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BS5837 – Pre Planning – Mortgage – Risk Management & Prediction

ARBORICULTURAL IMPACT ASSESSMENT FOR LAND AT REAR OF 26 WARGRAVE ROAD TWYFORD



**Prepared on behalf of:
Mr P Cooper
Killarney
Smithfield Road
Maidenhead
SL6 3NP**

Ref: PB/AIA-25/03.18

15 April 2025



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

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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 Adonia Architectural Ltd, Unit C11, Weldale Street, Reading, RG1 7BX and the tree survey conducted by ourselves on the 18 March 2025.

1.4 Clients instructions

1.4.1 We are instructed by Mr P Cooper with regard to the site at land at rear of 26 Wargrave Rd, Twyford, RG10 9PQ to prepare an arboricultural impact assessment to determine the effects of the proposed works on the trees identified in our survey of 18 March 2025 and visa-versa.

1.5 Supplied information

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

Table 1. Supplied information.

Drawing ref.	Drawing title
Dwg No. PL103 Aug 2024	Block Plan with Distance
Dwg No. PL202 Aug 2024	Proposed Plans and Elevations
Dwg No. PL203 Aug 2024	Proposed Site and Heights



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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 the construction of a new dwelling, and provision for two parking areas off the access from Hermitage Road.

2.2.2 The BS5837 tree survey report ref PB/5837-25/03.18 identified ten 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 18 March 2025. 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 On the 18 March 2025 a search of Wokingham Borough Council's online Protected Tree Map showed that trees within the application area are not protected by any Tree Preservation Orders (TPOs), nor is the property 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

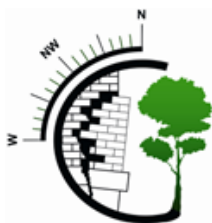
4.1.1 The assessment is based on the guidance given in BS 5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations*.

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 not anticipate the proposed layout of the site development works will require the necessary removal of any tree to allow full site access or 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 not anticipated that the proposed layout of the site development works will require any necessary facilitation pruning works to any retained trees to allow for either site access or the implementation of site development works.

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 RPAs of trees (T) T6, T7, T8 and T11 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 very minor RPA incursions for the foundation construction of the proposed new building over the RPAs of T1 and T11; however, the incursions are so small as not to warrant any specific foundation related mitigation and standard construction methods can be adopted, see section 5.4.6 below.

5.2.4 It is proposed to construct a new driveway and car parking area to accommodate two cars, and the construction of this is anticipated to have a minor RPA incursion over the RPAs of T7, T8 and T11 and it is therefore anticipated there will be requirements for ground protection mitigation, see section 5.4.7 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-25/03.18 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-25/03.18 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/5837-25/03.18, 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-25/03.18, referenced as “Ground protection – temporary”, but also including areas referenced “Ground protection – ‘No-dig’”, 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.
- 5.4.5 An RPA incursion is anticipated for the foundation construction of the proposed extension over a small section of the RPA of T1 (equating to 0.3m² or 1.1% of the total RPA of 28.1 m²) and the RPA of T11 (equating to 1.5m² or 4.6% of the total RPA of 32.3 m²) included on PB/TPP-25/03.18 referenced as “RPA incursion”, showing the minimum area.
- 5.4.6 Following the guidelines within Section 5.3 of BS5837:2012, this small area lost by the incursion will be more than compensated by the fact that the tree rooting zones will in reality spread out further around their circumference, which will be contiguous with its theoretical, circular RPA area. The loss of these small areas of the RPA by the incursions will not in our opinion significantly affect the future viability of the trees. The incursions are so small as not to warrant any specific foundation related mitigation and standard construction methods can be adopted
- 5.4.7 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 made of high-density polyethylene designed to support the anticipated traffic; this is shown on PB/TPP-25/03.18 referenced as “Ground protection - ‘no-dig’ foundation”, showing the minimum area.
- 5.4.8 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.
- 5.4.9 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.



