



Urban Tree Experts

BS5837 – Tree Surveys – Ecological Consulting

ARBORICULTURAL IMPACT ASSESSMENT FOR 1 DIAMOND VILLAS HURST, READING



**Prepared on behalf of:
Jim Townsend and Company
7 Castle Crescent
Reading
RG1 6AQ**

Ref: PB/5837-24/07.09

26 July 2024



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1. Report details

1.1 Arboricultural Impact Assessment (AIA)

1.1.1 An arboricultural impact assessment (AIA) is a term used to describe a specific type of tree survey which examines the relationship between trees and adjacent features (existing & proposed) such as buildings, roads etc. The study describes how the trees and features will interact and influence each other and should consider both present and future interactions.

1.1.2 AIA studies are commonly used to determine whether a proposed development will adversely affect established trees and whether these trees will be the cause of nuisance to the proposed development.

1.2 Scope

1.2.1 This assessment is concerned with the arboricultural aspects of the site only.

1.2.2 This assessment was undertaken in accordance with British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations (BS: 5837).

1.3 Limitations

1.3.1 The assessment contained within this document is based upon plans and other supporting information (verbal or documented) as supplied to us by Bonney Architecture, 14 Hornbeam Close, Barkham, Wokingham, RG41 4UR and the tree survey conducted by ourselves on the 9 July 2024.

1.4 Clients instructions

1.4.1 We are instructed by Kevin Townsend with regard to the site at 1 Diamond Villas, The Street, Hurst, Berkshire, RG10 0DG to prepare an arboricultural impact assessment to determine the effects of the proposed works on the trees identified in our survey of 9 July 2024 and visa-versa.

1.5 Supplied information

1.5.1 The documents listed in Table 1 below were supplied by Bonney Architecture and are used in the preparation of this report:

Table 1. Supplied information.

Drawing ref.	Drawing title
<i>Dwg No. BA0173_51</i>	<i>PROPOSED PLANS</i>
<i>Dwg No. BA0173_52</i>	<i>PROPOSED ELEVATIONS</i>
<i>Dwg No. BA0173_53</i>	<i>SITE & LOCATION PLANS</i>



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2. The site

2.1 Site description

2.1.1 The topography of the development site is level.

2.2 Proposed development

2.2.1 The proposed development consists of alteration and extension to the existing dwelling with a two storey side extension and loft conversion, and provision for two parking areas to the front drive

2.2.2 The tree survey report ref PB/5837-24/07.09 identified seven individual trees that may be impacted by the scheme. The tree details have been assessed against the proposed scheme set out on the drawings listed in Table 1 on the previous page.

2.3 Tree survey

2.3.1 The trees were surveyed by Paul Billin BSc MICFor on 9 July 2024. All tree identification numbers used within this report correspond with those contained within the tree survey schedule included at Appendix 2.

2.4 Statutory designations

2.4.1 The legal status of trees on this site was inspected on 23 July 2024 on Wokingham Borough Council's protected tree map which shows that a number of the off-site trees are protected by a Tree Preservation Order (TPO) TPO-1574-2017; including the cypress tree (T)2, and the Strawberry tree, T1. The property is not within a Conservation Area.

3. Introduction

3.1 AIA objectives

3.1.1 To assess the areas within this site where proposed works are to be carried out in close proximity to established trees.

3.1.2 To determine whether the proposed works can be carried out successfully without adversely affecting the trees both in the short and long term.

3.1.3 To determine whether the trees will have adverse effects on the proposed development both in the short and long term.

3.1.4 To suggest ways to mitigate any conflicts that may arise between the trees and the proposed development and to offer recommendations relating to the protection of the trees during redevelopment works.

3.2 Items for consideration

3.2.1 Trees and development located within close proximity to each other can influence each other in a number of ways.



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3.2.2 The following items are normally considered during arboricultural impact studies:

- Root disturbance caused by demolition, excavation & construction e.g. buildings and roads Location of service runs, welfare/office buildings & materials storage.
- Changes in levels & surface types.
- Sunlight shading of exterior amenity areas (such as gardens, playgrounds etc).
- Physical encroachment by roots, tree stem & branches.
- Allowance for future tree growth.
- Health, safety and nuisance items e.g. leaves, fruit and residues.

