



East Devon
Tree Care

ARBORICULTURAL SITE APPRAISAL

Site Address	Penshurst High Street Newton Poppleford EX10 0DW
Client	Structure Haus
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1 EXECUTIVE SUMMARY

- 1.1 This survey is concerned with eight trees in the vicinity of the proposed replacement footbridge, new retaining wall and landscaping improvements.
- 1.2 The survey identifies four trees on-site and four off-site. None of these trees are expected to be affected by the proposed project.
- 1.3 There are no trees within the garden of Penshurst south of the brook, and neighbouring trees' root protection areas do not extend to the garden south of the footbridge. Access to the garden during construction will be from the southern side of the brook, away from root protection areas, negating the need for a tree protection plan or arboricultural method statement.

2 INTRODUCTION

- 2.1 East Devon Tree Care Ltd has been commissioned by Bridgitte Mandt of Structure Haus to produce an Arboricultural Report, an Arboricultural Impacts Assessment (AIA) and a Tree Survey Plan (TSP) at Penshurst.
- 2.2 The survey was carried out by qualified Arboricultural Consultant Matthew Shute on 18.03.24 by means of a visual inspection from ground level assisted by the use of a nylon mallet, wire probe and binoculars. No aerial inspection or invasive probing or drilling was undertaken. No electronic decay detection was used for this report. Where a more detailed assessment/inspection of a particular feature is deemed necessary it has been recommended in the survey schedule.
- 2.3 A sample of the heights and spreads was measured using a trupulse laser measure. Some tree heights and spreads were estimated using the measured heights as a benchmark.
- 2.4 Trees were assessed in accordance with BS 5837:2012 "Trees in Relation to Design, Demolition and Construction – Recommendations". This is a basic collection of data to determine the condition of the trees at the time of surveying. Tree species and their dimensions are recorded in the tree survey schedule together with their ages, condition and category codes in accordance with the guidelines set out in the British Standard. See Appendix 1 of this report.
- 2.5 The report is based on the following drawings and documents, which have been supplied by the client:
 - i. Site Plan: 06057E_PA-04_Ground Floor as existing_B_2024_02_29
 - ii. Site Plan: 06057E_PA-07_Ground Floor as proposed_B_2024_02_29

3 SCOPE AND LIMITATIONS OF REPORT

- 3.1 The survey is concerned with trees with a stem diameter greater than 75mm at 1500mm above ground level and within the agreed survey area.
- 3.2 The tree data has been plotted onto the drawings provided. The supplied topographical survey included base positions of all the inspected trees except for T8 which has been plotted onto the plan by eye.
- 3.3 None of the trees included within this report were tagged. Tree numbers are shown on the TSP and should be easily identifiable on site.
- 3.4 Soil type was not determined on site. This report makes no reference to the possible effects of tree roots and shrinkable soils, and any possible effects on building foundations.
- 3.5 Information regarding the location of any existing or proposed below-ground services was not provided for the purpose of the report.
- 3.6 Trees are large dynamic organisms whose health and condition can change rapidly; therefore, due to the changing nature of trees and other site considerations, this report and any recommendations made are only valid for the 12-month period following the 18.03.24.
- 3.7 All rights in this report are reserved. No part of it may be reproduced or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in any retrieval system of any nature, without our written permission. Its content and format are for the exclusive use of the client. It may not be sold, lent, hired out or divulged to any third party not directly involved in this site without the written consent of East Devon Tree Care Ltd.

4 SITE AND SURROUNDINGS

- 4.1 Penshurst is a detached property with rear garden that extends to both the north and south of Back Brook, a stream that bisects the rear garden.
- 4.2 There are two trees on the southern side of the brook within the neighbouring garden to the west with all remaining trees located north of Back Brook.
- 4.3 Penshurst has a small, landscaped courtyard garden to the rear of the property with retaining walls on the frontage of the brook.
- 4.4 This survey is only concerned with trees in close enough proximity to be influenced by, or along the construction access route to, the proposed replacement bridge over Back Brook.

