

Arboricultural Impact Assessment

Hudson Heights, Wynnstay Lane, Marford, LL12 8LH

Prepared for:

[REDACTED]

Our Ref: 24/AIA/WXM/319

January 2024

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1.0 INSTRUCTION

- 1.1 We have been instructed by [REDACTED] to carry out an updated Arboricultural Impact Assessment (AIA) to assess the development proposal in relation to trees in accordance with the principles of British Standard 5837 'Trees in Relation to Design, Demolition & Construction - Recommendations' 2012.
- 1.2 We are instructed to prepare a report to provide information to assist all parties involved in the planning process to make balanced judgements regarding arboricultural features in relation to the proposed extension and alterations at Hudson Heights, Wynnstay Lane, Marford. As such, all trees within influencing distance to the development proposal both on and adjoining the site have been surveyed and are listed within a Tree Survey Schedule (**Appendix 1**) and plotted on all accompanying plans.
- 1.3 The stage 1 tree survey was carried out on 09/01/2024 by Alistair Henderson, Principal Consultant to Tree Solutions Ltd. Our appraisal of the mechanical integrity of trees on the site is enough to inform the current project. The assessment of trees is carried out from ground level without invasive investigation and the disclosure of hidden defects cannot therefore be expected. Whilst the survey is not specifically commissioned to report on matters of tree safety, we report obvious defects that are significant in relation to the existing and proposed land use. We do not carry out detailed safety inspections unless specifically instructed to do so in writing and have not carried out such inspections of trees on the proposal site.
- 1.4 Four individual trees (T1–T4) and one hedgerow (H1) were surveyed and mapped on a Preliminary Tree Constraints & Impact Assessment Plan Ref: 24/AIA/WXM/319, Drawing Nos. 1 & 2 at **Appendix 2**. All arboricultural information recorded during the survey is presented within a schedule at **Appendix 1**.
- 1.5 The Arboricultural Impact Assessment is based on the proposed layout under plan Ref: BR-2023-Roberts-PL01 by BR Architecture.

2.0 STATUTORY CONTROLS

- 2.1 We have been unable to ascertain if any trees are subject to a Tree Preservation Order as this information is not displaced on any online interactive mapping layer. We can however confirm that the land does not fall within a designated Conservation Area. You are advised to seek confirmation on TPO's from WCBC prior to undertaking any works to trees not granted consent under this planning application.

2.2 Protected Species

- 2.2.1 Mature trees often contain cavities, crevices and hollows that offer potential habitat for species such as bats and barn owls. Both are afforded protection under the Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), as well as The Conservation (Natural Habitats, &c) (Amendment) Regulations 2007.

2.3 Wildlife Habitats

- 2.3.1 Trees and hedgerows of most species provide valuable nesting sites for a wide range of birds, and it is likely that nesting birds will be present on the site during the period March to September.

3.0 THE SITE

- 3.1 Existing detached residential dwelling with associated vehicle access and parking.

4.0 DEVELOPMENT PROPOSAL

- 4.1 Extensions and alterations to existing dwelling and widening of vehicular access.

5.0 GENERAL CONSTRAINTS DATA - CONSTRUCTION EXCLUSION ZONES (CEZ's)

5.1 GENERAL

5.1.1 The three phases of an AIA were outlined in Section 1. In addition, during the development process for retention trees, there may be three and even four constraints to consider: Construction Exclusion Zone (CEZ's):

- CEZ 1: Root Protection Area (see 5.2)
- CEZ 2: Tree Crown Protection (see 5.3)
- CEZ 3: Tree Dominance (see 5.4)
- CEZ 4: New Tree Planting Zone (see 5.5)

CEZ's are explained below:

5.2 CEZ 1: ROOT PROTECTION AREA (RPA)

5.2.1 The RPA, calculated in m², should be protected before and during any demolition/construction works. This ensures the effective retention of trees by safeguarding a reliable quantum of functioning tree roots. The RPA is based on a radial measure from the centre of the tree stem, which is calculated by multiplying the stem diameter by a factor of twelve or by the (mean stem diameter²) x number of stems for multi-stemmed trees.

