

ARBORICULTURAL REPORT

BS 5837:2012

ARBORICULTURAL IMPACT ASSESSMENT

&

ARBORICULTURAL METHOD STATEMENT

SITE ADDRESS:

Halfpenny House, Crossways Road, Grayshot, GU26 6HF

CLIENT: Katie Allison-Guy

REF NO:

D3048.V1.0-AIA.AMS

INSPECTION DATE:

4th of October 2023

PREPARED BY:

Tom Butterfield BSc(HONS) DipArb L4 20th of November 2023

REPORTS	INCLUDED
~INITIAL TREE SURVEY~	×
~TREE SURVEY SCHEDULE~	×
~TREE CONSTRAINTS PLAN~	×
~ARBORICULTURAL IMPACT ASSESSMENT~	\checkmark
~TREE SURVEY SCHEDULE + REQUIRED WORKS FOR THE PROPOSAL~	\checkmark
~TREE PROTECTION PLAN~	\checkmark
~ARBORICULTURAL METHOD STATEMENT~	\checkmark

Issue No	Author	Issue Date	Additions/alterations	Notes
D3048.V1.0	ТВ	20/11/2023	NA	

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INTRODUCTION

CLIENT	Katie Allison-Guy
INSPECTION DATE	4th of October 2023
SITE LOCATION /S	Halfpenny House, Crossways Road, Grayshot, GU26 6HF
INSPECTED BY	Tom Butterfield BSc (HONS) DipArb L4

1.0 Terms And Abbreviations

Tree Preservation Order	TPO
Conservation Area	CA
Arboricultural Impact Assessment	AIA
Arboricultural Method Statement	AMS
British Standard 5837:2012 – Trees in Relation to Design, Demolition and Construction - Recommendations	BS5837
Root Protection Area	RPA
Root Protection Radius	RPR
Local Planning Authority	LPA
Tree Protective Fencing	TPF
Diameter of the stem at breast height (1.5 meters)	DBH
Tree Survey Schedule	TSS
Construction Exclusion Zone	CEZ
Sustainable Urban Drainage System	SUDS
Cellular Confinement System	CCS
Ground Protection	GP

2.0 Contact Details

Contact	Name Company		Contact details	Issued
Client	Katie Allison-Guy	/	<u>katie.guy1986@gmail.com</u>	✓
Arboricultural Consultant	Mr Tom Butterfield Dryad Tree Specialists Ltd		tom@dryad-trees.co.uk 01483 455555	
LPA Tree Officer	/	East Hampshire District Council	/	
Architect	Mt Leigh Brooks	BWP Architects Ltd	lab@bwparchitects.com	~

3.0 Brief And Purpose

- 3.1 Katie Allison-Guy commissioned this Arboricultural report on the 19th of September 2023.
- 3.2 To make recommendations for effective tree protection strategies for the duration of the development.
- 3.3 To produce an Arboricultural Impact Assessment, Method Statement and Tree Protection Plan for the proposal.
- 3.4 To provide the necessary Arboricultural information for the planning requirements of the LPA (East Hampshire District Council) to release and fulfil any tree-related conditions to approve planning permission.

4.0 Executive Summary

- 4.1 The two larger prominent trees (T1 & T8) on site are to be retained and protected.
- 4.2 Tree works to facilitate the development should be completed before the development begins.
- 4.3 TPF and GP will be installed before the development begins and remain for the duration.
- 4.4 Excavations for the service installation within the RPA of G2 and T8 will be carried out by hand, under Arboricultural supervision.
- 4.5 Mulch over selected areas of the RPA of T8 will be applied following the completion of the tree work.
- 4.6 Heavy construction vehicles will be prohibited from parking and turning in the parking area for the existing house at the front of the site.

5.0 Background Information

5.1 This AIA and AMS is to be read in conjunction with the Arboricultural Report Tree Survey Ref: "D3048.V1.0-TS(HalfpennyHouseGU266HF)October2023".

6.0 Proposal

6.1 The proposal is to build a new house to the rear of the existing one.



7.0 Planning Information

- 7.1 The site falls under the jurisdiction of East Hampshire District Council, the LPA for this area.
- 7.2 A planning application has not yet been submitted to East Hampshire District Council (LPA) as of the 20th of November 2023.
- 7.3 This report aims to address the Arboricultural aspect of the planning application so that planning permission may be granted by using appropriate arboricultural methodologies.

8.0 Document Source

Document	Source	Format	
Site plan	BWP Architects Ltd	DWG:- SB9245 - TOPO	
Layout plans and proposal	BWP Architects Ltd	DWG: CWR2305 Planning Nov 2023	

ARBORICULTURAL IMPACT ASSESSMENT

9.0 Overview

- 9.1 This section comprises of an assessment of the implications the proposed works detailed in Section 5.0 will have on the surrounding trees. It considers the Arboricultural implications and relevant mitigation measures.
- 9.2 Numbers and tree details below are only included where works are specified to facilitate the development, not where recommendations have been made on the grounds of Good Arboricultural Management. The preliminary recommendations made in the initial tree survey should also be implemented where a tree is to be retained.



10.0 Tree Retention (Includes Any Tree Pruning)

10.1 The following trees are deemed suitable for retention and protection during the development.

Grade	А	В	С	U
Tree No.	/	T1, T8	G2, G3, G4, G9, G10	/

*{} denotes partial removal of the group

11.0 Tree Removal

11.1 The following trees were deemed unsuitable for retention and require removal before the commencement of the development. The removal of these trees are unlikely to detract from the character and amenities of the local area.