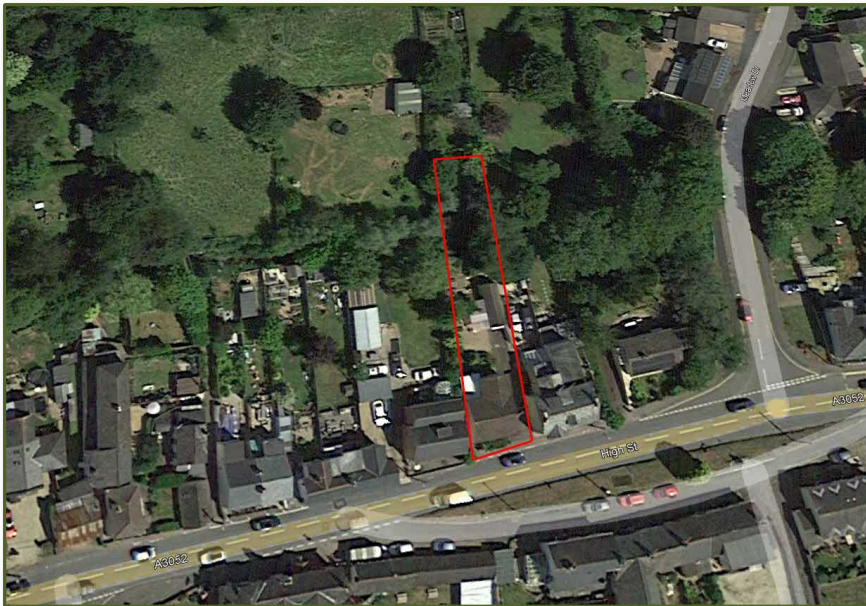


Figure 1: Site location. Source: Google Earth

5 TREE POPULATION

5.1 Four trees were recorded within the survey area. An additional four are within neighbouring gardens but are near enough to the replacement bridge that they have been included within this survey.

5.2 Tree Quality Categorisation. Under BS 5837:2012 “Trees in Relation to Design, Demolition and Construction – Recommendations”, trees and groups are objectively assigned a quality category designed to quantify their value within any future development. The table has been reproduced in Appendix 2.

5.3 Category A Trees. Trees of high value, including those that are particularly good examples of their species and/or those that have visual importance or significant conservation or other value. It is essential to retain these trees. The design of the proposed development should take into account the retention of category A trees.

5.3.1 There are no category A trees recorded in the survey.

5.4 Category B Trees. Trees of moderate value, including those that do not qualify as category A due to impaired condition and/or those that collectively have higher value than they would as individuals; also trees with material conservation or other value. The design of the proposed development, where feasibly possible, should take into account the retention of category B trees. A design layout that suggests the removal of category B trees has an increased risk of planning refusal.

5.4.1 There are three category B trees recorded in the survey, two within the garden of Penshurst and one located off site.

5.4.2 T6 is a young Blue Atlas Cedar with the potential to become a significant tree. T7 is a coppiced Hazel located on the western boundary of the garden. Both trees are located within the garden of Penshurst and both have the potential to make significant contributions to the site in the medium to long term.

5.4.3 T2 is mature Willow, located off site in the garden to the west. This is a large and attractive tree visible from the rear gardens of the surrounding properties.

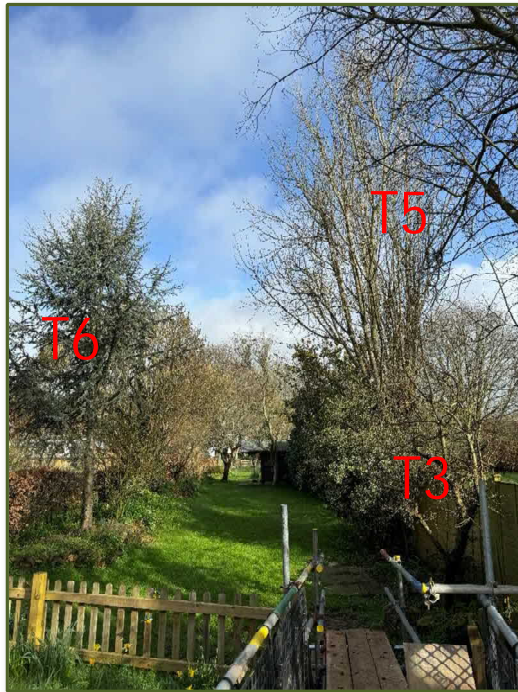


Figure 2: Overview of trees T3, T5 & T6.