5.2.2 During the AIA 2, the derived radial measure is converted by the arboriculturalist into the actual area to be protected, having due regard to prevailing site conditions and how these may have affected the tree(s), particularly in relation to factors affecting their likely rooting disposition. The RPA for each tree should initially be plotted as a circle centred on the base of the stem. Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution.

5.2.3 The means of protecting the RPA will include the installation of tree protective fencing prior to the start of any demolition or construction work on site. The prohibition of various activities within the RPA must be adhered to (e.g. mechanical excavation, soil stripping, fire lighting, material storage, lowering levels and creating excessive sealed surfacing) and may include the use of temporary ground protection and/or special engineering solutions where construction is proposed near to retention trees or within the RPA.

5.3 CEZ 2: TREE CROWN PROTECTION ZONE

5.3.1 N/A as no new development is proposed adjacent to any retained trees.

5.4 CEZ 3: TREE DOMINANCE ZONE

5.4.1 N/A as no new development is proposed adjacent to any retained trees.

5.5 CEZ 4: NEW PLANTING ZONE

5.5.1 New trees are proposed along the site frontage.

6.0 SURVEY METHODOLOGY

6.1 The method used in the preparation of this report is based on the principles of BS 5837: 2012.

1. Tree heights were surveyed to the nearest 1m
2. Trunk diameters were measured by use of forestry girth tape
3. The category assessment (Table 1) on which the trees is based include current and long-term arboricultural, landscape, cultural and conservation values (BS5837: 2012). This table can be found at **Appendix 1**
4. For clarity, the grading system is summarised from **Table 2** of the BS as follows:

U grade – trees for removal, effective for less than 10 years

A grade – trees of high quality and value, effective for more than 40 years

B grade – trees of moderate quality and value, effective for more than 20 years

C grade – trees of low quality and value, effective for 10 years

Note: We have indicated colour coding on the drawing and therefore a monochrome copy should not be relied on.

6.2 SOIL ASSESSMENT

6.2.1 A soil assessment should be undertaken by a competent person to inform decisions relating to:

- the root protection area (RPA)
- tree protection
- new planting design; and
- foundation design to take account of retained, removed and new trees (potential soil subsidence/heave)

Tree Solutions do not undertake soil assessments and the client is advised to seek specialist advice in this respect.

7.0 JUXTAPOSITION OF TREES AND STRUCTURES

7.1 Below ground constraints

- 7.1.1 The below ground constraints are generally summarised as the root protection area (RPA). The shape of the RPA and its exact location will depend upon arboricultural considerations including likely tolerance of the tree to root disturbance; morphology and disposition of the roots when known influenced by past or existing site conditions; soil type and structure; and topography and drainage.
- 7.1.2 The purpose of the RPA is to prevent physical damage to tree roots and to prevent damage to the soil structure. Tree roots are damaged by soil compaction, changes in soil levels or soil contamination which could reduce tree health and/or stability.
- 7.1.3 Root patterns are affected by topography and characteristics of the soil or substrate. Where trees are located within proximity to existing hard standing or underground physical barriers, they are unlikely to have an even distribution of lateral roots due to restrictions in root growth created by compacted sub-grades beneath. The RPA of all trees have been plotted unmodified as there were no significant underground barriers to prevent a good radial root spread.

7.2 Underground Services

- 7.2.1 There are no proposed service runs within the designated RPA of trees/hedgerows.

8.0 DEVELOPMENT IMPACT TO TREES

- 8.1 The vehicular access onto Wynnstay Lane is to be widened to provide safer access/egress to the dwelling. Having experienced the blind egress, I fully understand the need for this improvement. In order to widen the gates and driveway, it will be necessary to remove tree number 1 and a small section of the boundary hedgerow. T1, is not a particularly good example having been badly topped in the past resulting in an unbalanced and unattractive crown form. The removal of this would have no significant adverse impact on the landscape character and setting of Wynnstay Lane as it is located at the very end and away from other residential dwellings. Given the need to provide a safer driveway to the applicants, we believe that its removal is fully justified especially as there is ample space to plant replacements should they be required. Furthermore, the tree affords no statutory protection to prevent the owners removing it at any time irrespective of this planning proposal. The removal of the small section of Hawthorn hedge will be largely unnoticed as it extends to the east.
- 8.2 The new garage and associated ground works will likely impact tree number 3, as such this young specimen will be lifted and transplanted this winter where it will likely establish well and continue to provide an attractive landscape feature to the applicant's garden.