	Tree Removal				
Grade	Tree Number	Reason			
А	/	/			
В	/	/			
С	T5, T6, G7	(Facilitate the development) – Located within the footprint of the proposal. Low Arboricultural quality.			
U	/	/			

12.0 Tree Pruning Works

- 12.1 Tree pruning has been recommended to facilitate the development.
- 12.2 Trees/groups that require pruning include:

	Tree Pruning			
Grade	Tree Number	Tree Reason		
Α	/	/		
В	T1	(Facilitate the development) – Remove one lowest damaged branch over the driveway to provide sufficient height clearance for high-sided vehicles.		
С	G4 G9 G10	 (Facilitate the development) – The hedge has become very spread with age and encroaches significantly over the site. The proposal is to cut back to near the boundary to regain the plot size. (Facilitate the development) – The hedge has become very spread with age and encroaches significantly over the site. The proposal is to cut back to near the boundary to regain the plot size. (Facilitate the development) – Cut back hedge to increase plot size and maintain compact hedge size in the future. 		
U	/	/		

The above pruning works are further detailed in the TSS with recommendations and will not adversely affect the health of the tree or significantly alter its amenity value.

13.0 Encroachment into RPAs

13.1 The table below summarises any encroachments/coverings into RPAs of retained trees and suggests appropriate techniques to minimise impacts.

CONSTRUCTION								
Tree No.	Tree No. Type of Encroachment Total area of RPA (m ²) Encroachment into RPA (m ²) Encroachment % of RPA							
T8 (B grade)	0.61							
Enc	roachments into the	RPAs of T8 are requ	iired, but they are unlikely to result i	n severance.				
<i>JUSTIFICATION</i> Between the area of the proposed trench installation and the trees' stem resides a large concrete base that was previously a garage. The base is located at a slightly lower level than the tree and is likely to have created a significant obstacle and barrier for the roots from T8. The service trench resides on the edge of the RPA, and with the presence of the existing base, excavations are unlikely to encounter significant roots. Additionally, the encroachment area is considered to be very low at just 0.61%. <i>ACTION</i> The trench will be dug by hand under Arboricultural supervision. Newly exposed ground (previously under hedge) within RPA of T8 will be covered with 75mm mulch for the duration of the development to help offset the effects of any potential encroachment into the RPA.								
Tree No.	Type of Encroachment	Total area of RPA (m ²)	Encroachment into RPA (m ²)	Encroachment % of RPA				
T8 (B grade)	Patio	247.7	4.8 m ²	1.94%				
Encroachments into the RPAs of T8 are required, but they are unlikely to result in severance. JUSTIFICATION Between the area of the proposed patio and the trees' stem resides a large concrete base (as above). The patio resides within the edge of the RPA, requiring only shallow excavations. Due to the presence of the existing base, excavations are unlikely to encounter significant roots. ACTION The excavations for the patio are to be dug by hand under Arboricultural supervision. The ground is to be protected from Lime leaching by laying the patio base over a geotextile membrane. ACCEDTABLE								
Tree No.			Type of incursion					
G2 (Cgrade)		Service i	nstallation from site to the road					
JUSTIFICATION / ACTION The services have been moved to keep away from the RPAs of T1, but they run through the low-quality hedge at the front of the site. Excavations through the hedge will be carried out by hand under Arboricultural supervision to minimise possible root damage to surrounding trees.								

14.0 Access

14.1 Access from the road to the site will pass over the existing gravel driveway and the RPAS of T1 underneath.

Acceptable

- 14.2 Additional ground boarding will be specified over the driveway and RPA to minimise potential compaction damage to the driveway below.
- 14.3 The Oak (T1) will remove one low-damaged branch and lightly prune secondary branches to provide sufficient site access.
- 14.4 The parking area in front of the existing house will not be used for parking or turning construction vehicles.

15.0 Proximity And Shading

- 15.1 Section 5.3 of BS5837 addresses the issue of structures in proximity to trees and recommends that buildings are erected adequate distances away from trees to allow for future growth and development. Issues that are addressed include shading of buildings and open spaces, direct damage, pressure for removal, seasonal nuisance and concerns over safety.
- 15.2 The proximity between the development and the trees to be retained is in accordance with section 5.3 of BS5837, with the majority of the shadowing away from the proposed house in the rear.
- 15.3 Pressures on surrounding trees should be of little consequence for the following reasons:
 - Future pruning works are unlikely to be greater than that of general maintenance purposes.

16.0 Tree Protection

- 16.1 All trees that are to be retained will be protected according to the recommendations of BS5837:2012. Tree protection would be provided in the form of physical barriers or ground protection to protect the RPAs of retained trees.
- 16.2 All barriers would be installed before the development commences and maintained for the duration of the development or to a specific stage.

Tree Protection Fencing (Protective Barrier)

16.3 Tree Protection Fencing would be set out at the distances from the trees as noted in the Tree Survey Schedule under the RPA column or as illustrated on the Tree Protection Plan (Appendix 3).

Ground Protection (Ground Boarding)

16.4 Construction traffic access will be required over the existing driveway. To protect the driveway and RPA below, heavy-duty boarding will be installed over the access point and associated RPA below.

Soil Protection

16.5 Where it is anticipated that cement/concrete or any other contaminating material will come into direct contact with soil that resides within or adjacent to a RPA of a retained tree, a suitable membrane will be placed between to prevent contamination of the soil.

Materials Storage

- 16.6 The storage and mixing of materials are to be located outside of the RPAs of retained trees.
- 16.7 No contaminating runoff is to be allowed to enter the RPAs of retained trees.

Services

16.8 New services are to be installed. The majority is outside of the RPAs, but where encroachments are foreseen, excavations will proceed by hand under Arboricultural supervision.

17.0 Mitigation & Summary of AIA

To facilitate the development, 3 x C grade trees/groups are to be removed, 1 x B grade tree requires minor pruning, and 3 x C grade hedges are to be cut back.