Figure 3: Overview of T7.



Figure 4: Overview of T2 & T8.

5.5 Category C Trees. Trees of low value, including those with very limited merit or impaired condition; trees offering transient or temporary landscape benefits. Due to their generally low quality, it would not be a great loss if they had to be removed if they were a significant constraint to the design or construction process of the proposed development. Particular attention is drawn to the phrase “significant constraint”.

5.5.1 There are five category C trees recorded in the survey, two within the garden of Penshurst and three located off site.

5.5.2 Directly beside the temporary bridge on the northern bank of the stream and within the neighbouring garden to the east are a multi stemmed Goat Willow (T1) and a semi mature Alder (T4). The Goat Willow comprises of six stems and is in moderate physiological condition typical for the species. The Alder has been suppressed by the Willow and as a result has developed a lean and canopy bias to the south. Due to the poor form of the Alder and the short-lived nature of Goat Willow stems, both trees have been classified as category C trees.

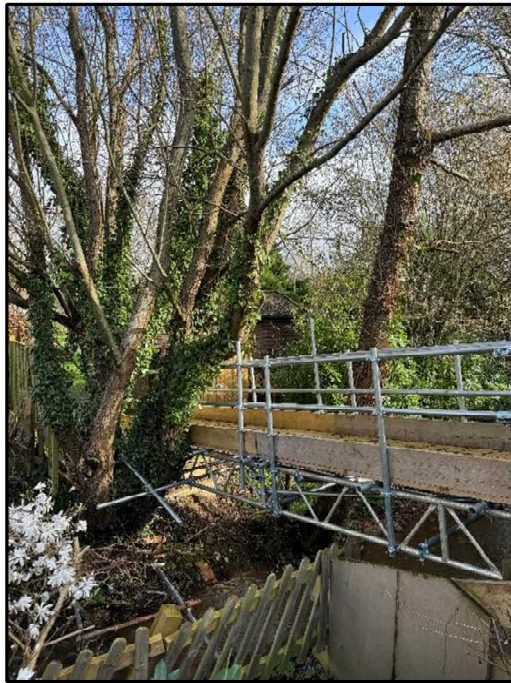


Figure 5: Overview of T1 with T4 to right.

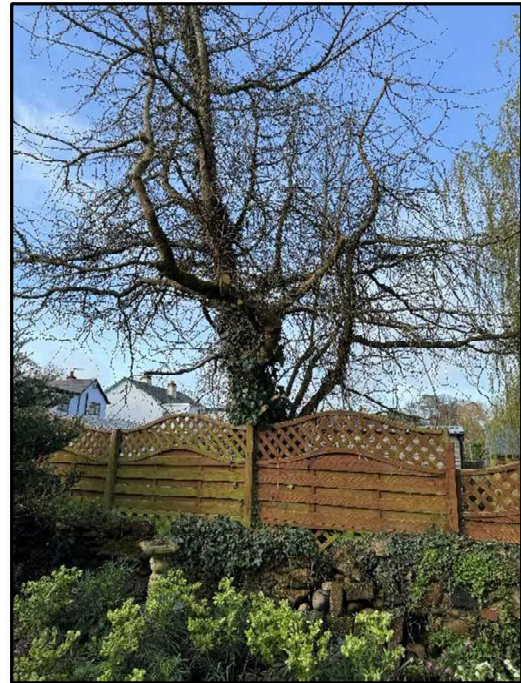


Figure 6: Overview of T8.