- 8.3 Tree number 4 can be retained with no construction impacts, it is however a poor quality tree exhibiting physiological and morphological disorders that would necessitate its removal for H&S within the next 5 years regardless of the proposed works. The applicants have taken our advice and intend to be proactive in removing it now and planting a replacement in the adjacent garden space.
- 8.4 The side extension is in an unutilised area to the east of the dwelling and is clear of the boundary hedgerow leaving a 1.5/2m easement. As such, there will be no adverse impact to its future health and vitality.



P1 – T1 viewed from existing driveway



P2 – T1 viewed from Wynnstay Lane to west



P3 – T3 (Birch) to be transplanted



P4 – Location of side extension, T2 to be coppiced

9.0 PROPOSED REVISIONS TO THE SCHEME

- 9.1 We advise that all proposed revisions having implications for trees should be referred to us for review.

10.0 CONCLUSIONS

- 10.1 BS 5837: 2012 contains clear and current recommendations for a best practice approach to the assessment, retention and protection of trees on development sites. The proposed development has followed this guidance by:

- Seeking arboricultural advice and undertaking a phase 1 preliminary tree survey in order to inform the layout and design of the proposed development
- Acting upon arboricultural advice throughout the design process in order to obtain the best development proposal whilst considering the current and future tree requirements
- Replacement trees are to be planted to mitigate the loss of T1
- Taking the above into consideration, we can see no valid arboricultural grounds for refusal

11.0 LIMITING CONDITIONS

- Unless stated otherwise:
- Information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of the inspection.
- The inspection is limited to visual examination of the subject trees from ground level only and without dissection, excavation, probing or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future.
- This report has been prepared for the sole use and benefit of the client. Any liability of Tree Solutions shall not be extended to any third party.
- No part of this report can be reproduced without the authorisation of *Tree Solutions Ltd*.

Appendix One
Tree Survey Schedule

TREE SURVEY SCHEDULE (BS5837: 2012)

SITE:	HUDSON HEIGHTS, WYNNSTAY LANE, MARFORD
CLIENT:	
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT

SURVEYOR:	A HENDERSON
ASSESSMENT DATE:	09 JAN 2024
VIEWING CONDITIONS:	GOOD
JOB REFERENCE:	24/AIA/WXM/319

TREE NO. T - Tree G - Group H - Hedge	SPECIES (COMMON NAME)	AGE	HEIGHT (m) + (N.S.E.W)	RADIAL CROWN SPREAD (m)				STEM/ MULTI-STEM* DIA.(mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB-CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m²)
				N	S	E	W						
T1	Cherry	M	7	3.5	3	4	4	350	G	- Ivy clad, recently severed at base - Topped at 7m leaving unattractive and irregular crown form - Loss easily mitigated by new tree planting - E.R.C. 10	Remove and replace with row of fastigate trees in landscape gap between timber fence and boundary hedge	C3	4.2 55m²
T2	Holly	EM						N/A	MD	- Overgrown hedgerow plant - Multi-stem from base due to past coppice during hedge management 2 stems to east are dead, remaining stem in advanced decline - E.R.C. 0	Coppice	U	N/A
T3	Himalayan Birch	Y	3	1	1	1	1	60	G	- Young tree, easily transplanted - E.R.C. 10	Transplant to adjacent garden area	C3	1
T4	Cherry	M	9	1.5	1.5	1.5	1.5	250x3 (433)	P	- Reduced vigour exhibited in crown with stem to south dead and remaining showing signs of dead and dieback - Decay detected at base - E.R.C. 0	Remove & replace with new, better-quality tree/s	C1	5.2 85m²
H1	Hawthorn	M	2	0.5	0.5	0.5	0.5	N/A	G	- Good quality and well-maintained boundary hedgerow - E.R.C. 20+	Remove small section to west for widened access	N/A	N/A