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- 5.4.10 An Arboricultural Method Statement (AMS) would provide guidance on the typical range of processes that are involved during development and would seek to ensure that appropriate methods of implementation are carried out. It would set out the management and protection details in support of the planning proposal which must be implemented to secure successful tree retention. An AMS may be conditioned in the planning approval.

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 external to the site but the full details were not available at the time of preparing this report. The excavation and installation of new foul drains and rainwater soakaways 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 The installation of underground services close to retained trees must be considered by the AC prior to commencing work on site and the AC allowed sufficient time to respond.

6. Visual impact on the landscape and tree character

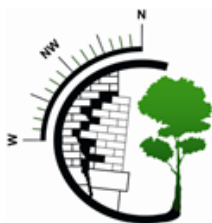
- 6.1 There will not be the direct loss of any tree as a result of the development, with no facilitation pruning work, and therefore it is anticipated that there will be no impact on local amenity, landscape or tree character.

7. Direct or indirect impacts of trees

- 7.1 The retained trees adjacent to the site on third party land will continue to increase in size, and we anticipate that management intervention will be required in keeping with normal arboricultural practice.
- 7.2 There would likely be a requirement for crown maintenance work this side of the boundary on trees T6 and T7 within the next five to ten years in order to achieve an ongoing tenable relationship between the trees, property and occupants.
- 7.3 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-25/03.18 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 collection as currently practiced and therefore no adverse impact is anticipated as a result of the proposal.



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- 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, nor any facilitation pruning work, to retained trees, and therefore it is anticipated that there will not be any 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-25/03.18 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

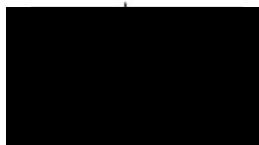
- 10.1 We recommend that tree protection measures as set out in the tree protection plan PB/TPP-25/03.18 are installed and remain in situ until all works activity is completed.
- 10.2 These measures are likely to be conditioned as part of the approved planning consent.

11. Queries

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

Tree Surveys
Bramley House
Newnham Bridge
Tenbury Wells
WR15 8NX

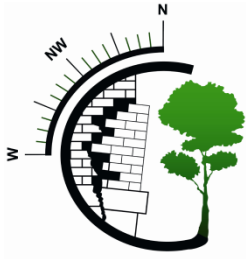
Telephone: 0118 976 2902
Email: info@tree-surveys.com



Paul Billin BSc MICFor
Chartered Arboriculturist
Tree Surveys & Urban Tree Experts

Revisions:

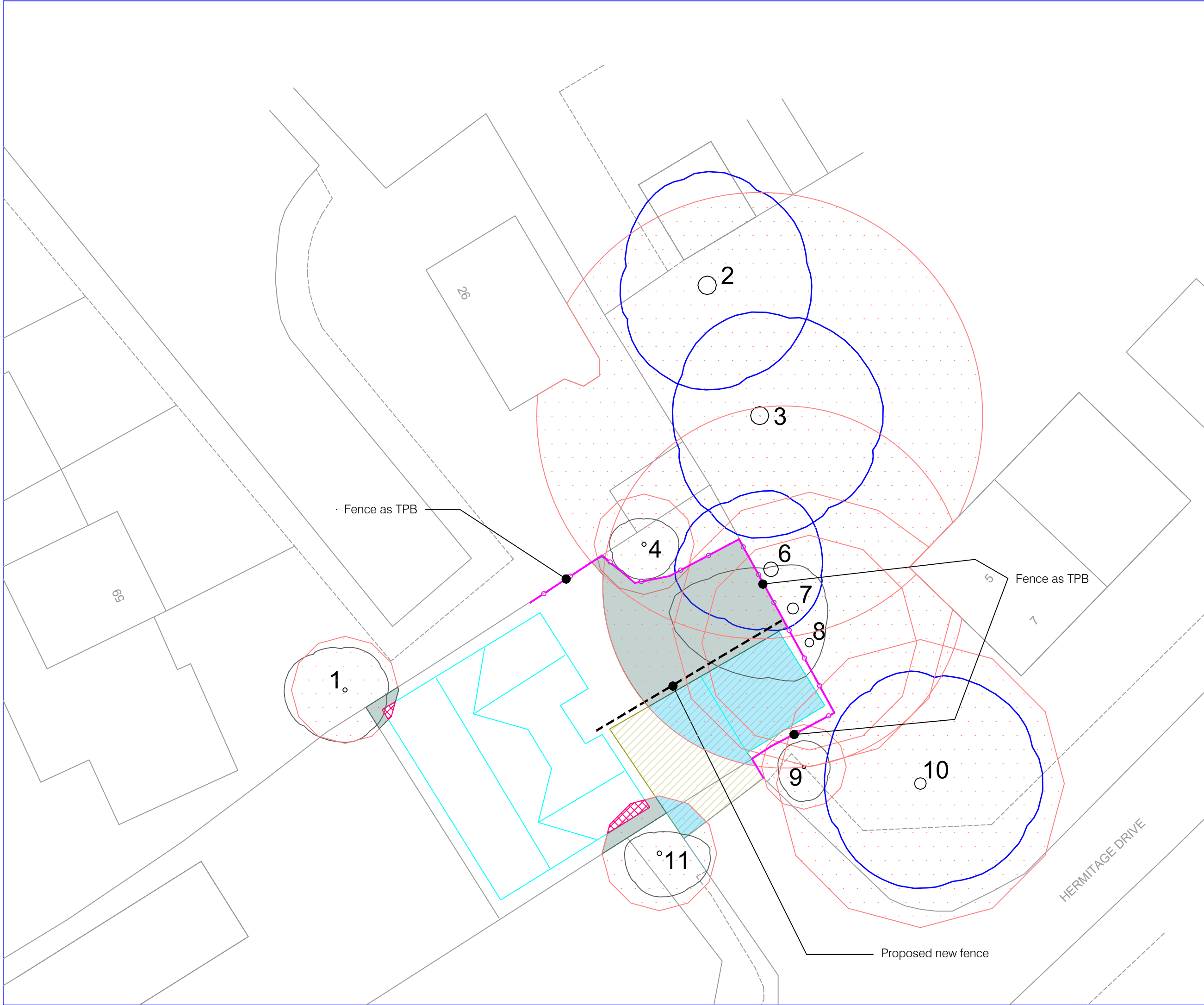
None



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APPENDIX 1



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.
- Proposed based on dwg: PCH21 Site Plan.



Key:

- Trees retained
- refer to report for information
- Tree number
- refer to report for information
- Existing site features
- Root protection area (RPA)
- Proposed new build
- Trees for removal
- Tree protection barrier (TPB)
- refer to report for information
- Ground protection – Temporary
- refer to report for information
- RPA Incursion
- refer to report for information
- Ground protection – 'No Dig'
- refer to report for information
- Proposed hard surface - driveway

0 5m 10m 20m

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Bramley House,
Newnham Bridge,
Tenbury Wells,
Worcestershire, WR15 8NX
Tel: 0118 762902
e-mail: info@tree-surveys.com

Client	Paul Cooper		
Job Title	Land at Rear 26 Wargrave Road, Twyford		
Drawing Title	TREE PROTECTION PLAN		
Scale	1:200 @ A3		
Date	April 2025	Drawn: MJE	Checked: PB
Drg. No.	PB/TPP-25/03.18	Rev.	



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APPENDIX 2

BS5837:2012 Tree Survey

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Client: Mr P Cooper
 Project: Land at Rear 26 Wargrave Road
 Survey Date: 18/03/2025
 Surveyor: Paul Billin



Bramley House
 Newnham Bridge
 Tenbury Wells
 Worcestershire
 WR15 8NX
 Phone: 0118 9762 902

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											Estimated Measurements			
Downy Birch <i>Betula pubescens</i>		6.5	1	249	N	2.5	2.5	M	A: 28.1 R: 2.99	Fair	C: Poor S: Poor B: Fair	No action :: Unspecified Neighbour's tree. Poor form. Top stem snapped out, wound with decay	C 10 to 20 yrs	
2											Estimated Measurements			
Austrian Pine <i>Pinus nigra ssp. Nigra</i>		28	1	1079	N	6.5	8	M	A: 526.8 R: 12.94	Fair	C: Fair S: Ivy B: Fair	No action :: Unspecified Neighbour's tree. No access.	B.2 20 to 40 yrs	
3											Estimated Measurements			
Austrian Pine <i>Pinus nigra ssp. Nigra</i>		21.5	1	1049	N	6	9	M	A: 497.9 R: 12.58	Fair	C: Fair S: Ivy B: Fair	No action :: Unspecified Neighbour's tree. No access. Bifurcates 1.9m AGL	B.2 20 to 40 yrs	
4														
Common Holly <i>Ilex aquifolium</i>		6.5	3	234 (Eq)	N	1.5	2	Y	A: 24.8 R: 2.8	Fair	C: Fair S: Fair B: Fair	Two stems fused together at 1.4m AGL. Including union	C 20 to 40 yrs	
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	

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				
6											Estimated Measurements			
Common Horse Chestnut <i>Aesculus hippocastanum</i>	17.5	1	849	N	4.5	4	M	A: 326.1 R: 10.18	Fair	C: Fair S: Fair B: Fair	Ivy :: Sever only		B.2	
				E	3	4					20 to 40 yrs			
				S	3.5	4.5					Neighbours tree. Bifurcated 2.2m AGL co-dominant stems Previously pruned and pollarded 11.5-12.0m AGL. Dense regrowth from heads; points of weakness Ivy obscuring stems. Future management; repollard			
				W	5.5	3.5								
7											Estimated Measurements			
Sycamore <i>Acer pseudoplatanus</i>	17.5	1	649	N	2.5	7	M	A: 190.6 R: 7.78	Fair	C: Poor S: Poor B: Fair	No action :: Unspecified		C.2	
				E	2	7					20 to 40 yrs			
				S	4.2	5					Neighbours tree. Bifurcates 2.4 & south stem at 3.7m AGL co-dominant stems Previously pollarded 10.5-12.0m AGL. Heads have decay; prolific secondary regrowth; heads are points of weakness			
				W	7	5								
8											Estimated Measurements			
Sycamore <i>Acer pseudoplatanus</i>	5.5	1	500	N	0	5	Dead	A: 113.1 R: 6	Dead	C: S: B:	No action :: Unspecified		U	
				E	0	5						<10 yrs		
				S	0	5						Neighbours tree. Dead totem, severe decay at top.		
				W	0	5								
9											Estimated Measurements			
Lawson Cypress <i>Chamaecyparis lawsoniana</i>	11	3	197 (Eq)	N	1.5	0	Y	A: 17.6 R: 2.36	Fair	C: Fair S: Fair B: Fair			C	
				E	1.5	0					20 to 40 yrs			
				S	2	0					Neighbour's tree			
				W	1.5	0								
10											Estimated Measurements			
Common Horse Chestnut <i>Aesculus hippocastanum</i>	15	1	670	N	6.5	4	M	A: 203.1 R: 8.04	Fair	C: Fair S: Ivy B: Fair	No action :: Unspecified		B	
				E	7	4					>40 yrs			
				S	6	4					Small stub wounds with cavities, typical of species			
				W	5.5	3								
11											Estimated Measurements			
Mountain Ash <i>Sorbus aucuparia</i>	8	4	267 (Eq)	N	1.25	2.5	SM	A: 32.3 R: 3.2	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified		C	
				E	3	2					10 to 20 yrs			
				S	2.5	3					Remnant of row of trees			
				W	2	3								
Age Classifications:	N Y SM	Newly planted Young Semi-mature	EM M OM	Early Mature Mature Over Mature			Condition:	C S B	Crown Stem Basal area		Stems: ERC:	Ø Diameter (Eq) Equivalent stem diameter using BS5837:2012 definition Estimated Remaining Contributio		

Report selection criteria.

Projects.

Land at Rear 26 Wargrave Road

Date Range.

Any Date

Work types.

----> Ivy :: Sever only
----> No action :: Unspecified
----> -No Selection made-

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) 10
Number of trees in Report selection 10

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