5.5.3 T3 is a small Apple tree in the rear garden of Penshurst and barely visible from any of the neighbouring gardens.

5.5.4 T5 is a semi mature Ash. This tree has been historically topped at 3m affecting its form. The tree is now moderately affected by Ash Dieback affecting its assumed life expectancy.

5.5.5 T8 is a Ginkgo Biloba in the courtyard garden west of Penshurst. Although this is still a semi mature tree, it has been planted very close to the boundary wall which is beginning to be affected by incremental growth of the tree. Due to the tree's impact on the wall, it is not likely to be retained as a long-term feature within the neighbouring garden.

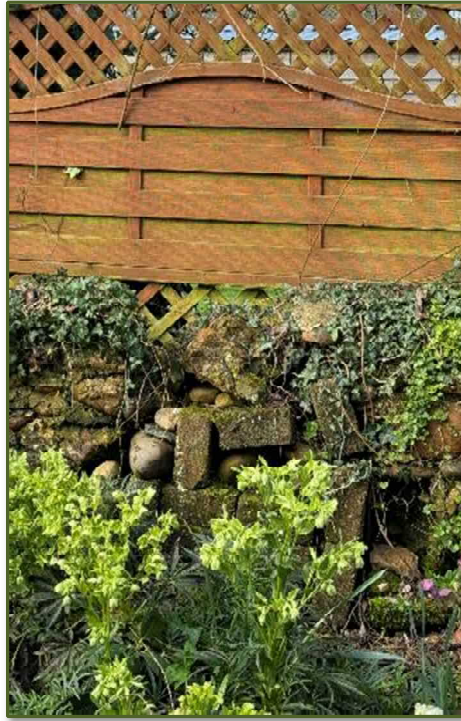


Figure 7: Damage to wall beside T8.

5.6 Category U Trees. This category signifies trees that are in such a condition that any existing value would be lost within ten years and that should, in the current context, be removed for reasons of sound arboricultural management.

5.6.1 There were no category U trees recorded in the survey.

5.7 Visual Amenity of Trees. With all of the surveyed trees being located in the rear garden and none being visible from a public highway or any other public highway, none of the trees have a high amenity value. T2 is one of the larger trees and as such is considered a landscape feature when viewed from the rear gardens in its immediate vicinity.

6 TREE CONSTRAINTS

6.1 Below-ground Constraints

- 6.1.1 Development processes and changes to land use that lead to soil compaction in tree rooting zones and physical damage to trees can adversely affect long-term tree health. Any digging down beneath existing ground levels within the root protection areas (RPAs) of retained trees is likely to cause root damage that could cause potentially damaging affects to tree health and/or tree stability. The RPAs of all the trees surveyed have been calculated and plotted onto the TSP.
- 6.1.2 RPAs are typically drawn as a circle, centred on the surveyed tree unless there are barriers or other features that may affect the actual distribution of tree roots. The stream running through the middle of the garden is likely to have created a natural barrier to tree roots due to the waterlogged, anaerobic soil conditions, and as such the RPAs of T1, T2 and T4 have been adjusted away from the stream.
- 6.1.3 In addition to the stream as a barrier to root growth, the historic hard landscaping and stone abutment of the previous footbridge are also considered to have affected the distribution of tree roots. The RPA of T2 has also been adjusted away from this hard landscaping.
- 6.1.4 It is advised that no construction of foundations or installation of services should take place within the RPA of any tree recommended for retention. If a development proposal is made to build within the RPA of a tree to be retained, it is essential that the structure is designed with the need minimal excavations to minimise any adverse impact to the trees.
- 6.1.5 Proposed works within the RPAs of trees that are to be retained can increase the risk of planning refusal.
- 6.1.6 Infrastructure Requirements –Services, etc. The installation of services within the rooting zones of trees can have a detrimental impact on the long-term survival of retained trees, leading to their unnecessary loss or root failure in high winds. Where the installation of services within the RPAs of retained trees is unavoidable, appropriate work methods will be required to ensure the safe long-term survival of those trees. This process will require additional consultation with a qualified Arboricultural Consultant and is likely to be more expensive than conventional trench installation.