HEADINGS & ABBREVIATIONS

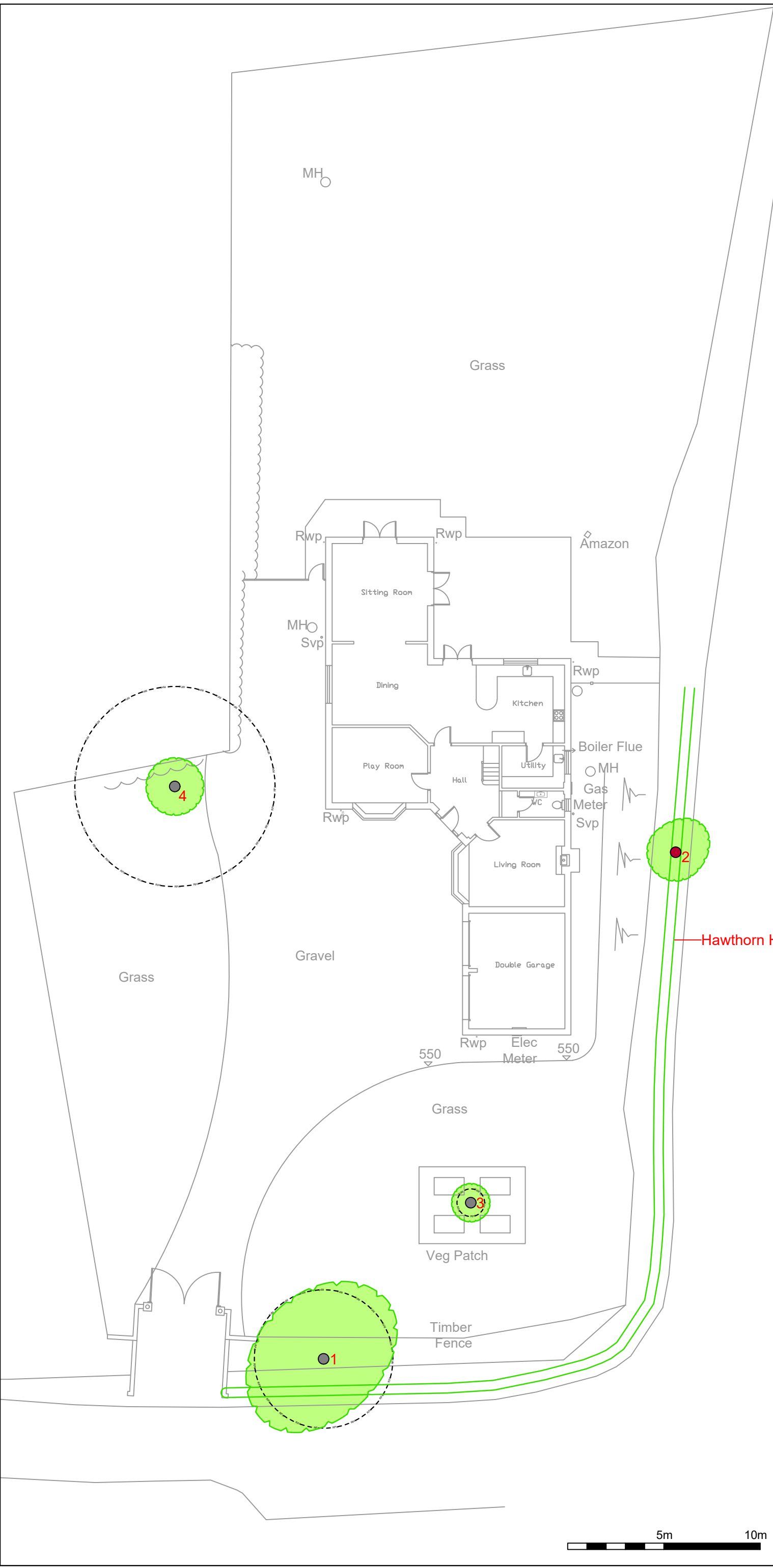
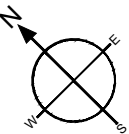
TREE NO.	REFERENCE NUMBER. REFER TO PLAN OR NUMBERED TAGS WHERE APPLICABLE (T = TREE, G = GROUP, H = HEDGE)
SPECIES:	COMMON NAME (LATIN NAMES AVAILABLE ON REQUEST)
AGE RANGE/LIFE STAGE:	Y = YOUNG, SM = SEMI MATURE, EM = EARLY MATURE, M = MATURE, PM = POST MATURE
HEIGHT:	ESTIMATED AND RECORDED IN METRES. APPROXIMATELY 1 IN 10 TREES ARE MEASURED USING A CLINOMETER AND THE REMAINDER ESTIMATED AGAINST THE MEASURED TREES
CROWN SPREAD:	MAXIMUM CROWN RADIUS MEASURED TO THE FOUR CARDINAL COMPASS POINTS FOR SINGLE SPECIMENS ONLY (MEASUREMENT FOR TREE GROUPS - MAXIMUM RADIUS OF THE GROUP)
CROWN CLEARANCE & DIRECTION OF GROWTH:	HEIGHT IN METERS OF CROWN CLEARANCE ABOVE ADJACENT GROUND LEVEL (TO INFORM ON GROUND CLEARANCE, CROWN/STEM RATIO AND SHADING)