3.3 **Guidance used whilst assessing trees in relation to development includes:**

- *BS 5837:2012 Trees in Relation to Design, Demolition and Construction - Recommendations*. Published by the British Standards Institute.
- *Tree Preservation Orders: A Guide to the Law and Good Practice*. Published by the Department of the Environment, Transport and the Regions.
- *NJUG 10 - Guidelines for the planning, installation and maintenance of Utility Services in relation to trees*. Published by the National Joint Utilities Group (NJUG).

4. Analysis

4.1 Assessment methodology

4.1.1 The assessment is based on the guidance given in BS 5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations*.

4.2 Key issues

4.2.1 The key issues associated with the proposed items identified above in relation to trees are:

- Will there be direct impacts from tree losses on the landscape, both in terms of impacts on visual receptors and impacts on the landscape character of the area?
- Will the proposed development work require grade and ground level alterations that may have significant implications for root systems of retained trees?
- The tree constraints and tree protection measures.
- Services in close proximity to the retained trees.
- Leaf/fruit or sap fall and shade constraints leading to pressure to prune or fell trees.
- Damage to mature trees with low canopy heights growing in close proximity to machinery and contractors' plant operating areas.

4.2.2 These key issues and associated impacts are considered below along with possible tree protection measures and mitigation as necessary.



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5. Impact on existing trees

5.1 Tree loss, tree damage and pruning works

5.1.1 We do anticipate the proposed layout of the site development works will require the necessary removal of one tree to allow full site access and the implementation of site development works. There is no loss of any tree anticipated as a result of the British Standard classification; trees of poor health and condition in Category 'U' - "Trees unsuitable for retention".

5.1.2 It is anticipated that the proposed layout of the site development works will not require any necessary facilitation pruning works to any retained trees to allow for either site access or the implementation of site development works. The spatial relationship between the tree canopies and the proposed extension is shown in section 7 on page 8.

5.2 Impacts on root protection areas (RPAs)

5.2.1 The design of the proposed development is such that there will be minor impact on the RPAs of the retained trees:

5.2.2 Site set up and access during construction works is over the side garden of the property which is also over the RPAs of tree (T)1 and T2 and therefore it is anticipated there will be requirements for temporary ground protection, see section 5.4.4 below.

5.2.3 There are anticipated to be RPA incursions for the foundation construction of the proposed new building extension over the RPA of T1, therefore it is anticipated there will be requirements for a specially designed engineered structure within the RPA, see section 5.4.5 below.

5.2.4 It is proposed to extend the width of the car parking area to accommodate two cars, and the construction of this is anticipated to have a minor RPA incursion over the RPAs of T1 and T2 and it is therefore anticipated there will be requirements for ground protection mitigation, see section 5.4.6 below.

5.2.5 There will be no major impacts on tree root protection areas as a result of this scheme provided that the tree protection barrier and ground protection mitigation is installed as per the tree protection plan ref PB/TPP-24/07.09 and maintained in situ until all construction works activity is completed.

5.3 Grade changes

5.3.1 No grade changes are proposed within the RPAs of retained trees to facilitate the new development and therefore there will be no impact on the retained tree RPAs providing the tree protection measures are followed.

5.3.2 Should grade changes be required within the RPA of retained trees, the contractor must prepare a method statement setting out how the work will be undertaken, and the machinery used in order to minimise disturbance and reduce compaction to the RPA of retained trees. The method statement must be submitted to and approved by the local authority prior to any alterations or changes.