- 17.1 The Arboricultural implications of the proposed development are seen as acceptable as the larger, higher quality trees (T1 & T8) are to be retained and protected.
- 17.2 A pre-commencement meeting is to be held before the project commences. Attendees to include Arboricultural Consultant, the client and the Tree Officer to confirm and agree on the tree protection measures and any supervision that is required during the development.
- 17.3 All tree work, as recommended, is to be completed before the development begins.
- 17.4 Adequate ground protection (Ground Boarding) and Tree Protection Fencing is to be in place before the development begins. Timber hoarding is to be erected around T1 at the entrance of the site to protect its stem and buttress roots from damage.
- 17.5 Heavy construction vehicles will be prohibited from parking and turning in the parking area for the existing house located at the front of the site.
- 17.6
- 17.7 The ground within the RPAs shall not be mechanically scraped at any time. Clearance works over these areas shall be carefully carried out by hand, avoiding the use of machinery.
- 17.8 The existing concrete base in the rear garden is to be retained and left in situ to prevent potential room damage to T8.
- 17.9 There are relatively minor encroachments required into the RPAs of G2 and T8. The level of encroachment is not such that specialist, low-invasive methods of installation are necessary.
- 17.10 All encroachments into the RPAs of retained trees are to be carried out by hand under Arboricultural supervision.
- 17.11 Select areas of RPA of T8 to have 75mm mulch applied for the duration of the development.
- 17.12 Where any cement or similar contaminating material is to be introduced into the ground within an RPA, a suitable membrane (plastic/DPM or similar) should be used to prevent Lime leaching into the adjoining soil.
- 17.13 Any operations within the Construction Exclusion Zone/RPAs are to be carried out under Arboricultural supervision.
- 17.14 During the development, the Construction Exclusion Zones are to be acknowledged and strictly seen as sacrosanct.
- 17.15 Only low-quality smaller trees are to be removed; the larger mature trees are to be retained and protected.
- 17.16 The proposed services have been plotted on the TPP. Where they encroach into RPAs of retained trees/hedges, hand digging under arboricultural supervision has been specified.
- $17.17 \quad \text{All retained trees are to be protected in accordance with BS5837}.$
- 17.18 The Arboricultural implications of the proposed development are deemed acceptable, subject to full compliance with the Arboricultural Method Statement and these tree protection recommendations.

ARBORICULTURAL METHOD STATEMENT

18.0 Introduction

- 18.1 The AMS will demonstrate how aspects of the build that potentially result in loss or damage to a tree may be mitigated, allowing retained trees adequate protection.
- 18.2 To safeguard retained trees on-site during the development works, the implementation of tree protection measures are to take place and be adhered to at all times as detailed below. This will protect the above and below-ground parts of retained trees and preserve soil structure.
- 18.3 The basic principle is that the area inside the TPF creates a Construction Exclusion Zone (CEZ). The soil structure and roots, where any ground protection has been used, are also protected during the development process.
- 18.4 All tree protection outlined in the AMS is to be fully implemented, and Arboricultural inspections and supervision are to be carried out as detailed in this Method Statement.
- 18.5 All personnel will be made aware of the key implementation of the AMS during site. A copy of this Method Statement is to be made freely available to all site personnel.
- 18.6 As of 2005, Local Planning Authorities have the power to **serve Temporary Stop Notices** if agreed tree protection measures have been breached or not carried out sufficiently. Strictly adhering to this AMS will ensure that such costly and time-consuming action may be avoided.

19.0 Pre-Commencement Meeting

- 19.1 A pre-commencement site meeting involving the Project Manager, The Arboricultural Consultant and the LPA Tree Officer will be held to ensure all aspects of the tree protection processes are understood and agreed. A record of the meeting will be communicated to the attending parties by the Arboricultural Consultant.
- 19.2 Matters to be discussed at the meeting are to include:
 - Timing and sequencing of works.
 - Location and specifications for TPF.
 - Location and specifications for Ground Protection.
 - Tree Works
 - Any other Arboricultural issues.
 - Works to be supervised and inspected.

20.0 Site Management

- 20.1 The site manager will be responsible for briefing and inducting all site personnel working within RPAs or canopies of retained trees, making them aware of tree constraints, and providing a copy of the Arboricultural Method Statement.
- 20.2 The site induction will include movement of plant, excavation, mixing and pouring of cement and concrete.
- 20.3 The site manager will be responsible for daily running of the site, protecting all retained trees and liaising with the Arboricultural Consultant on arising tree matters.
- 20.4 Any incidence of damage to retained trees will be documented by the site manager, who will report the incidences to the Arboricultural Consultant immediately and cease works in this area until appropriate mitigation has been agreed with the LPA.

21.0 General Site Precautions

- 21.1 The following points will be observed at all times:
 - No mechanical digging or scraping is allowed within defined RPAs.
 - No fires are to be lit within 10m from the edge of the tree canopy.
 - No access is permitted inside the CEZ or TPF.
 - No materials, equipment or debris to be stored within the CEZ or RPAs of retained trees.
 - Notice boards, telephone cables or other services will not be attached to retained trees.
 - Materials that may contaminate the soil (cement mixer, fuel, vehicle washings) will not be permitted to operate or allow runoff into the RPAs of retained trees or soils.
 - Site operations must be carried out in such a way as to avoid damage to the aerial part of the trees.

22.0 Stages Checklist, Sequencing, Inspection, Supervision

- 22.1 Effective tree protection relies on good understanding and implementation of the AMS with a logical sequencing of events and Arboricultural inspections/supervision.
- 22.2 Any works that have the potential to affect trees are to be supervised by a qualified Arboricultural Consultant.
- 22.3 The Arboricultural Consultant will document each visit and inspection, and communicate the details to the client and LPA. This will provide ongoing evidence of compliance with the planning conditions.
- 22.4 The final details of any supervision and frequency of site visits will be agreed at the pre-commencement meeting.

