, without agreement in advance with the retained arboricultural consultant.

The TPZs will at all times remain free of liquids, materials, vehicles, plant, and personnel, without agreement in advance with the retained arboricultural consultant.

Any liquid materials spilled on site will immediately be cleared up. If liquids are spilled within 2m of any TPZ or RPA, the incident will immediately be reported to the retained arboricultural consultant, to determine the appropriate response.

All damage to trees and other vegetation will immediately be reported to the retained arboricultural consultant, to determine the appropriate response.



The original of this drawing was produced in colour -a monochrome copy should not be relied upon.

BS 5837:2012 TREE RETENTION CATEGORIES

Category A
Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Category B
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

Category C
Trees of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm.

Category U
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

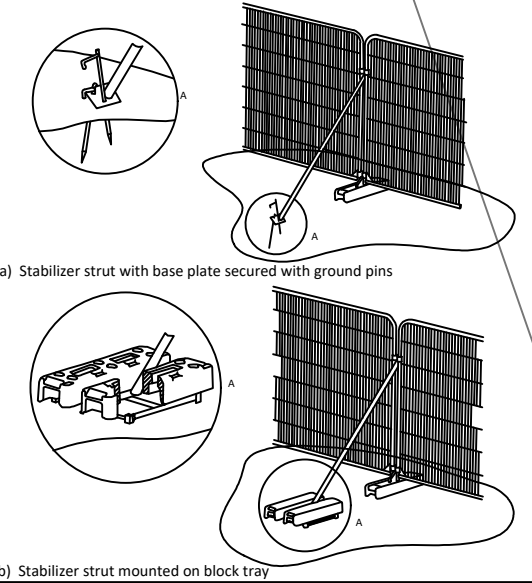
BS5837 Root Protection Areas
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work.

Position of protective fencing and tree protection zones.

Existing footpath to be retained during construction as a form of ground protection for pedestrian movement. Groundguard construction mats will be required should plant machinery require access.

REV	DATE	DESCRIPTION	DRAWN
-	-	Base Drawing	-

Figure 3 Examples of above-grounds stabilizing systems



Title Tree Protection Plan - Construction		
Client Mr Guy Bowen		
Project Church Cottages		
Date September 2024	Drawn by EC	Checked by -
Drawing No 211127-P-13	Rev -	Scale 1:200@A3

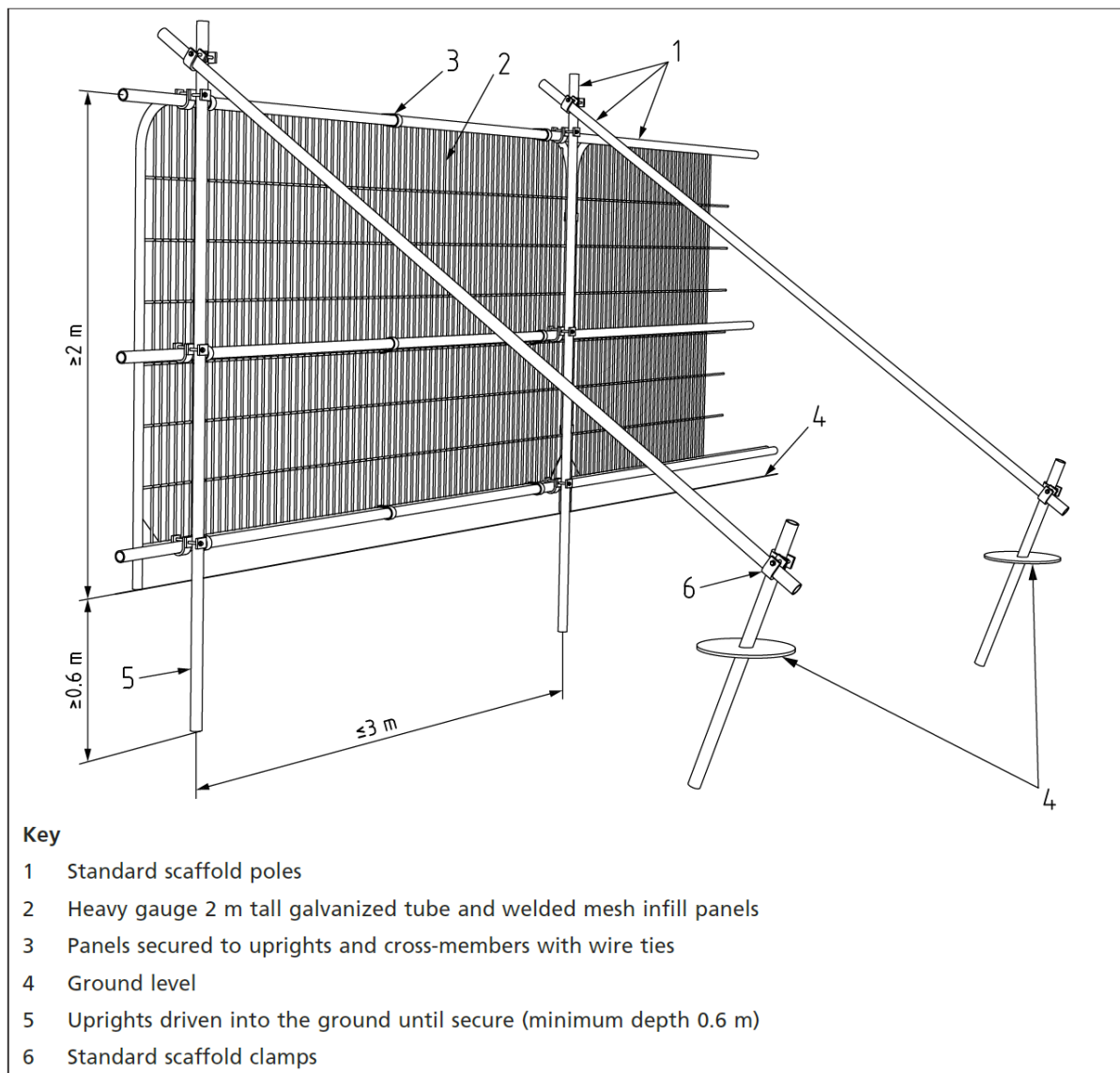


5.4 BS5837:2012 Cascade Chart for Tree Quality Assessment

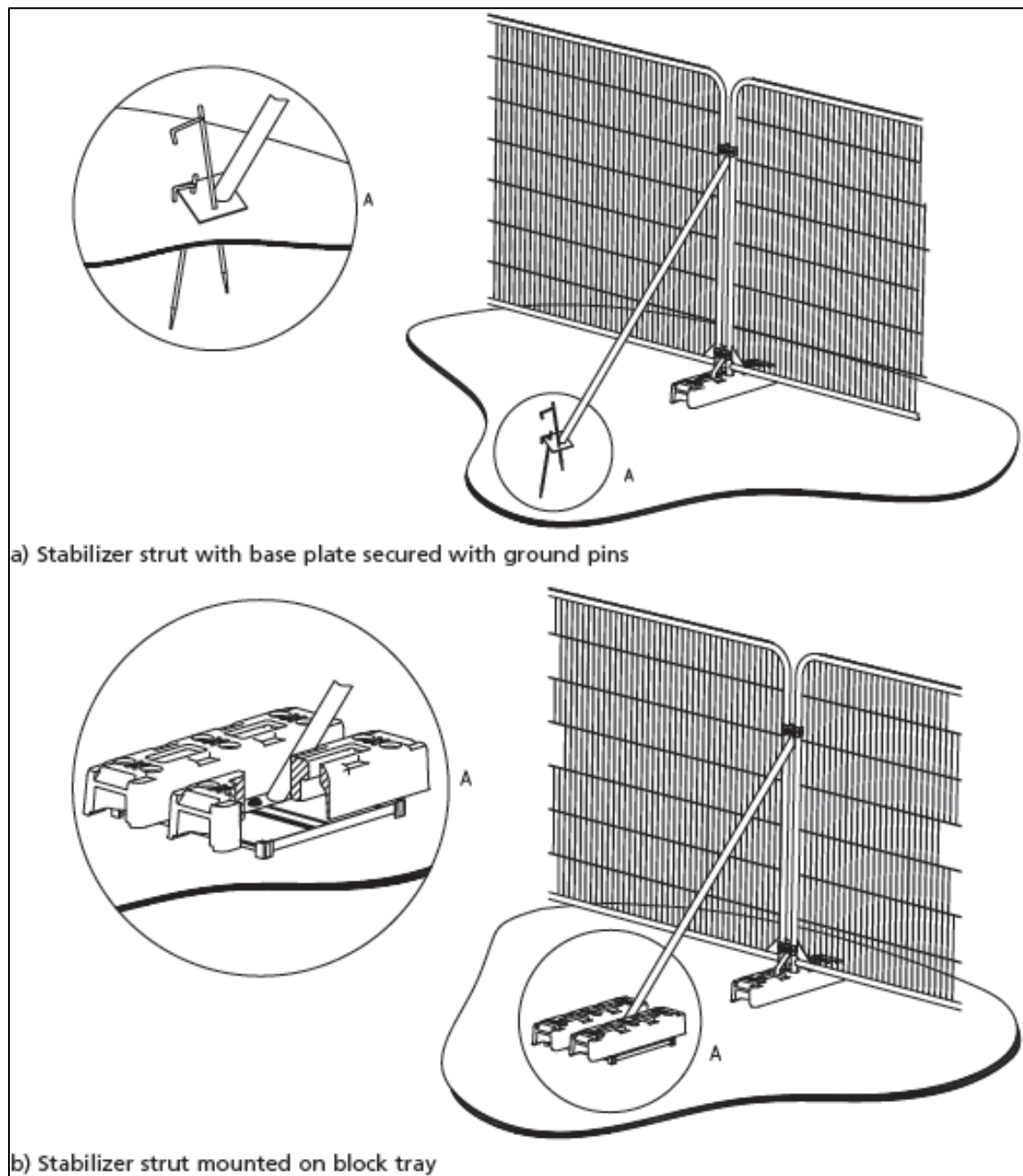
Table 1 Cascade chart for tree quality assessment				
Category and definition		Criteria (including subcategories where appropriate)		Identification on plan
Tree unsuitable for retention (see Note)				
Category U Those in a such condition that they cannot realistically be retained as living trees in the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

5.5 Tree Protection Measures & Signage

5.5.1 Default Tree Protection Fencing Design



5.5.2 Alternative Tree Protection Fencing Design



5.5.3 Signage for Tree Protection Fencing



5.6 Scope & Limitations

The scope of this report is as follows:

- To undertake a BS5837: 2012 survey of trees and hedgerows within the site identified by the client as being subject to future development proposals.
- To provide a Tree Constraints Plan (See Annex 5.3) for the site, provided without reference to a detailed development design in order to inform and optimise future development proposals.
- To undertake a BS5837:2012 arboricultural impact assessment of trees and hedgerows within the area identified by the client as being potentially affected by future development proposals.
- To provide a series of tree impact plans for the site, which are provided with reference to a detailed development design in order to inform a planning application for this site.

This report is valid for a period of not more than 12 months from the date of the inspection or less in the event of significant changes to the condition of trees present on site (*e.g.* following major storm damage, fire or disease) or prevailing site conditions.

No detailed assessment has been undertaken as part of this report with regard to managing the trees in relation to their risk of failure (either parts of the trees or the entire trees).

Trees and hedgerows can support a variety of vertebrate and invertebrate fauna, including species that are afforded protection under wildlife legislation (*e.g.* The Wildlife and Countryside Act 1981 (as amended), The Conservation of Habitats and Species Regulations (2017)).

Where the presence of legally protected species is known or suspected, advice should always be sought from an experienced ecological consultant and/or the relevant statutory nature conservation organisation (*e.g.* Natural England) for formal advice. Such detailed advice is beyond the remit of this report, but obvious wildlife constraints will be identified wherever feasible.

The author has relied on the accuracy of the drawings provided in the production of this report.

5.7 Survey Methods

The tree survey was carried out according to the methods set out in British Standard 5837:2012.

The survey was carried out from ground level. Binoculars were used where required. Measurements were taken with the use of electronic measuring equipment and measuring tapes. Crown spread dimensions were measured either with a laser or by pacing. Where measurements have been estimated, (e.g. for neighbouring trees), this will be indicated in the survey (#).

The survey was carried out at the site address or from public places, with no access to neighbouring properties.

The tree, group, hedgerow positions are those shown on the topographical survey provided. Positions have only been amended where obvious inaccuracies have arisen. Trees have been recorded as groups where they form cohesive features either aerodynamically, visually or culturally. Sequential reference ID numbers are given for plotted positions as described in Table 5, below:

Table 5: Summary of Reference Identification Codes.

Reference Code	Description
T1, T2, T3 <i>etc.</i>	Individual trees
G1, G2, G3	Tree groups
W1, W2, W3	Woodlands
H1, H2, H3	Hedgerows

The stem diameter measurements were recorded at 1.5m above ground level. For stems growing on slopes, multi-stems and stems with unusual growth patterns the BS5827:2012 guidance was followed (Annex C). Trees with a diameter of less than 75mm were not recorded for this survey as they are likely to be replaceable or can be relocated.

5.8 Legislation, Planning Policy and Guidance

This report is principally designed to satisfy the requirements of BS5837:2012 - *Trees in Relation to Design, Demolition and Construction*.

The information and advice contained within this report will facilitate the correct application of The Town and Country Planning Act 1990 (specifically Part VIII 'Special Controls', Chapter 1 'Trees' S.197 and sequential).

Advice contained within this report is designed to address local plan policies in relation to trees in the planning process.

This advice contained within this report is also designed to address the requirements of updated The National Planning Policy Framework (NPPF) 2019. The framework states that "*planning policies and decisions should contribute to and enhance the local environment*" (paragraph 170).

Chapter 15 of the framework focusses on habitats and biodiversity. Specifically, paragraph 175 states:

"...when determining planning applications, local planning authorities should apply the following principles:

- *if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- *development proposals whose primary objective is to conserve or enhance biodiversity should be supported;*
- *opportunities to incorporate biodiversity improvements in and around developments should be encouraged;*
- *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.*

5.9 References & Bibliography

British Standards Institute (2010). *British Standard 3998:2010 Tree Work – Recommendations.* BSI, London UK.

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NHBC Standards (2019). *Chapter 4.2 Building near Trees.* NHBC, Milton Keynes UK. (<https://nhbc-standards.co.uk/>).

NJUG (2007). *NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.* Volume 4, Issue 2. National Joint Utilities Group.

6. QUALIFICATIONS & EXPERIENCE

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This report has been prepared by Edward Cleverdon. Edward is a senior arboricultural consultant dealing with trees in relation to all forms of human activity including the built environment. Edward is a professional member of the Arboricultural Association, an associate member of the Institute of Chartered Foresters, graduated with a BSc (hons) degree in Arboriculture from The University of Central Lancashire, is a LANTRA qualified professional tree inspector; and a registered user of Quantified Tree Risk Assessment.