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5.4 Tree protection measures

- 5.4.1 To protect retained trees from construction activities they must be protected by suitable protection barriers and ground protection.
- 5.4.2 The accompanying tree protection plan ref PB/TPP-24/07.09 shows the specific tree protection locations required prior to, and during, the construction works.
- 5.4.3 The default tree protection barrier as specified and detailed in BS 5837:2012 (section 6.2, Fig 2), and included in Appendix 5 of the tree survey report ref PB/5837-24/07.09, is designed to provide construction exclusion zones around the RPAs of all trees to be retained.
- 5.4.4 Temporary ground protection must be installed prior to any site works, demolition, or construction activity as shown on tree protection plan PB/TPP-24/07.09, referenced as “Ground protection – temporary”, showing the minimum area, and must remain in situ for the duration of the works. One example of temporary ground protection to be used includes DuraDeck® ground protection mats, or similar, to minimise compaction from any additional, extraordinary vehicular access, including excavators or powered wheelbarrows.
- 5.4.5 An RPA incursion is anticipated for the foundation construction of the proposed extension over a small section of the RPA of T2, equating to 5.1m² or 1.6% of the total RPA of 318.5 m². Disturbance to tree roots can be significantly reduced by appropriate mitigation work, in this case a specially designed engineered structure; supporting the above ground part of the structure on bored piles (constructed with reinforced concrete); with the proposed superstructure to be supported on the piles via an engineer designed reinforced concrete slab cast on-site, with a ventilated void and with edge upstands to support the perimeter walls; this is shown on PB/TPP-24/07.09 referenced as “Ground protection - 'no-dig' foundations”, showing the minimum area.
- 5.4.6 An RPA incursion is anticipated for the foundation construction of the proposed extension of the car park area over the RPA of T1 and T2. Disturbance to tree roots can be significantly reduced by appropriate mitigation work, in this case construction must be undertaken using a “no dig” cellular confinement system; this is shown on PB/TPP-24/07.09 referenced as “Ground protection - 'no-dig' foundation”, showing the minimum area.
- 5.4.7 Spoil movements, storage of materials, skips, temporary on-site parking, site office and welfare facilities will be sited on the existing hard surfaced driveway at the side of the property, with temporary ground protection as required for extraordinary use.
- 5.4.8 We do not anticipate any long-term negative impacts upon the retained trees provided that the tree protection and mitigation measures are installed and maintained in situ until all construction works activity is completed.
- 5.4.9 The Arboricultural Method Statement (AMS) would provide guidance on the typical range of processes that are involved during development and seeks to ensure that appropriate methods of implementation are carried out. It sets out the management and protection details in support of the planning proposal which must be implemented to secure successful tree retention. The AMS may be conditioned in the planning approval.



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5.5 Services in close proximity to retained trees

- 5.5.1 The services into the proposed extension are expected to connect to existing services within the existing building footprint but the full details were not available at the time of preparing this report. There is no anticipation of excavation and installation of new foul drains or rainwater soakaways, but these must be sited outside the RPA of retained trees.
- 5.5.2 All excavations within the RPA of any retained trees affected by below ground works must be undertaken by an acceptable technique, as described in National Joint Utilities Group (NJUG) Volume 4, Issue 2: 16/11/2007 - *Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees*.
- 5.5.3 If there is a need to replace, renew or install underground services close to retained trees the proposals must be considered by the AC prior to any amendments or work commencing on site and the AC allowed sufficient time to respond.

6. Visual impact on the landscape and tree character

- 6.1 There will only be the direct loss of one small tree as a result of the development, with no facilitation pruning work, and therefore it is anticipated that there will be no impact on local amenity, landscape or tree character.

7. Direct or indirect impacts of trees

- 7.1 The spatial relationship between the tree canopies and the existing dwelling is shown below in Photo 1 and, in Photo 2 on page 9 between the tree canopies and the indicative massing of the proposed extension, showing that there will not be any requirement for any necessary facilitation pruning works to the retained trees T1 and T2.