Tree Protection Removal Notification

22.5 Once all of the construction works have been completed and all material and machinery have been removed from the site, the Arboricultural Consultant and the LPA Tree Officer shall be notified, informing them of the intent to remove the tree protection measures.

Key Stages, Arboricultural Monitoring and Supervision Sign off Checklist

22.6 The checklist below is a guide that should be followed during the course of the development when certain Arboricultural activities are to take place.

		Stages Checklist (To be filled in during the	project)	
Stage	Tree No.	Task / Activity	Personnel	~
1	All	Issue Arboricultural Report to Client	AC	~
2	All	Give 1-2 week notice to Arboricultural Consultant and all attending parties of the Pre-Commencement meeting.	C / SM	
3	All	Pre-commencement meeting with Project Manager, The Arboricultural Consultant and the LPA Tree Officer before demolition or construction works to discuss tree protection measures	C / TO / SM / AC	
4	All	Personnel to be briefed on the AMS as part of a site induction	C / SM / CON	
5	All	Carry out tree works to facilitate the development	C / SM & CON	
6	All	Erect Tree Protection Fencing and install Ground Protection	AC to inspect	
7	All	Installation of the site set up	C / SM & CON	
8	G2, T8	Manual excavation (hand dig) of the section of the services and patio within RPA - work to be supervised by Arboricultural Consultant	AC to supervise	
9	All	Undertake and complete construction works	C / SM & CON	
10	All	Undertake landscaping works outside of Construction Exclusion Zone	C / SM & CON	
11	All	Completion of Ground Works & of Building Works	C / SM & CON	
12	All	Removal of Machinery and materials from the site	C/ SM & CON	
13	All	Notification to Arboricultural Consultant and Tree Officer of intent to remove tree protection measures	C / SM / TO / AC / CON	
14	All	Remove Tree Protection Fencing and Ground Protection	C/ SM & CON	
15	All	Undertake landscaping works within the Construction Exclusion Zone	C/ SM & CON	
16	All	COMPLETE		
	Arbori	icultural Consultant (AC) Client (C) Site Manager (SM) Tree Officer (1	'O) Contractor (CON	Ð

22.7 Key stages within the suggested sequencing of works are as follows:

23.0 Site Storage, Parking, Welfare Etc

- 23.1 The site will require provision for; site storage, contractor parking, welfare facilities, temporary services/drainage, material drop off points, etc.
- 23.2 None of the above provisions is to be located within RPAs of retained trees without the input from the project Arboricultural Consultant and the prior consent of the Local Planning Authority.
- 23.3 Specific areas of material storage and mixing are illustrated on the Tree Protection Plan.

24.0 Tree Works

 $24.1 \qquad \text{The table below sets out the tree works that are required to facilitate the development.}$

	Tree Works – Facilitate the Development												
Prefix	ID	Species	BS Cat	Recommended works	Reason								
Т	1	Oak	B1	Remove the lowest damaged lateral branch over the driveway. Crown lift secondary branches over access driveway to 5m	Good Arboricultural Management & Facilitate Development								
G	4	Mixed	C3	Remove / cut back to the boundary leaving neighbouring hedge	Facilitate Development								
Т	5	Indian Bean Tree	C1	Remove	Facilitate Development								
Т	6	Purple Leaved Plum	C1	Remove	Facilitate Development								
G	7	Mixed	С3	Remove	Facilitate Development								
G	9	Cherry Laurel	С3	Cut back by approximately 1.5m to regain a section of the garden	Facilitate Development								
G	10	Mixed	С3	Privet sections could be cut back slightly to increase space, minimal though	Facilitate the development								

- 24.2 Trees to be removed should be spray marked with Hi-vis paint prior to removal.
- 24.3 Felling works should be timed to avoid the main nesting season for birds between 1st March and the 31st August. If the works must proceed within this time, then the ecological aspects will be risk assessed on the day by the attending Arborist or an Ecologist.
- 24.4 **Stump removal** within RPAs of retained trees should not be mechanically pulled out; instead should be carefully ground out with a pedestrian stump grinder.
- 24.5 If the need for additional tree pruning is required during the development, the Arboricultural Consultant will be contacted to advise on appropriate works and liaise with the LPA as required.
- 24.6 All tree works will be carried out in accordance with BS 3998:2010 'Recommendations for Tree Work' (as amended), and to current Arboricultural Best Practice standards. Tree works will be carried out by a suitably qualified and experienced Arboricultural Contractor (Arborist) holding the necessary insurance cover (£10,000,000 recommended). The contractor should carry out the relevant site-specific Risk Assessment and record such information before the commencement of tasks and work following current health and safety standards, practices and legislation. Lists of suitable contractors are available from the Arboricultural Association at www.trees.org.uk/find-a-professional/Directory-of-Tree-Surgeons.
- 24.7 Subject to the approval of this report, tree works that facilitate the development may be undertaken without seeking additional permission.

25.0 Protected Species – Bats And Birds

- 25.1 With respect to the Wildlife and Countryside Act 1981, any contractor, prior to working on these trees, must ensure that the trees do not provide a habitat for nesting birds or bats. Should nesting birds or active birds' nests be present, then work must cease until after the nesting season.
- 25.2 If the works are likely to destroy or disturb bats or their roosts, the appropriate Statutory Nature Conservation Organisation must be notified and allowed a reasonable amount of time to advise on whether the proposed work should be carried out, and if so, the method to be used.

26.0 Tree Protective Fencing (TPF)

- 26.1 Tree Protective Fencing is required to ensure RPAs of retained trees and soil structures are safeguarded during the development, creating the Construction Exclusion Zone (CEZ).
- 26.2 It is essential the barriers are erected before the development begins and remain in situ for the duration of the development.
- 26.3 The CEZ should be seen as sacrosanct; only authorised persons are to have access to the area following permission from the LPA.