STEM DIA/MULTI-STEM DIA:	STEM DIAMETER - MEASURED AT APPROXIMATELY 1.5 METRES ABOVE GROUND LEVEL OR A COMBINATION OF STEMS FOR MULTI-STEMMED TREES
VITALITY:	A MEASURE OF PHYSIOLOGICAL CONDITION. D = DEAD, MD = MORIBUND, P = POOR, M = MODERATE, G = GOOD
E.R.C. = ESTIMATED REMAINING CONTRIBUTION:	RELATIVE USEFUL LIFE EXPECTANCY (YEARS)
BS 5837 CATEGORY & SUB-CATEGORY GRADING:	A = HIGH QUALITY AND VALUE, B = MODERATE QUALITY AND VALUE, C = LOW QUALITY AND VALUE, U = UNSUITABLE FOR RETENTION (SUB-CATEGORY REFERS TO ARBORICULTURAL, LANDSCAPE AND CULTURAL/CONSERVATION VALUES)
BS 5837 RADIUS & BS 5837 RPA:	PROTECTIVE DISTANCE - RADIUS FROM THE CENTRE OF THE STEM TO THE LINE OF TREE PROTECTION (CONSTRUCTION EXCLUSION ZONE - CEZ) AND PROTECTIVE BARRIER ROOT PROTECTION AREA - BS 5837 (2012) ANNEX D (THE RECOMMENDATIONS STATE THAT THE RPA SHOULD BE CAPPED AT 707 M²) NOTE – ALL CALCULATIONS ROUNDED TO NEAREST DECIMAL

Table 1 Cascade chart for tree quality assessment

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

Appendix Two

Preliminary Tree Constraints Plan



Legend

- Root Protection Area
Modified to Account for
Site Features
- Category A
(High Quality)
- Category B
(Moderate Quality)
- Category C
(Low Quality)
- Category U
(Dead/Dying/In Decline)
- Root Protection Area
- Crown Spread
- Tree Number
- NOTE: Tree/group numbers marked have approximate locations.

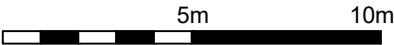
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Project:	
Hudson Heights, Wynnstey Lane, Marford	
Title:	
Preliminary Tree Constraints Plan	
Scale:	Date:
1:200 @ A3	January 2024
Drawn By:	Revision:
NB	-
Job Ref:	Drawing No:
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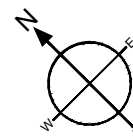


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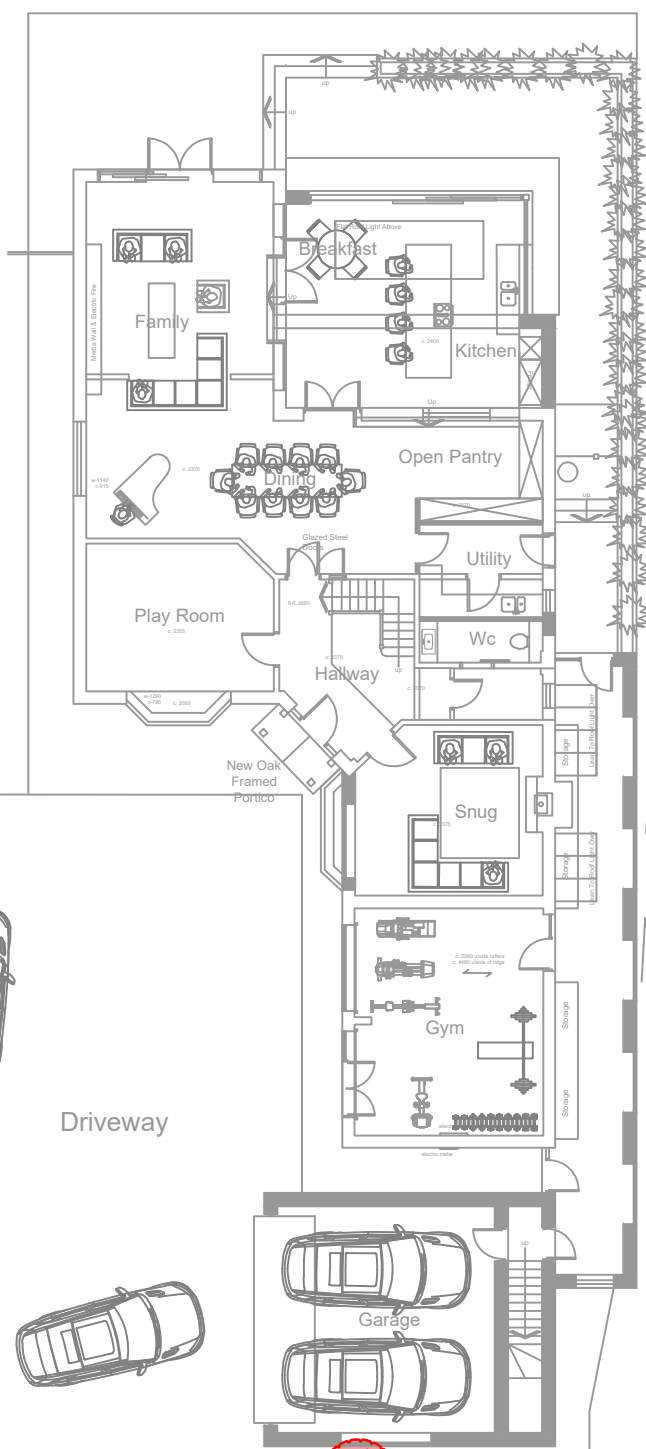


Appendix Three

Impact Assessment Plan



Garden



Hawthorn Hedge

Garden

Driveway

Garage

Garden

T3 transplanted

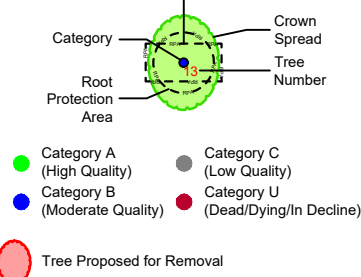
Boundary fence

Access

5m 10m

Legend

Root Protection Area
Modified to Account for
Site Features



NOTE: Tree/group numbers marked
have approximate locations.

Client: [REDACTED]	
Project: Hudson Heights, Wynnstay Lane, Marford	
Title: Arboricultural Impact Assessment	
Scale: 1:200 @ A3	Date: January 2024
Drawn By: NB	Revision: -
Job Ref: 24/AIA/WXM/319	Drawing No: 02

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