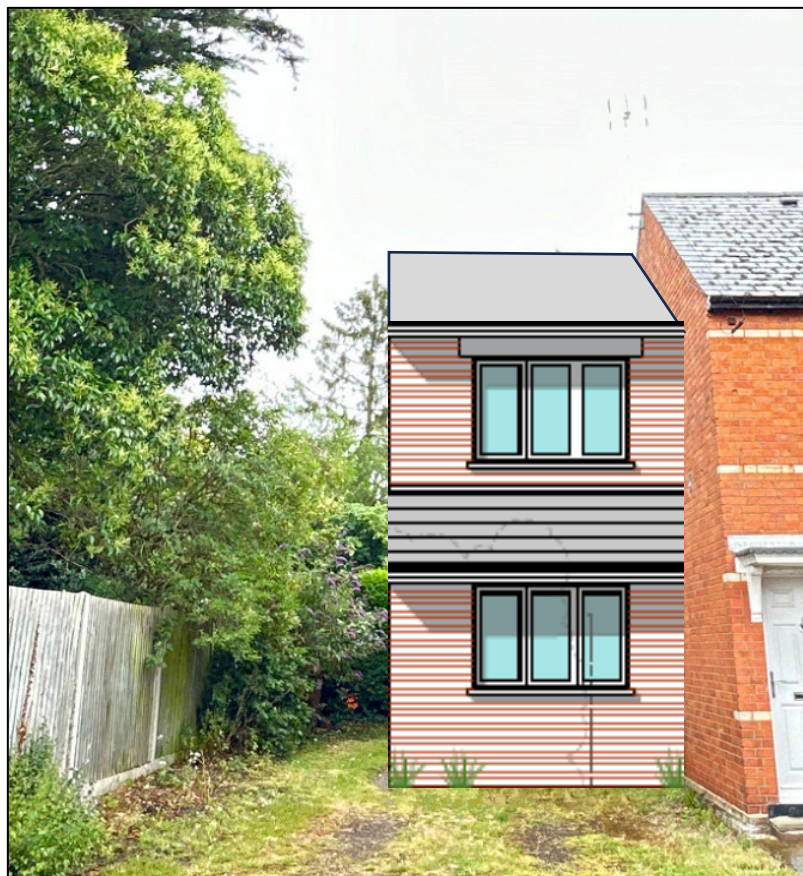
Photo 1. Existing dwelling and canopy extents of T1 and T2





7.1 Continued . . .

Photo 2. Tree canopies with indicative massing of the proposed extension



- 7.2 The retained trees adjacent to the site will continue to increase in size as they reach full maturity, and we anticipate that management intervention will be required in keeping with normal arboricultural practice.
- 7.3 Given the existing canopy size of T1 and T2 and their location adjacent to proposed extension it may reasonably be expected that there would be a requirement for crown maintenance work this side of the boundary within the next five to ten years in order to achieve an ongoing tenable relationship between the tree, property and occupants, and that this would form part of a tree work notification.
- 7.4 The retained trees will not be affected by the development work providing the protection measures set out and included on the tree protection plan ref PB/TPP-24/07.09 are installed and maintained in situ until all construction works activity is completed.

8. Leaf, fruit or sap fall and shade

- 8.1 The retained trees will not provide excessive shade over the site.
- 8.2 Leaf fall is anticipated from the retained trees, but the provision of leaf guards or grilles on gutters and gullies will minimise the problem and this can be managed by leaf



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8.2 Continued . . .

collection as currently practiced and therefore no adverse impact is anticipated as a result of the proposal.

8.3 There are no trees near the proposed extension which are prone to the production of excessive honeydew exudate, or fruit fall.

9. Conclusions

9.1 There will not be direct loss of any trees as a result of the development, with only minimal facilitation pruning work internally to two trees, and therefore it is anticipated that there will not be any significant impact on local amenity, landscape or tree character.

9.2 Providing the protection measures set out above and included on tree protection plan ref PB/TPP-24/007.09 are installed, maintained, and remain in situ until all works activity is completed, there will be no significant impacts on the retained trees.

9.3 Site supervision is considered unnecessary and would be disproportionate to the risk associated with the work. A suitably qualified Arboriculturist must be engaged to provide technical advice should it be required.

10. Recommendations

10.1 We recommend that tree protection measures as set out in the tree protection plan PB/TPP-24/07.09 are installed and remain in situ until all works activity is completed.