Specification for TPF:

- 26.4 The installation and specification as per BS5837 are as follows:
 - Secondary Specification:

The barrier is to consist of 2m tall welded mesh panels (Heras fencing) secured on pinned rubber or concrete feet. The weldmesh panels shall be securely fixed and joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The distance between the fence couplers shall be at least 1m and shall be uniform throughout the fence. The panels shall be supported on the inner side by stabiliser struts, attached to a base plate secured with ground pins. (Appendix 4).

Weatherproof signs (Appendix 5) to be placed on the fencing at regular intervals of no less than every 3m.

• Timber Hoarding:

(To protect the Oak stem and buttress at the front of the site)

The barrier is to consist of a timber made framework with 2.44mm high ply sheets fixed to the framework. The timber framework shall be supported on the inside by timber struts. The struts and the framework shall be pinned to the ground (avoiding roots) to resist movement. The fencing shall include and protect the tree stem and the buttress roots on the edge of the driveway from vehicle damage. Weatherproof signs (Appendix 5) to be placed on the fencing at regular intervals of no

less than every 3m.

- 26.5 The locations of the TPF are illustrated in the TPP (Appendix 3) as thick blue lines and the timber hoarding in thick red lines.
- 26.6 The TPF will remain in place until development has completed Stage 13 (Stages Checklist), thereafter, it will be carefully dismantled only with the approval of the project Arboriculturalist and or the Local Authority Tree Officer.

Stages for Installation of Fencing:

- Hand clearance of any vegetation to allow clear working access.
- Setting out fencing points.
- Fencing is erected as per the above specification.
- Arboricultural Consultant to inspect and sign off the installation.



	TREE PROTECTION FENCING
	0
	TREE PROTECTION FENCING
$\langle \rangle$	I imber hoarding
\backslash	0
	CONSTRUCTION EXCLUSION ZONE CEZ





27.0 Ground Protection

- 27.1 Any soil containing roots (RPA) may be subject to compaction damage and so warrants protection.
- 27.2 It is essential that ground protection is installed before the development begins and remain in situ for the duration of the construction.
- 27.3 The ground protection should be capable of supporting predicted weights without being distorted or causing compaction of the underlying soil.
- 27.4 The ground protection will remain in place until development has been completed (Stage 13 Stages Checklist), thereafter they will be carefully removed, but only with the approval of the project Arboriculturalist and/or the Local Authority Tree Officer.

Ground Protection Specification Over Existing Gravel Driveway

- 27.5 The area of Ground Protection is illustrated on the TPP as yellow shading.
- 27.6 Due to the predicted heavy construction vehicles passing over the existing gravel driveway, Ground Protection in the form of heavy-duty (sufficient for construction traffic weight) matting or thick composite sheeting is required to protect the driveway from damage and the soil below from compaction during the development.
- 27.7 The boarding should be of sufficient rating to resist deformation.
- 27.8 The boards should be installed as per manufacturing guidelines and pinned in place to prevent slippage.



Figure 1 – Ground board example

28.0 Site Access And Hard Surfaces

- $28.1 \qquad \text{Access to the rear of the site will be over the existing gravel driveway.}$
- 28.2 Since the driveway is not designed to support heavy construction vehicles, heavy duty ground boarding over the RPA of T1 has been specified.
- 28.3 When operating plant machinery on-site, every effort should be made to avoid damage to both subterranean and aerial parts of retained trees. Particular care should be taken when operating plant with long booms, swinging counterweights and high clearances.
- 28.4 T1 has been recommended for a crown lift over the driveway to allow sufficient clearance for vehicles.
- 28.5 If, during the development, piles are to be dug, a mini Piling Rig will be used that can manoeuvre under the tree's canopy without causing damage.

GROUND PROTECTION

DRYAD tree specialists

29.0 Demolition

- 29.1 No demolition is to be carried out within the RPAs of retained trees.
- 29.2 If demolition works are to be carried out within the RPAs of retained trees, the Arboricultural Consultant is to be contacted and a revised AMS is to be written and approved by the LPA in accordance with BS5837.

30.0 Foundations And Construction

- 30.1 No foundations are to be installed within the RPA of retained trees.
- **30.2** The proposed house resides outside of the RPAs of T8.
- **30.3** If new foundations are to be installed within the RPAs of retained trees, then the Arboricultural Consultant is to be contacted, and a revised AMS is to be written and approved by the LPA in accordance with BS5837.

31.0 Underground Services

Drains and Soakaway

- 31.1 All surface water and foul drains are shown on the TPP.
- 31.2 A section of the drains passes over the peripheral edge of the RPA of T8. It is thought that limited roots would be present here due to the location of the existing base. The foul drain also passes through the hedge G2 at the site's front.
- 31.3 All excavations within the RPA of G2 and T8 will be carefully carried out by hand under Arboricultural supervision following the Manual Excavation Guidelines in Section 34.0 of this report.
- $31.4 \qquad \text{No soakaways are to be dug within the RPAs of retained trees.}$

Other

31.5 If changes to the layout of the services or additional services are to be installed within the RPAs of retained trees, the Arboricultural Consultant is to be contacted, and a revised AMS is to be written and approved by the LPA in accordance with BS5837.

32.0 Final Soil Levels

- 32.1 Final soil levels are to remain the same as the original soil level within the RPAs of retained trees.
- 32.2 The ground within the RPAs are not to be mechanically scraped or altered at any time.
- **32.3** If final soil levels are to change within RPAs of retained trees, the Arboricultural Consultant is to be contacted, and a revised AMS is to be written and approved by the LPA in accordance with BS5837.