6.2 Ground Level Changes

- 6.2.1 A rise or reduction in soil level can have major implications on the longevity and health of the trees. Minor changes (up to 100mm) can be tolerated in some cases but is heavily dependent on tree species, and their condition and growing environment.
- 6.2.2 Existing ground levels within the RPA should be respected as far as is reasonably practicable. The advice of a qualified Arboricultural Consultant should be sought if level changes are required.

6.3 Above-ground Constraints

- 6.3.1 Low branches. The existing canopy heights and low branches form a constraint to development. Existing canopy heights and the height and orientation of the lowest significant branches have been recorded as part of this survey. Wherever possible, the development should be planned so that they are outside of the canopy lines to minimise the impact on all the trees that are to be retained.

7 STATUTORY PROTECTION AND GUIDANCE

7.1 National Planning Policy Framework (NPPF)

- 7.1.1 The NPPF assumes protection of all ancient woodland and veteran trees unless it can be clearly demonstrated that the need for, or benefits of, development outweigh the loss. In this respect ancient woodland is defined as an area that has been wooded continuously since at least 1600 AD and a veteran as a tree of exceptional value for wildlife, in the landscape or culturally, because of its great age, size or condition.
- 7.1.2 On this site there is no ancient woodland.
- 7.1.3 Veteran trees often provide a range of rich but scarce habitats supporting many rare and endangered species and are an irreplaceable part of England's landscape and biological heritage.
- 7.1.4 For sites where veteran trees are valued for their historic, landscape and biological importance, the continuity of wildlife habitat is one of the fundamental issues. In such sites, there must be the key aim that there should be no avoidable loss of veteran tree habitat by using current best practice to maintain the wildlife and environmental value of the site while meeting obligations in law with respect to duty of care.
- 7.1.5 The standing advice also recommends a larger root protection area for mature veteran trees is extended to least 15 times the diameter of the stem, or the canopy spread plus 5m, whichever being the greater.

7.1.6 None of the surveyed trees are veterans.

7.2 Tree Preservation Orders (TPOs) & Conservation Area Designations

7.2.1 Local authorities reserve the right to create TPOs to protect the amenity value conferred to a location by a tree or group of trees. Where a TPO is in force, the lopping, topping, felling and uprooting of or wilful damage to a tree are prohibited and such actions may be prosecuted and incur a fine. Works to TPO protected trees must only be undertaken with the written consent of the local authority.

7.2.2 An online check was made using the TPO search tool on the East Devon District Council website on 18.03.24. At this time, no tree preservation orders were shown at the address, nor is the site within a conservation area.

7.3 Protected Species – Birds

7.3.1 Trees are a potential habitat for nesting birds, which (as well as their nests and eggs) are protected under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to intentionally or recklessly damage or destroy an active bird nest or any part thereof.

7.3.2 Due to the suitability of the trees within the survey boundary for nesting birds, any tree work should ideally be undertaken outside the bird nesting season (British bird nesting season: March to August inclusive).

7.3.3 If this is not possible then a detailed inspection of each tree should be undertaken by a qualified ecologist immediately prior to the arboricultural works. Should an active nest be found (being built, or containing eggs or chicks) then any work likely to affect the nest must be halted and a working boundary of 5m left intact around the nest until the nest becomes inactive.

8 ARBORICULTURAL IMPACTS ASSESSMENT

Tree Quality Category	A	B	C	U
Trees that can be retained	-	3	5	-
Trees that will be removed	-	0	0	-
Trees that will be impacted by the proposal	-	0	0	-

8.1 Development Proposal

8.1.1 The proposed development is to replace the temporary bridge with a new galvanised steel footbridge, using the existing stone abutments from the previous structure for the foundations.

8.1.2 Replacement of the failing retaining wall on the southern side of the stream.

8.1.3 Making good of the existing hard landscaping and stems descending to the stream.

8.2 Above Ground Impacts

8.2.1 The replacement bridge will be situated below the canopy of T1, but canopy clearance is sufficient that there should be no need to undertake any pruning to the tree to allow placement of the new bridge.