10.2 These measures are likely to be conditioned as part of the approved planning consent.

11. Queries

Any queries regarding this report should be addressed, in the first instance, to Urban Tree Experts:

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Revisions:

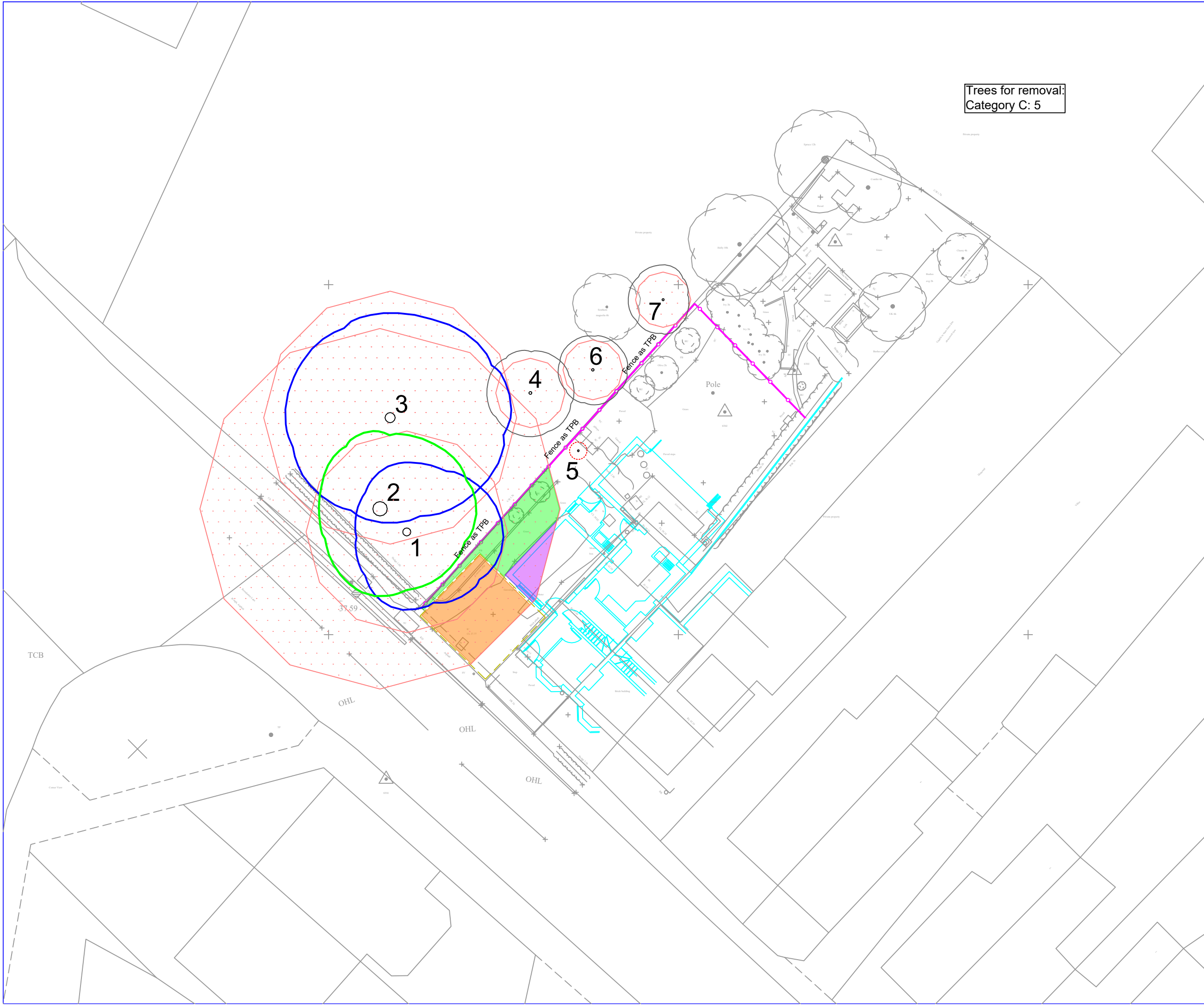
None



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APPENDIX 1



Trees for removal:
Category C: 5

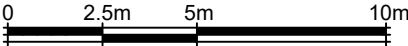
NOTES

- All dimensions must be checked on site and not scaled from this drawing.
- The original of this drawing was produced in colour, a monochrome copy should not be relied upon.
- Read drawings in conjunction with arboricultural report.
- Topo based on OS data, Licence No. 100022432.