33.0 Soft Landscaping and Fencing

Mulching - Soil Amelioration Works (Ahead of development)

- 33.1 As recommended, soil improvement on unaffected areas of the RPAs should be carried out following the completion of the tree work but ahead of the main site setup.
- 33.2 Over bare ground (previously under hedge), a 75mm layer of well-rotted wood chip mulch should be spread over the area specified in the TPP.
- 33.3 The mulch should be wheelbarrowed into the RPA areas and spread out manually using hand tools.
- 33.4 The mulch should be maintained for the duration of the build and kept moist but not waterlogged.

Landscaping

- 33.5 Landscaping outside of the Tree Protection Fencing may take place at any time during the development.
- 33.6 All landscaping within the Tree Protection Fencing (CEZ) may take place following the completion of Stage 13 (Stages Checklist).
- 33.7 The ground within the RPAs is not to be mechanically scraped at any time.
- 33.8 The clearance of any vegetation and ground within the RPAs shall be carefully carried out by hand.
- 33.9 Vehicles shall not be allowed to track over the RPAs of retained trees.

Fencing

- 33.10 Any fencing installation within the Construction Exclusion Zone should be carried out following the completion of Stage 13 (Stages Checklist).
- 33.11 Any fences to be erected within the RPAs of retained trees are to be installed as follows:
- 33.12 Close board (feather edge) fencing is recommended, as the length of fencing bays can be adjusted to accommodate any roots found.
- 33.13 Post holes are to be carefully **dug by hand** to maximum depth and kept as narrow as possible (max 300mm diameter).
- 33.14 To excavate the post holes, follow the Manual Excavation guidelines in Section 34.0 of this report.
- 33.15 If roots larger than 25mm in diameter are encountered, then the hole is to be abandoned, backfilled with soil and the hole relocated.
- 33.16 The holes are to be lined with a membrane to prevent Lime contamination into the surrounding soil before filling.

Replacement Hard Surfacing

33.17 Existing hard surfacing within RPAs may be replaced under Arboricultural supervision so that the soil beneath the existing sub-base is not disturbed. The new hard surfacing shall be installed above the undisturbed sub-base.

34.0 General Manual Excavation

34.1 Manual excavations within RPAs of retained trees are to be carried out **by hand** to an agreed depth under the supervision of the attending Arboricultural Consultant.



- 34.2 The soil is to be loosened with a pickaxe or fork then removed with an air-spade, shovel or trowel.
- 34.3 Any roots encountered smaller than 25mm in diameter may be carefully pruned, leaving the smallest wound possible.
- 34.4 Any roots encountered larger than 25mm in diameter shall be carefully excavated around to avoid causing damage to the protective bark. The Arboricultural Consultant is to decide whether it is feasible to remove or retain the root.
- 34.5 Any roots revealed shall be covered with hessian to avoid desiccation.
- 34.6 All arising spoil is to be removed from the RPA straight away, and compaction of the exposed soil is to be avoided at all costs (No walking or tracking over).
- 34.7 **Lime leaching protection** If contaminating materials (cement/concrete) are to be used; then a suitable plastic membrane is to be placed between it and the soil to prevent Lime leaching of the soil and contact with the roots.

35.0 Amendments

- 35.1 Issues may arise during the development phase that may require amendments to the previously agreed tree protection strategy. Any amendments to the AMS will be discussed with the Arboricultural Consultant and approved in writing by the LPA before implementation.
- 35.2 Copies of all amendments will be attached to the site copy of the AMS to provide a record of what has been agreed and altered.

36.0 Conclusion

36.1 Subject to all aspects of the above AMS being fully implemented, it is foreseen that the development may proceed with **minimal risk** to the retained trees.

37.0 Appendices

Appendix 1 – Tree Survey Schedule BS5837:2012

Report Ref: D3048.V1.0-AIA.AMS

DRYAD tree specialists

Site:Halfpenny House, Crossways Road, Grayshot, GU26 6HFClient:Katie Allison-GuySurvey Date:4th of October 2023Ref No:D3048.V1.0-AIA.AMSLPA:East Hampshire District CouncilWeather:FairInspector:Tom Butterfield BSc (HONS) DipArb L4

Tree Survey Schedule With Required Works



Dryad Tree Specialists Ltd, Oak Hill, Wood Street Village, Guildford, GU3 3ET. <u>www.dryad-trees.co.uk</u> branchline@dryad-trees.co.uk

Prefix	ID	Species	No. Trees	No. Stem	HT (m)	N	Cro Spr (n I E	wn ead n) S V	V	LB/Bear	LB/Ht(m)	DBH (mm)	Age	Landscape	RPR (m)	RPA (m ²)	Vitality	Structure	BS Cat	Life (yrs)	Notes and Observations	Required Works	Reason
т	1	Oak	1	1	13	7.5	7.5	7.5	7.5	E	3.8	570	Μ	Н	6.8	147.0	Good	Good	B1	20+	Single stem. Spreading crown structure. The crown breaks into multiple stems from 3.5m. The low-hanging branch over the driveway and road has suffered a rip-tear wound approximately 1.5m from the main stem. The wound looks slightly necrotic and infected. Significant volume of minor size dead wood throughout the crown	Remove the lowest damaged lateral branch over the driveway. Crown lift secondary branches over access driveway to 5m	Good Arboricultural Management & Facilitate Development
G	2	Mixed	/	/	3	1	1	1	0	N	0	100	EM	L	1.2	4.5	Poor	Fair	C3	10+	Mixed hedge along the front of the property. Mainly Cypress Fletcheri on the inside and Cherry Laurel on the outside. Internal sections of the Cypress hedge have died and turned brown. Maintained by trimming. Provides some screening from the road	/	/
G	3	Cherry Laurel	/	/	2.5	1.5	1	1	1.5	N	0	100	EM	L	1.2	4.5	Good	Fair	C3	10+	Hedge growing along the boundary. Maintained by trimming. Provides some screening	/	/
G	4	Mixed	/	/	2.5	1.5	1.5	1.5	1.5	N	0	100	EM	L	1.2	4.5	Good	Good	C3	10+	Mixed hedge growing along the boundary. Includes Cherry Laurel, Hazel, Rhododendron, Western Red Cedar, Berberis and Holly. Hedge has become very spread from the boundary, encroaching over the site to a larger degree in the rear garden. A section of Western Red Cedar in the rear garden has begun to collapse into the garden. Provides screening from the neighbouring property. Maintained by trimming	Remove/cut back to the boundary, leaving neighbouring hedge	Facilitate Development