8.2.2 None of the trees on the site are likely to be subject to any above ground impacts.

8.3 Below Ground Impacts

8.3.1 The RPA of T1 has been adjusted to discount the stone abutment on which the new bridge will sit. This existing abutment appears to be a concrete slab which very likely predates the growth of T1 in its current form.

8.3.2 The new retaining wall sits outside of the RPA of all trees and its construction is not thought likely to impact any of the trees on the site.

8.3.3 The existing hard landscaping and steps down to the stream that will be made good is not likely to have any significant impact to the trees on site. The RPA of T2 has been adjusted to be outside of this area. Willows can have very prominent surface roots which often cause direct damage to small walls, steps, and paving. The existing hard landscaping is very likely to predate the establishment of all trees on the site except for T7 and have formed a barrier to root growth. The lack of any noticeable disturbance of the landscaping is a strong indication that no significant tree roots are present below these structures.



Figure 8: Stone abutment on northern side of brook.



Figure 9: Hard landscaping to be made good.

8.4 Tree Protection Requirements

8.4.1 The natural barrier provided by the stream will provide adequate protection for trees on the site with limited pedestrian activity expected on the northern side of the stream during construction. Any site huts or material storage or mixing areas will be on the southern side of the brook and will not have any impact to trees on the site. No further tree protection measures are required, the project will not require a tree protection plan nor an arboricultural method statement.

ID	Name	Height (m)	Age	Stems	Dia (mm)	Crown Spread (m)	L/Hgt (m)	FSB (m)	Condition	Comments	RPA-R (m)	RPA-A (m2)	Category	Life Expectancy	Flags
T1	Goat Willow	8	M	MS	600	N: 5 E: 4 S: 5 W: 3	3	3(S)	Fair	Multi stemmed willow, six stems, diameter taken below boling. Aging tree, reduced vitality.	7.2	162.9	C2	10+	DE,CE,NP
T2	Willow	11	M	1	500	N: 4 E: 4 S: 7 W: 6	2	2(N)	Good	Good quality tree in neighbouring garden.	6	113.1	B2	20+	DE,CE
T3	Apple	5	SM	1	100	N: 2 E: 1 S: 1 W: 1	1	1(E)	Good	Small Apple.	1.2	4.5	C1	10+	
T4	Common Alder	10	SM	1	400	N: 0 E: 1 S: 5 W: 1	5	5(S)	Fair	Tree growing on edge of stream, lean and canopy bias to south.	4.8	72.4	C1	10+	DE,CE,NP
T5	Ash	11	SM	1	420	N: 2 E: 2 S: 3 W: 2	3	3(N)	Poor	Previously topped at 3m. Tree now moderately affected with Ash Dieback.	5.04	79.8	C1	10+	DE,CE

ID	Name	Height (m)	Age	Stems	Dia (mm)	Crown Spread (m)	L/Hgt (m)	FSB (m)	Condition	Comments	RPA-R (m)	RPA-A (m2)	Category	Life Expectancy	Flags
T6	Atlantic Cedar	7	Y	1	275	N: 2 E: 2 S: 2 W: 2	3	3(W)	Good	Good condition, potential to become a large tree.	3.3	34.2	B2	20+	DE,CE
T7	Hazel	5	M	MS	600	N: 3 E: 3 S: 3 W: 1.5	1	1(S)	Good	Historic Hedgebank Hazel coppice. Diameter estimated at ground level.	7.2	651.4	B3	40+	DE,CE
T8	Gingko	8	SM	1	450	N: 3 E: 3 S: 4 W: 4	3	3(W)	Fair	Tree in neighbours garden, growing directly beside boundary wall which is showing signs of direct damage. Unlikely to be retained as a long-term feature within garden.	5.4	91.6	C1	10+	PE,DE,CE,NP

APPENDIX 2: SURVEY METHOD

The survey of the trees has been conducted from ground level only. The nature of the soils on site has not been assessed. Trees are dynamic living organisms with a constantly changing structure; even trees in good condition can suffer from damage or stress. The information recorded is presented as being correct at the time of the survey.

The following features of each tree, group of trees or wood may have been recorded in the Tree Survey Schedule in Appendix 1.

TYPE	Tree, Hedgerow, Woodland, Group			
TREE NO	Corresponding to tag (where tagged).			
SPECIES	The common name is given. The Latin abbreviation may also be given.			
HEIGHT (M)	Existing height recorded to the nearest half metre for dimensions up to 10m and the nearest whole metre for dimensions over 10m.			
STEM DIA @ 1.5M	Diameter of tree trunk measured at 1.5m above ground level, or immediately above root flare for trees with more than 1 stem below 1.5m from ground level. Recorded in millimetres, rounded to the nearest 10mm (0.01m).			
BRANCH SPREAD (M)	Radial spread of branches, measured at 4 compass bearings, north, south, east and west. Recorded to the nearest half metre for dimensions up to 10m and the nearest whole metre for dimensions over 10m.			
EXISTING HEIGHT OF FIRST SIGNIFICANT BRANCH (M) AND DIRECTION OF GROWTH	Existing height in metres above ground level of first significant branch and direction of re-growth. Recorded to the nearest half metre for dimensions up to 10m and the nearest whole metre for dimensions over 10m. (e.g., 2.4-N)			
EXISTING HEIGHT OF CANOPY (M)	Existing height to lowest significant live branch measured in metres. Distance is measured to lowest point of branch above ground level. Recorded to the nearest half metre for dimensions up to 10m and the nearest whole metre for dimensions over 10m.			
LIFE STAGE	Y	Young		
	SM	Semi-mature		
	EM	Early mature		
	M	Mature		
	OM	Over-mature		
	V	Veteran		
CONDITION	G	Good – trees showing signs of good vigour		
	F	Fair – trees showing signs of fair vigour		
	P	Poor – trees showing signs of poor vigour		
	D	Dead trees		
LIFE EXPECTANCY	<10	Short – less than 10 years		
	10+	Low – 10-20 years		
	20+	Medium – 20-40 years		
	40+	High – 40 years or more		
CATEGORY GRADING	Each tree/group is identified with a retention category in accordance with BS 5837:2012. See "Cascade Chart for Tree Quality Assessment" overleaf.			
FLAGS	NF	Not found on plan	FI	Requires further inspection
	PE	Plotted by eye on plan	BR	Potential bat roost
	D	Tree considered dangerous	NT	Tree not tagged
	U	Works urgent	NK	Tree name unknown
	DE	Diameter estimated		
	CE	Canopy estimated		
	NP	In neighbouring property		

CASCADE CHART FOR TREE QUALITY ASSESSMENT

(from British Standard 5837:2012 “Trees in Relation to Design, Demolition and Construction – Recommendations”)

TREES UNSUITABLE FOR RETENTION				
Category and Definition	Criteria			Identification on Plan
<p>Category U</p> <p>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</p>	<p>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 U category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning).</p> <p>Trees that are dead or are showing signs of significant, immediate and irreversible overall decline.</p> <p>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.</p> <p>NOTE: Category U trees can have existing or potential conservation value that it might be desirable to preserve.</p>			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and Definition	Criteria - Subcategories			Identification on Plan
	1. Mainly Arboricultural Qualities	2. Mainly Landscape Qualities	3. Mainly Cultural Values, including Conservation	
<p>Category A</p> <p>Those of high quality with an estimated remaining life expectancy of at least 40 years</p>	Trees that are particularly good examples of their species, especially if rare or unusual, or those that are essential components of groups, or of 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).	LIGHT GREEN
<p>Category B</p> <p>Those of moderate quality with an estimated remaining life expectancy of at least 20 years</p>	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 beyond 40 years; or trees lacking the special quality necessary to merit category A designation.	Trees present in numbers, usually 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.	MID BLUE
<p>Category C</p> <p>Those of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm</p>	Unremarkable trees of very limited merit or such impaired 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