Key:

- Trees retained
- Tree number
- Existing site features
- Root protection area (RPA)
- Trees for removal
- Tree protection barrier (TPB)
- Proposed building footprint
- Proposed parking
- Ground protection - 'no-dig' hard surface (min. area - see report)
- Ground protection - 'no-dig' foundation (min. area - see report)
- Ground protection - temporary



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Client	Jim Townsend & Co		
Job Title	1 Diamond Villas, The Street, Hurst		
Drawing Title	TREE PROTECTION PLAN		
Scale	1:200 @ A3		
Date	July 2024	Drawn: MjE	Checked: PB
Drg. No.	PB/TPP-24/07.09	Rev.	



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APPENDIX 2

BS5837:2012 Tree Survey

Tree Surveys

Client: Jim Townsend & Co.
Project: 1 Diamond Villas
Survey Date: 09/07/2024
Surveyor: Paul Billin



Bramley House
Newnham Bridge
Tenbury Wells
Worcestershire
WR15 8NX
Phone: 0118 976 2902

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
1 1											Estimated Measurements	
Strawberry Tree <i>Arbutus unedo</i>	13	1	469	N	4	4	M	A: 99.5 R: 5.62	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified	B.2
				E	5.5	3.5					Co-dominant stems from included unions 2-2.5m and 3.2m AGL. Ground level higher on neighbour's side; 0.45m from front curtilage	20 to 40 yrs
				S	4.5	4						
				W	3	4						
2 2											Estimated Measurements	
Lawson Cypress/Chamaecyparis <i>Chamaecyparis Spp.</i>	21	1	839	N	4.5	8	M	A: 318.5 R: 10.06	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified	A.2
				E	5.5	7					Previously crown lifted. Co-dominant stems from unions 5.5-7m AGL; one central stem torn out	>40 yrs
				S	5	8						
				W	3.5	10						
3 5											Estimated Measurements	
Common Horse Chestnut <i>Aesculus hippocastanum</i>	17.5	1	589	N	6	4	SM	A: 157 R: 7.06	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified	B.2
				E	7	4					Three co-dominant stems, open unions 2.5m & 3.2m AGL. Previously pollarded at 5.0m AGL with several co-dominant stems above this poin	20 to 40 yrs
				S	6	4						
				W	6	4						
4 6											Estimated Measurements	
Common Holly <i>Ilex aquifolium</i>	5	3	161 (Eq)	N	2.5	0	SM	A: 11.8 R: 1.93	Fair	C: Fair S: B:	No action :: Unspecified	C
				E	2.5	0					Unremarkable	20 to 40 yrs
				S	2.5	0						
				W	2.5	0						
Age Classifications:	N	Newly planted	EM	Early Mature			Condition:	C	Crown		Stems:	Ø Diameter
	Y	Young	M	Mature				S	Stem			(Eq) Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature				B	Basal area		ERC:	Estimated Remaining Contributio

Report selection criteria.

Projects.

1 Diamond Villas

Date Range.

Any Date

Work types.

----> No action :: Unspecified

Latest Survey.

All surveys for the selected trees.
---> Last survey for each selected tree.

Work Completed.

---> Work Completed
---> Work Not Completed

Number of trees in selected Project(s)7
Number of trees in Report selection7

Age Classifications:	N	Newly planted	EM	Early Mature	Condition:	C	Crown	Stems:	Ø	Diameter
	Y	Young	M	Mature		S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature		B	Basal area		ERC:	Estimated Remaining Contributio