Report Ref: D3048.V1.0-AIA.AMS

DRYAD tree specialists

Prefix	ID	Species	No. Trees	No. Stem	HT (m)	N	Cro Spr (n N E	own ead n) S V	N	LB/Bear	LB/Ht(m)	DBH (mm)	Age	Landscape	RPR (m)	RPA (m ²)	Vitality	Structure	BS Cat	Life (yrs)	Notes and Observations	Required Works	Reason
т	5	Indian Bean Tree	1	1	4.5	3	2	2	1.5	Ν	1	130	SM	L	1.6	7.6	Good	Fair	C1	10+	Smaller tree. Slight stem lean and crown bias towards the North	Remove	Facilitate Development
т	6	Purple Leaved Plum	1	1	4.5	2	2	2	2	N	1.5	100	SM	L	1.2	4.5	Fair	Fair	C1	10+	Smaller tree. Minor wound at base adjacent to the planting stake. Slightly sparse crown	Remove	Facilitate Development
G	7	Mixed	/	/	2.5	1.5	2	2	2	N	0	100	SM	L	1.2	4.5	Fair	Fair	C3	10+	Mixed shrubs in the rear garden include Viburnum, Cotoneaster, Choisya, Cotinus, Berberis, Rhododendron, Cherry Laurel, Pampas Grass, Weigela, Euonymus, Dogwood and others. Low Arboricultural merit	Remove	Facilitate Development
т	8	Sycamore	1	1	17	6.5	6.5	5	7.5	S	3	740	М	Н	8.9	247.7	Good	Fair	B2	20+	Growing on the boundary within the boundary hedge (G4). No signs of decay, disease or infection around the base. The main stem bifurcates at 3m, and the East stem further bifurcates at 4m above ground level. Unions appear relatively wide, with no bark inclusion observed. The Crown has been pruned back on the South side previously	1	/
G	9	Cherry Laurel	/	/	2.5	1	1.5	2	1.5	N	0	120	EM	L	1.4	6.5	Good	Fair	C3	10+	Boundary hedge. Has spread and crept into the garden. Provides screening from the neighbouring property. Maintained by trimming	Cut back by approximately 1.5m to regain a section of the garden	Facilitate Development
G	10	Mixed	/	1	3	0.5	1	1	1	N	0	80	SM	L	1.0	2.9	Fair	Fair	C3	10+	Mixed hedge growing within the site boundary. Includes Privet, Holly and Lawson Cypress. Maintained by trimming	Privet sections could be cut back slightly to increase space, minimal though	Facilitate the development

Tree Survey Schedule Key

Tree Survey Schedule Key and Notes

Prefix	T NT G NG W H	Refers to: Tree Neighbou Group Neighbou Woodland Hedge	ring Tree ring Group I	ID	Refers to a unique identification number or tag number for the given tree or group. Corresponds to the Tree Constraints Plan and Tree Survey Schedule										
No. Trees	Refers to the number of trees in a group														
No. Stem	Refers	to the num	per of stems per individual tree												
Height	Descri	ibes the app	roximate height of the tree from groun	nd level or bu	ttress flare in meters										
Crown Spread	Refers	to the radiu	is of the canopy in meters from the ste	em of the tree	e in the directions of North, East, South and West										
LB/Bear	Lowest Branch Bearing: Refers to the directions of the lowest point of the canopy in meters														
LB/Ht(m)	Lowes	st Branch He	ight: Refers to the ground clearance fr	om the grou	nd level to the height of the lowest point of the canopy in meters										
DBH	Diame record	eter at Breas led in the su	t Height. Stem diameter of the tree tru rvey and a final DBH is calculated in a	unk measure ccordance wi	d in millimetres. If the tree is multi-stemmed, each diameter is ith BS5837										
	Y SM EM	Young Semi-Matur Early Matur	Refers to the age class of the tree: Young = Usually less than 10 years old Semi-Mature = Significant future growth to be expected, both in height and crown spread (typically below 30% of life expectancy) Early Mature = Full height almost attained. Significant growth may be expected in terms of crown spread (typically 20 cforth of the second s												
Age	М	Mature	Mature = Full height attained. Crown spread will increase but growth increments will be slight (typically 60% or more of life expectancy)												
	OM Over Mature V Veteran		Over Mature = A level of maturity whereby significant management may be required to keep the tree in a safe condition Veteran = A level of maturity whereby the crown has undergone natural or aided regression (veteranisation), significant management may be required to keep the tree in a safe condition. Typically contributes richly to ecological diversity												
RPR	The ra	dius of the I	Root Protection Radius given in meter	rs. The minimum area of ground requiring protection thorough developments											
RPA	The ra	dius of the I	Root P rotection A rea given in meters.	The minimu	m area of ground requiring protection thorough developments										
			efers to the vitality of the tree:												
Vitality	G F P D	Good Fair Poor Dead	-laving above average vitality -laving average vitality Having well below average vitality is struggling to survive and may be dying Free is dead												
			Refers to the structure of the tree:	lefers to the structure of the tree:											
Structure	G Good 7 F Fair 7 P Poor 7 D Dead 7		Free presents no significant structural defects Free presents some structural defects, unlikely to lead to high priority works Free presents significant structural defects that may lead to high priority works Tree is dead												
			Refers to the Landscape contribution	value of the	tree:										
Landscape	H M L	High Medium Low	Exceptional or very attractive specimen, observable by a significant number of people and locations Attractive specimen, Medium potential to be observable by many people or vice versa Unattractive specimen or largely hidden from view												
	Reten	tion categor	y refers to the BS5837, (See Appendix	2) list quality	y and value.										
BS CAT	"A"-hi	gh, "B"-mode	erate, "C"-Low and "U"-Remove.												
	List re	tentions crit	eria. "1"- Arboricultural, "2"-Landscap	pe and "3"- C	ultural / Conservational										
Life Exp	(40+)	xpectancy: A	esumated useful remaining contribu	ution in years	s before the tree requires removal. classed as (<10, (>10), (20+),										
Reasons	Refers Safety	to the reaso	on a recommendation is made. Typica	lly to facilita	te the development, access, good Arboricultural practice or Health and										

Appendix 2 –Cascade chart for tree quality assessment

BS 5837:2012. Trees in relation to design, demolition and construction - Recommendations Cascade Chart for tree quality assessment

Trees to be considered for retention (see Note) Identification on Plan Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, Category **U** 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] Those in such a condition that they Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline cannot realistically be retained as living • Dark Red RGB Code: 127-000-000 trees in the context of the current land Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees ٠ use for longer than 10 years 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. 2^{Mainly landscape qualities} A Mainly cultural values, including Mainly Arboricultural qualities Identification on Plan **5** conservation Frees to be considered for retention Trees that are particularly good Trees, groups or woodlands of Trees, groups or woodlands of significant Category A examples of their species, especially if particular visual importance as conservation, historical, commemorative Arboricultural and/or landscape features or other value [e.g. veteran trees or rare or unusual; or those that are Trees of high quality with an estimated essential components of groups or remaining life expectancy of at least 40 wood-pasture] Light green formal or semi-formal Arboricultural RGB Code: 000-255-000 vears features [e.g. the dominant and/or principal trees within an avenue] Trees that might be included in category Trees present in numbers, usually Trees with material conservation or other Category **B** A, but are downgraded because of growing as groups or woodlands, such cultural value impaired condition [e.g. presence of that they attract a higher collective Trees of moderate quality with an significant though remediable defects. rating than they might as individuals: or estimated remaining life expectancy of including unsympathetic past trees occurring as collectives but at least 20 years Mild Blue management and storm damage] such situated so as to make little visual RGB Code: 000-000-255 that they are unlikely to be suitable for contribution to the wider locality retention for beyond 40 years; or trees lacking the special quality necessary to merit the cate or A destination Unremarkable trees of very limited merit Trees present in groups or woodlands, Trees with no material conservation or Category but without this conferring on them or such impaired condition that they do other cultural value not qualify in higher categories significantly greater collective landscape Trees of low quality with an estimated Grev value; and/or trees offering low or only remaining life expectancy of at least 10 RGB code: 091-091-019 temporary/transient landscape benefits vears, or young trees with a stem diameter below 150 mm

Appendix 3 - Tree Protection Plan

D3048.V1.0.A3.TPP (Tree Protection Plan)





Appendix 4 – Tree Protection

Tree Protection Fencing

DEFAULT SPECIFICATION - HERAS FENCING ON SCAFFOLD FRAMEWORK

BS 5837:2012

BRITISH STANDARD

on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabilizer struts should be mounted on a block tray (Figure 3b).

NOTE 1 Examples of configurations for steel mesh perimeter fencing systems are given in 85 1722-18.

NOTE 2 It might be feasible on some sites to use temporary site office buildings as components of the tree protection barriers, provided these can be installed and removed without damaging the retained trees or their rooting environment.

6.2.2.4 All-weather notices should be attached to the barrier with words such as: "CONSTRUCTION EXCLUSION ZONE – NO ACCESS".



Figure 2 Default specification for protective barrier

SECONDARY SPECIFICATION - HERAS FENCING ON PINNED BASEPLATE

BRITISH STANDARD

BS 5837:2012



6.2.3 Ground protection during demolition and construction

6.2.3.1 Where construction working space or temporary construction access is justified within the RPA, this should be facilitated by a set-back in the alignment of the tree protection barrier. In such areas, suitable existing hard surfacing that is not proposed for re-use as part of the finished design should be retained to act as temporary ground protection during construction, rather than being removed during demolition. The suitability of such surfacing for this purpose should be evaluated by the project arboriculturist and an engineer as appropriate.

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TIMBER FRAME SITE HOARDING



Appendix 5 - Exclusion sign for CEZ

TREE PROTECTION AREA

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND ARE SUBJECTS OF A TREE PRESERVATION ORDER (TOWN & COUNTRY PLANNING ACT 1990)

CONTRAVENTION OF TREE PRESERVATION ORDERS MAY LEAD TO **CRIMINAL PROSECUTION**

THE FOLLOWING MUST BE OBSERVED BY ALL PERSONS:-

- THE PROTECTIVE FENCING MUST NOT BE REMOVED
- NO PERSON SHALL ENTER THE PROTECTED AREA
- NO MACHINE OR PLANT SHALL ENTER THE PROTECTED AREA
- NO MATERIALS SHALL BE STORED IN THE PROTECTED AREA
- NO SPOIL SHALL BE DEPOSITED IN THE PROTECTED AREA
- NO EXCAVATION SHALL OCCUR IN THE PROTECTED AREA

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSON OF THE LOCAL PLANNING AUTHORITY

KEEP OUT!





TREE PROTECTION AREA KEEP OUT !

(TOWN & COUNTRY PLANNING ACT 1990) TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A TREE PRESERVATION ORDER. CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY