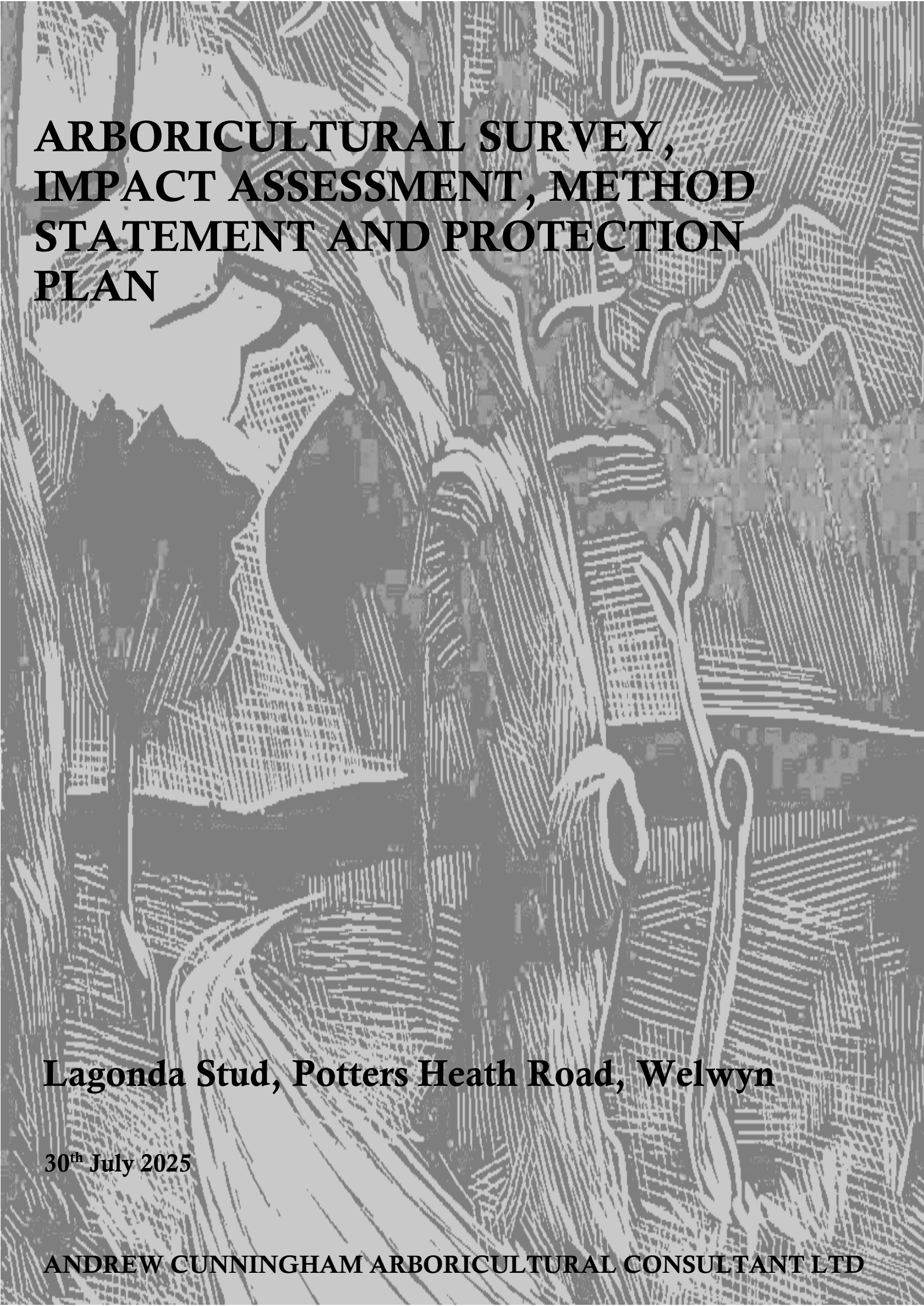




ARBORICULTURAL SURVEY, IMPACT ASSESSMENT, METHOD STATEMENT AND PROTECTION PLAN

Lagonda Stud, Potters Heath Road, Welwyn

30th July 2025

ANDREW CUNNINGHAM ARBORICULTURAL CONSULTANT LTD

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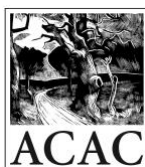
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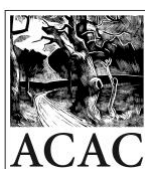
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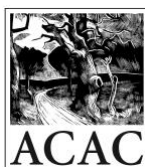
1. **EXECUTIVE SUMMARY**

- 1.1 The site is located within the village of Welwyn which is situated just to the north of the town of Welwyn Garden City, Hertfordshire.
- 1.2 The proposals are for the demolition of several existing barns/outbuildings and for the construction of a new detached dwelling and garage. The proposals also include new hard and soft landscaping.
- 1.3 During the tree survey, 20 items were identified which included 10 individual trees, 6 tree groups and 4 hedgerows.
- 1.4 Of these, the majority (11 out of 20) were identified as low quality (Category C) with an anticipated useful life expectancy of somewhere in the region of 10 years. The remaining items (9 in total) were categorised as moderate quality (Category B) with a useful life expectancy of at least 20 years.
- 1.5 No items were identified as high quality (Category A) or Category 'U' (considered unsuitable for retention in the site's current context).
- 1.6 To implement the development proposals, one moderate quality (Category B) tree will require removal. This equates to just 5% of the total arboricultural resource within and adjacent to the site. All other trees will be retained and incorporated within the scheme.
- 1.7 Minor facilitation pruning will be required to G1 to allow space for construction. This is considered routine and should have a minimal impact to the overall health of this tree group.
- 1.8 Impacts to the remaining retained trees can be managed through robust tree protection fencing and guidance through the Arboricultural Method Statement (AMS). If recommendations set out within the AMS are implemented and adhered too, then the development proposals are acceptable from an arboricultural perspective.



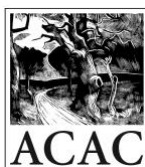
2. INTRODUCTION

- 2.1 Andrew Cunningham Arboricultural Consultant (ACAC) was instructed by Briarwood Landscape Architecture to undertake a tree survey at Lagonda Stud, Potters Heath Road, Welwyn, Hertfordshire. Hereafter, this will be described as ‘the site’.
- 2.2 The proposals are for the demolition of existing barns/outbuildings and the construction of a new detached dwelling and garage block.
- 2.3 The scope of the instruction was to visit the site and to survey relevant trees, hedges and tree groups in accordance with *BS5837:2012 ‘Trees in relation to design, demolition and construction – recommendations.’*
- 2.4 The purpose of the tree survey is to identify the arboricultural constraints within the site. This will allow an assessment of potential tree losses and indicate what tree protection measures will be required during the construction phase to ensure any impacts to retained trees are kept to an acceptable level.
- 2.5 It has therefore been requested that ACAC provides the following;
- All survey data in tabular form
 - A Tree Survey and Constraints Plan relating to all trees/vegetation on site
 - An Arboricultural Impact Assessment (AIA)
 - An Arboricultural Method Statement (AMS)
 - A Tree Retention and Removal Plan
 - A Tree Protection Plan



3. LIMITATIONS OF THE REPORT

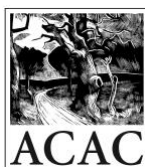
- 3.1 This arboricultural report has been drafted in relation to the current development proposals. It should be read in conjunction with the Tree Constraints, Retention/Removal and Protection Plans.
- 3.2 It is not the purpose of this report to identify and evaluate risk or set out detailed tree work specifications.
- 3.3 Any management recommendations set out within this report are of an advisory and preliminary nature only which relate to the site in its current context.
- 3.4 It is beyond the scope of this report to highlight direct or in-direct damage that existing trees could cause to structures on site, whether through annual growth or tree related subsidence.
- 3.5 In order for tree owners to reasonably comply with Duty of Care responsibilities; they should consider a schedule of tree risk management. This professional tree inspection process should contain a brief to evaluate the degree of risk posed (if any) by trees on the site and to specify appropriate management if necessary.
- 3.6 Trees are living organisms as well as self-supporting dynamic structures. Their physiological and structural condition can change rapidly in response to a wide range of biotic/abiotic factors. They have the potential to fail structurally, without prior manifestation of any reasonably observable symptoms. It is therefore not possible to categorically state that any tree is 'safe'.
- 3.7 Physical alterations to site conditions subsequent to the date of the tree survey could have the potential to change/invalidate the findings and recommendations within this report.
- 3.8 Findings and any recommendations set out in this report will only be valid for a maximum of **24** months.



4. INFORMATION PROVIDED

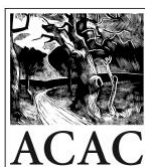
4.1 To Allow ACAC to carry out the tree survey and draft the associated report the following information was provided;

- Topographical Survey Plan – No Date or Reference
- Proposed Site Plan – Argento Design – 404_PL07 – April 25
- Proposed elevations – Argento Design – 404_PL11/12 – April 25



5. STATUTORY TREE AND WILDLIFE PROTECTION

- 5.1 The site is administered by North Hertfordshire District Council. They have confirmed (via email February 2023) that the site is not located within a Conservation Area and none of the trees within the site are currently protected through a Tree Preservation Order (TPO).
- 5.2 General advice regarding TPO's and wildlife legislation is included at **Appendix 3**.
- 5.3 No ancient or veteran trees were identified on site during the survey (information regarding ancient and veteran trees is included at **Appendix 4**).

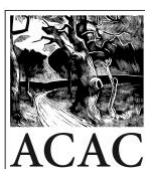


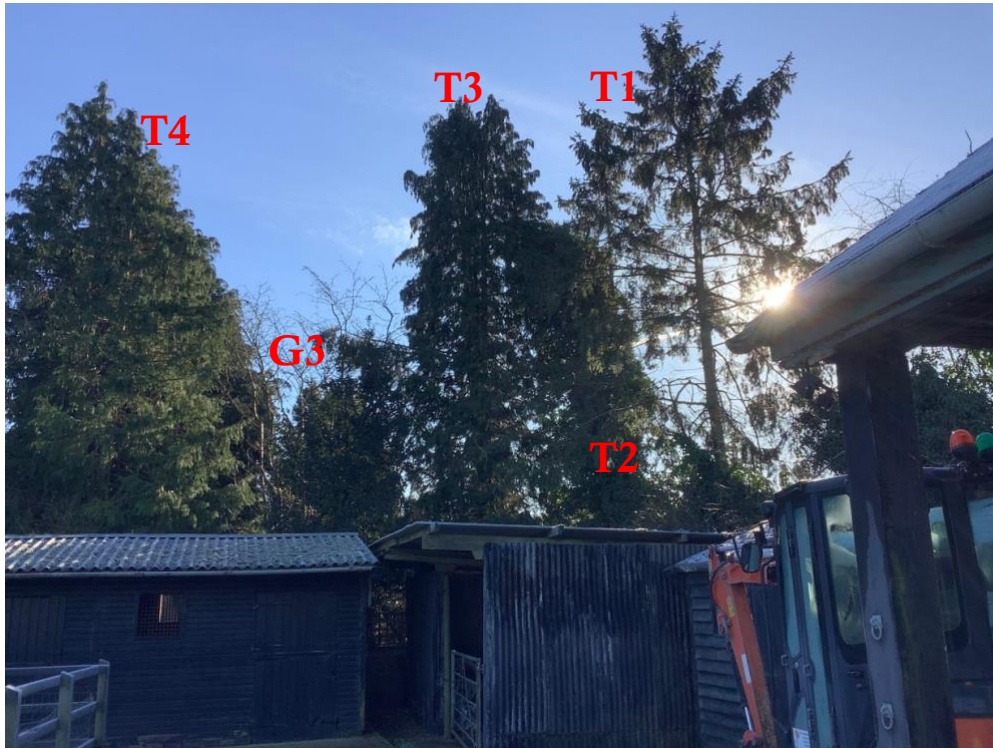
6. SITE DESCRIPTION

- 6.1 The site is located within a large garden area to the rear of Lagonda Stud (a domestic dwelling), which is situated within the village of Welwyn, Hertfordshire.
- 6.2 Currently, there are areas of formal lawn and a larger paddock area. There are numerous existing buildings which include a small stable block and a variety of unused storage barns.
- 6.3 There are numerous existing trees on site which range in their species and age groups. They are mostly located close to the garden boundaries of the site and provide screening to neighbouring dwellings.
- 6.4 Access into the site is from an existing gated access drive from Potters Heath Road to the south-west of the main site.
- 6.5 Below are photographs recorded during the tree survey;

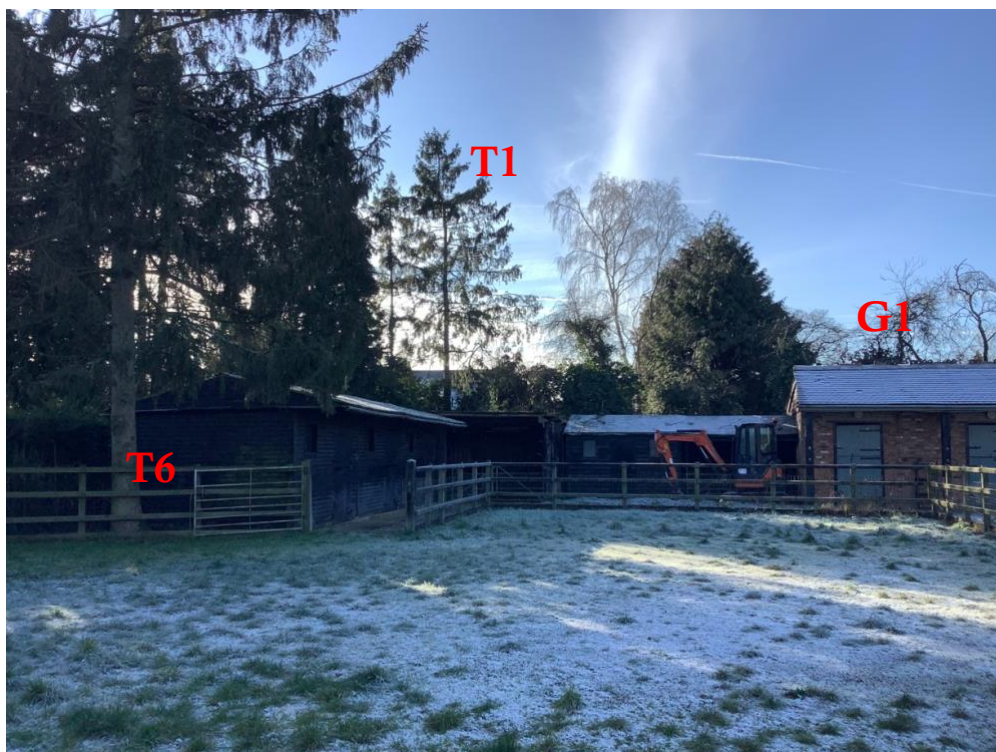


Photograph 1: Looking north-west from mid-site towards north-west corner of the site. Note substantial off-site moderate quality trees G5 and T9.

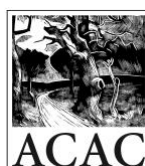




Photograph 2: Looking south from within the site towards existing barns and boundary trees. All are significant and offer screening to the neighbouring dwellings.



Photograph 3: Looking south-west towards the boundary trees G1 and T1 on the south-western boundary. Individual moderate quality tree T6 is shown within the foreground.

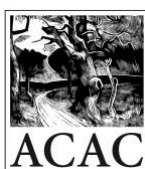




Photograph 4: Looking south-west along the rear elevation of existing barn in the south-eastern corner of the site. Tree stems are all within 3m of rear elevation of the existing barns.



Photograph 5: Looking north towards moderate quality mature Willow tree T8 located within the formal lawn area. This is a good arboricultural feature adjacent to the north-western boundary of the site.



7. **SURVEY FINDINGS**

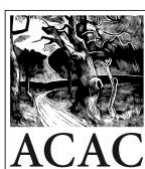
7.1 During the survey a total of twenty individual trees, tree groups and hedgerows were identified and assessed in accordance with BS5837:2012. The table below summarises tree survey finding;

Category/Survey items	Trees	Groups	Hedgerows	Total
A	0	0	0	0
B	6	3	0	9
C	4	3	4	11
U	0	0	0	0
Total	10	6	4	20

7.2 A total of 9 survey items were identified as moderate quality (Category B) and consisted of 6 individual trees and 3 tree groups. These were in good/fair structural and/or physiological condition and are likely to contribute to the arboricultural resource within the site for at least 20 years. Most of these were considered better for their collective/cohesive form.

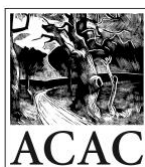
7.3 The remaining 11 survey items were categorised as low quality (Category C) and consisted of 4 individual trees, 4 hedgerows and 3 tree groups. These were either poor specimen trees or had notable structural/physiological defects which is anticipated to limit their useful life expectancy to somewhere in the region of 10 years.

7.4 During the survey, no items were identified as high quality (Category A) or Category 'U' (considered unsuitable for retention in the sites current context). Survey schedules are included at **Appendix 1**.



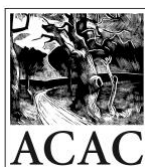
8. **PRELIMINARY TREE CONSTRAINTS**

- 8.1 Below ground constraints, or root protection areas (RPAs), for the surveyed trees have been plotted onto the tree survey plan for the site. These are represented as a circle centred on the base of each tree stem with a radius of 12 times stem diameter measured at 1.5m above ground level.
- 8.2 With reference to BS5837:2012, a root protection area (RPA) is defined as “a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree’s viability, and where the protection of the roots and soil structure should be treated as a priority”. “The default position [when considering design layout in relation to RPAs] should be that structures are located outside the RPAs of trees to be retained”.
- 8.3 BS5837:2012 states (4.6.2) that, “where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced.” The BS goes on to state that, “modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution,” and that any deviation from the original circular plot should take into account:
- Morphology and disposition of roots;
 - Topography and drainage;
 - Soil type and structure;
 - Likely tolerance of the tree to root damage/disturbance based on factors such as species, age, condition and past management.
- 8.4 Root systems can be damaged in a number of ways as follows:
- Severance of a root will destroy all parts of the root beyond that point. This can affect the overall functionality of the tree but also more importantly affect the trees stability which could cause a safety risk.
 - Soil compaction, which may occur from storage of material or passage of heavy equipment over the root area, can restrict and even prevent gaseous exchange through the soil, which can lead to reduced functionality and potentially decline and death. This also the case with raising soil levels.
 - Lowering the soil level will strip out the mass of roots near the surface.
 - Spillage of chemicals, oils etc.



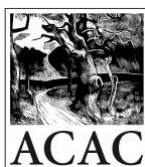
9. ARBORICULTURAL CONSTRAINTS - ON SITE

- 9.1 The main arboricultural constraints within the site relate to existing trees along the boundaries to adjacent dwellings. This relates to G1, T1, T2, T3, T4, T5, T6, as well as trees located within the formal lawn area (T7 and T8).
- 9.2 Consideration will need to be given to these trees during the design process to ensure adequate provision is made to protect them from potential detrimental impacts from construction activities.



10. **ARBORICULTURAL IMPACT ASSESSMENT (AIA)**

- 10.1 With reference to BS5837:2012 '*Trees in relation to design, demolition and construction*', this AIA evaluates the direct and indirect effects of the proposed design on the site's arboricultural resource.
- 10.2 The AIA considers the effects of any tree loss required to implement the proposed development as well as any potentially damaging activities proposed in the vicinity of retained trees. BS5837:2012 suggests that such activities might include:
- Removal of existing buildings, infrastructure and hard surfacing
 - Excavations for foundations
 - Installation of new hard surfacing
 - Installation of underground services
 - Excavations of trenches and changes in ground level
 - The viability of the proposed development in terms of access, adequate working space, provision for storage of materials including topsoil
- 10.3 With reference to BS5837:2012, the AIA includes an evaluation of the impact posed by the proposed development on the retained trees and vegetation on the site.



Proposed tree losses

- 10.4 The table and comments below summarises the retention and removal of trees across the site as a direct result of the current development proposals.

BS5837 Category	Trees	Groups	Total tree loss (entire)	Percentage of tree loss in relation to entire arboricultural resource
A	0	0	0	0%
B	1 (T6)	0	1	5%
C	0	0	0	0%
TOTAL	1	0	1	5%

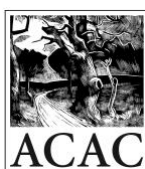
- 10.5 The table indicates that one moderate quality individual tree (T6) will require removal. This equates to just 5% of the entire arboricultural resource recorded as part of the tree survey. All tree removals are shown on the Tree Retention and Removal Plan at **Appendix 5**.

Significance of proposed tree losses

- 10.6 The significance of the tree loss is negligible as the tree is not visible due to other adjacent trees. Its loss will be mitigated in the longer term by new tree planting within the scheme.

Demolition and site clearance

- 10.7 The existing barns and outbuildings will be removed to allow the new dwelling and detached garage to be constructed. These structures are shown within the RPAs of G1, G2, G3, T1, T2, T3, T4 and T5.
- 10.8 These works have the potential to damage these retained trees unless undertaken in an appropriate manner as highlighted in the Arboricultural Method Statement within Section 12 of this report.



Tree Removals and Facilitation pruning

- 10.9 Minor facilitation pruning will be required to G1 and will be in the form of lateral pruning or canopy lifting away from the rear section of the new detached garage block. This will allow adequate space for construction activities to commence. These works are considered routine, and all trees should be resilient to such works with minimal impact to their overall health.

Tree protection

- 10.10 Once the tree removals have taken place, temporary tree protection fencing should be installed in accordance with BS5837:2012 and in locations shown on the Tree Protection Plan (**Appendix 6**).

Excavations

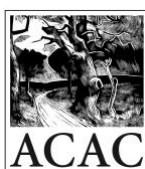
- 10.11 The proposed layout indicates that the new dwelling will be located on the edge of the RPA of T5 and on the edge of G1 for the new detached garage.
- 10.12 It is considered that the existing building may have restricted root growth into these areas, however it is also thought that these trees would be resilient to these minor incursions. As a precaution, any excavations should be carried out in accordance with recommendation set out within the Arboricultural Method Statement (AMS) at **Section 12** of this report.
- 10.13 A new parking bay is located on the edge of the RPA of T8. This tree will be resilient to this very minor incursion and if the temporary tree protection fence is installed before these works commence, then the potential impact will be acceptable.
- 10.14 No other excavations are required close to retained trees.

Proposed new hard surfacing

- 10.15 No new hard-surfacing is required close to retained trees.

Installation of Fencing through RPA

- 10.16 The proposed layout indicates that a new fence will be installed through the RPA of many of the retained trees. There is potential to cause root damage if the works are not undertaken in an appropriate manner. The AMS sets out guidance to ensure any potential impacts are kept to an acceptable level.

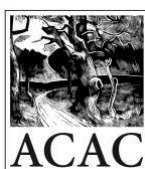


Services and drainage

- 10.17 No detail has been provided for the services or drainage at this stage, but it is anticipated that these will utilise existing services where available. However, any excavations within the RPAs of retained trees, should adhere to recommendations set out within AMS at **Section 12**.

Storage of materials, contractor parking, site huts, etc

- 10.18 There is adequate provision within the interior of the site for a storage area, contractor parking and welfare facilities without impacting the retained trees. However, consideration should be given to their locations to ensure there are no conflicts (above ground – canopies/below ground - roots) with retained trees and to utilise existing hard surfaces. The Arboriculturist will offer guidance as required.



11. **TREE PROTECTION PLAN**

11.1 A Tree Protection Plan (TPP) is included at **Appendix 6**.

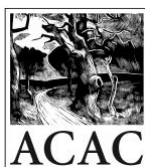
11.2 In accordance with BS5837:2012 the TPP is superimposed onto the proposed site layout plan and based on the topographical survey plan for the site. Any hard surfacing and structures within the RPAs of trees to be retained are shown on the TPP. In addition, where relevant, the TPP shows the following information, accompanied by descriptive text as required:

- Precise locations of protective barriers (forming Construction Exclusion Zones in relation to RPAs of retained trees)
- Other protection measures necessary e.g. temporary ground protection

11.3 The preparation of the TPP has considered the following factors where relevant:-

- Site construction access;
- Intensity and nature of construction activity;
- Contractors car parking;
- Chasing of construction works;
- Availability of special construction techniques;
- Spatial requirements

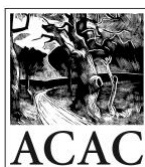
11.4 The tree protection measures shown on the TPP demonstrate the feasibility of the proposed development in relation to retained trees. However, they must be implemented with specific reference to the Arboricultural Method Statement (AMS) that is relevant to the proposals.



12. ARBORICULTURAL METHOD STATEMENT (AMS)

- 12.1 The aim of the AMS is to provide an assessment of potential impacts to retained trees and then ensure adequate protection to these trees during the construction phase of the project.
- 12.2 It gives clear guidance to how construction activities will be undertaken which have the potential to impact retained trees within the site.
- 12.3 The information contained within the AMS is in accordance with *BS5837:2012, Trees in relation design, demolition and construction – Recommendations*.
- 12.4 Before construction activities commence on site, the Project Manager must brief all site operatives to ensure they understand and comply to the contents of the AMS. This ‘induction’ should be documented by the Project Manager for future reference.
- 12.5 The AMS should be made available to all site operatives during the construction phase of the project to ensure understanding of the scope and importance of the tree protection specified for the site.
- 12.6 The AMS is a bespoke document that is relevant to the planning permission for the site. If there are any deviations from this, the Project Arboriculturist (ACAC) should be informed so that they can evaluate any additional impacts to retained trees and specify any further tree protection measures as appropriate. North Hertfordshire District Council (NHDC) should be notified of any deviation to the AMS before any works commence.
- 12.7 The following abbreviations have been used throughout this document:
- Arboricultural Method Statement – AMS
 - Tree Retention and Removal Plan - TRRP
 - Tree Protection Plan - TPP
 - Root Protection Area – RPA
 - Construction Exclusion Zone – CEZ
 - Tree Protection fencing - TPF
- 12.8 Arboricultural contacts for the project

- i. Arboriculturist – Andrew Cunningham (ACAC) – 07879050389 –
andrew@cunninghamtrees.co.uk



ii. Tree Officer (NHDC) – TBC

iii. Project Manager – TBC

12.9 General guidance for construction operatives

i. Do not undertake any construction activity that does not comply with the AMS and TPP.

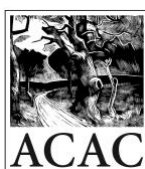
ii. Do not carry out any work within the CEZ without guidance from ACAC.

iii. Prohibited activities within the CEZ are as follows:

- No mechanical excavation whatsoever (unless under supervision from ACAC)
- No hand digging without an AMS (or guidance from ACAC)
- No altering of ground levels
- Storage of materials/machinery,
- Parking of vehicles/plant,
- Depositing of soil or rubble,
- Lighting of fires or disposal of liquids/chemicals.

iv. Fires on site should be avoided on site. If unavoidable, they must be positioned away from any retained trees so not to cause damage to foliage, bark etc.

v. Any materials whose accidental spillage would cause damage to a tree should be stored and handled well away (down slope where relevant) from the outer edges of root protection areas of retained trees on site.



13. **PHASING OF OPERATIONS**

13.1 The phasing of the project should be carried out in the following order:

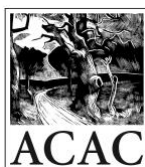
- i. Demolition of existing barns/outbuildings
- ii. Tree removals (shown on TRRP at **Appendix 5**)
- iii. Installation of tree protection fencing (as shown in TPP at **Appendix 6**)
- iv. Main construction phase (guidance from ACAC as required)
- v. Removal of Tree Protection measures following completion of construction works
- vi. Final Landscaping

Demolition of existing buildings

- 13.2 As the existing barns and outbuildings will have to be removed to allow the development proposals to be implemented, it should be possible to dismantle these with a standard ‘top down/pull back’ method.
- 13.3 This will allow a gentle approach to ensure adjacent trees are not damaged in the process.
- 13.4 Existing foundations which require removal and are within RPAs of adjacent trees shall be broken up by hand (mechanical breaker) and then removed from site by hand until outside of the RPA.
- 13.5 Any plant machinery shall be positioned outside of the RPAs of retained trees at all times.

Tree Removals and Facilitation Pruning

- 13.6 The proposals will require the removal of T6 as shown on the Tree Retention and Removal Plan at **Appendix 5**.
- 13.7 Once the tree removals have taken place, it is anticipated that minor facilitation pruning will be required in the form of lateral pruning and canopy lifting to G1 to provide adequate space for construction.
- 13.8 All tree works operations will be carried out by a suitably competent and qualified Tree Contractor and in accordance with industry best practice (*BS3998:2010 – Tree Work – Recommendations*).
- 13.9 All tree works shall be carried out in accordance with the tree contractors own site-specific risk assessment and method statement. This should be approved prior to the commencement of the works by the Project Manager for the site.



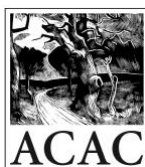
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- 13.10 The Tree Contractor shall be responsible to adhere to current wildlife legislation regarding nesting birds and roosting bats.
- 13.11 All operations will be carried out not to damage or impact adjacent retained trees. No retained trees should be used for anchorage.
- 13.12 All arising because of the tree removals will be removed from site unless agreed with the Project Manager before works commence.

Installation of temporary Tree Protection Fencing

- 13.13 Once the demolition and tree removals are complete, temporary tree protective fencing (TPF) shall be installed in locations and specification as shown on the TPP at **Appendix 6**. All TPF must be installed in accordance with the default BS5837:2012 specification (12 x stem diameter).
- 13.14 A weather resistant Construction Exclusion Zone sign should be secured to the TPF. An example is included at **Appendix 7**.

Excavations/Foundation Construction

- 13.15 Excavations will be required within the RPA's of G1 and T5 to install the new foundations for the dwelling and detached garage. Within these areas (shown on TPP at **Appendix 6**), a small excavator can be utilised to excavate the foundations.
- 13.16 The Arboriculturist will provide a watching brief during these works to ensure any potential damage is kept to an acceptable level.
- 13.17 If roots up to 25mm are encountered, these should be pruned back to a suitable side shoot with sharp saw or secateurs. Any roots encountered over 25mm or in clumps, work should stop, and advice obtained from the Arboriculturist. Larger roots will be retained in-situ if possible.
- 13.18 Any exposed roots to be retained will be covered with damp sacking so to avoid desiccation and death of roots. Back fill over roots should be with the use of a clean topsoil at the earliest convenience.
- 13.19 Once the excavations are complete, an impermeable membrane shall be installed before the foundation is constructed. This will reduce the potential for leaching from the concrete in to surrounding soils and potentially impacting tree roots.



Installation of boundary fencing

- 13.20 The proposed layout indicates that new boundary fencing is shown to impact many of the retained trees and vegetation on the southern and eastern boundaries. It is considered that these limited excavations (small excavation pits at 2 metre centres) will have a minimal impact to these retained trees.
- 13.21 Excavations for fence posts should be carried out with hand tools only, which will limit potential impacts to the underlying tree roots. The excavation pits for the fence posts should be lined with an impermeable membrane to ensure no leaching occurs to surrounding soils.

Site storage, Contractor parking, Welfare facilities

- 13.22 The site office, welfare facilities and storage areas should be in a secure area and on existing hard surfaces or paddock area away from existing trees. This will ensure minimal impact during the construction phase.

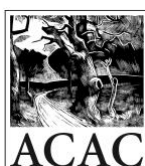
Removal of Tree Protection Fencing

- 13.23 The tree protection shall remain in place until works are completed.
- 13.24 On completion of all construction works, all tree protection can only be removed following approval of site conditions from ACAC.
- 13.25 All TPF should be removed from site (i.e. outside the CEZ). Contractors should still be aware of CEZ and the protection of trees.

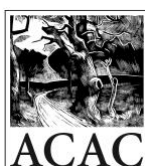
Monitoring

- 13.26 A summary of the monitoring required is set out below:

Work stage	Job description	Project Arboriculturist Action
1	Facilitation pruning	Contractor to work to TRRP (Appendix 5)
2	Installation of tree protection fencing	Contractor to work to TPP (Appendix 6).
3	Main construction phase	Provide a guidance/Supervision during construction works as required. Report to LPA regarding deviation from the AMS.

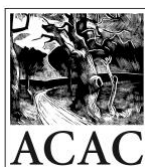


4	Removal of tree protection barriers	PM to inform Arboriculturist on intension to remove fencing following construction phase. NHDC will be informed via email.
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APPENDIX 1

TREE SURVEY SCHEDULES AND METHODOLOGY



TREE SURVEY SCHEDULE

Site: Lagonda Stud, Welwyn, Herts

Date: 30.01.23

Client: Briarwood Landscape Architecture



TREES

Tree ID	Species	Height in metres	Stem diameter in mm	Spread				Crown clearance height			Life stage	General observations	Structural condition	Physiological condition	ULE	Quality grading	RPA radius in metres	RPA area (sqm)
				N	S	E	W	1st branch height in metres	1st branch direction	Canopy height in metres								
T1	Spruce (Norway)	12	280	4.0	3.0	2.0	4.0	3.0	N	3.5	EM	Tree located on edge of larger boundary group, thin canopy. Located behind existing barn.	Fair	Fair	20+	B2	3.4	35
T2	Spruce (Norway)	10	160	3.0	2.0	1.5	2.0	4.0	N	4.0	EM	Tree located at 0.5m from barn, ivy clad. Drawn up and suppressed.	Fair	Fair	10+	C1	1.9	12
T3	Cypress (Lawson)	13	300	3.0	2.5	2.5	2.0	1.0	E	2.5	EM	Tree located within neighbours garden, multi-stemmed at 3m. Limited access. 2.5m from rear elevation of barn.	Fair	Good	10+	B2	3.6	41
T4	Cypress (Lawson)	13	350	3.0	2.5	3.0	3.0	3.0	W	2.0	EM	Off-site tree, located 2.7m from rear elevation of barn. Twin-stemmed from 1.5m. Prominent.	Fair	Good	10+	B2	4.2	55
T5	Damson	8	340	3.0	3.0	4.0	4.0	2.5	E	4.0	M	Tree located directly adjacent to the existing concrete slab, suppressed in form with some dieback.	Fair	Fair	10+	C1	4.1	52
T6	Spruce (Norway)	14	380	4.0	3.0	4.5	4.0	4.0	W	2.5	EM	Individual tree located adjacent to gable end of existing barn, typical form. Prominent.	Good	Good	20+	B2	4.6	65
T7	Cherry (flowering)	7	190	4	3.5	3.5	4.0	1.5	S	2.0	EM	Individual tree located within lawn area, typical form.	Good	Good	20+	C1	2.3	16
T8	Willow (weeping)	10.5	640	5	9.0	8.0	4.0	2.5	S	2.5	M	Individual tree located with lawn area, pollarded in past, broad canopy. Typical form.	Good	Good	10+	B2	7.7	185
T9	Spruce (Norway)	17	300	3	3.0	3.0	3.0	4.0	E	2.5	EM/M	Twin-stemmed, located within boundary hedgerow. Ivy to stems, limited access to stems.	Goos	Fair	20+	B2	3.6	41
T10	Laburnum	4.5	320	2.0	1.5	2.0	2.0	2.0	S	2.0	M	Pollarded tree located within lawn area., poor form.	Fair	Fair	10+	C1	3.8	46

GROUPS

Group ID	Species	Height range in metres	Stem numbers (estimate)	Maximum Stem diameter in mm	Average radius in metres	Average canopy height in metres	Life stage	General observations	Structural condition	Physiological condition	ULE	Quality grading	RPA radius in metres	RPA area in sqm
G1	Hawthorn, Damson, Privet	2-7	10	225	2	3	M	Linear group on boundary to rear of existing barns, some failures. Some dieback to some trees, minimal past management.	Good	Good	10	C2	2.7	23
G2	Spruce, Damson	6-8	5	250	2.5	2.0	EM	Three tree stems located to the rear of the barn, one tree hung up on adjacent, one tree pollarded in past. Ivy clad and limited access.	Fair	Fair	10	C2	3.0	28

TREE SURVEY SCHEDULE

Site: Lagonda Stud, Welwyn, Herts

Date: 30.01.23

Client: Briarwood Landscape Architecture



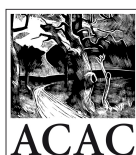
Group ID	Species	Height range in metres	Stem numbers (estimate)	Maximum Stem diameter in mm	Average radius in metres	Average canopy height in metres	Life stage	General observations	Structural condition	Physiological condition	ULE	Quality grading	RPA radius in metres	RPA area in sqm
G3	Holly, Laburnum, Ash	6-8	5	200	2.5	2.0	EM	Located within neighbouring garden, suppressed form, Ivy clad. Distance from existing barn - 2.5m.	Fair	Fair	10+	C2	2.4	18
G4	Spruce	14	3	460	4	2.0	EM	3 tree group located outside of redline boundary. Good collectively. Prominent within local landscape.	Good	Good	20+	B2	5.5	96
G5	Spruce, Scots Pine	15-16	6	450	4	3.0	EM/M	Obvious group of off-site trees, good collectively. No access to stem bases. Closest tree 1m from boundary fence.	Good	Good	20+	B2	5.4	92
G6	Spruce, Cypress (leyland)	16-17	2	450	3.5	3.0	EM/M	Two trees located adjacent to neighbouring building. Cohesive canopies. Better collectively.	Good	Good	10+	B2	5.4	92

HEDGEROWS

Hedge ID	Species	Height in metres	Hedge Width in metres	Maximum Stem diameter in mm	Life stage	General observations	Structural condition	Physiological condition	ULE	Quality grading	RPA radius	RPA area
H1	Cherry laurel	1.5	1	75	SM	Managed hedgerow.	Good	Fair	10	C2	0.9	3
H2	Cypress (leyland)	2	1	100	SM	Managed boundary hedgerow.	Good	Fair	10	C2	1.2	5
H3	Cypress (leyland), Firethorn, Holly, Elder, Crab apple	1-5	2	100	SM	Managed boundary hedgerow.	Good	Goos	10	C2	1.2	5
H4	Plum, Lonicea, Lilac	1-4	2	75	M	Managed boundary hedgerow.	Good	Good	10	C2	0.9	3

TREE SURVEY METHODOLOGY

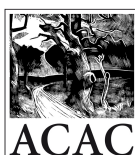
- The tree survey was carried out with reference to methodology set out in *BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'*.
- Trees were surveyed (from ground level) individually or as groups where it was considered that they had grown together to form cohesive arboricultural features. However, where it was considered that there was an arboricultural need to differentiate between attributes trees within groups/woodlands were also surveyed as individuals
- Within the tree survey schedule, each surveyed tree (T), group (G) or woodland (W) on or adjacent to the site is given a *reference number* which refers to its position on the tree survey constraints plan.
- Also shown on the tree constraints plan are root protection areas (RPA).
- **Tree species** are listed by common name only.
- Heights are measured in metres. They are recorded to the nearest half metre for dimensions up to 10m and to the nearest whole metre for dimensions over 10m.
- **Trunk diameters** are measured in millimetres and are rounded to the nearest 10mm. Single stemmed tree diameters are measured at 1.5m above ground level or, where a fork or swelling makes this impractical, at the narrowest point beneath. Diameters of multi-stemmed trees are calculated as 'combined stem diameters' (as per guidance set out within BS5837:2012).
- **Branch spreads** are taken at the four cardinal points to derive an accurate representation of the tree crown. They are recorded up to the nearest half metre for dimensions up to 10m and to up the nearest whole metre for dimensions over 10m.
- **Crown clearance** is expressed both as existing height above ground level of first significant branch along with its direction of growth, and also in terms of the overall canopy.
- **Canopy radius** is an average measurement of the radius of the tree canopies within the group.
- **Hedge width** is an average measurement of the overall width of the hedge along its length.
- Estimates. Where any other measurement has had to be estimated, due to inaccessibility for example, this is indicated by a “#” suffix to the measurement as shown in the tree survey schedule.
- **Life stage** is defined as Y – young (stake dependent), SM - Semi-Mature (still capable of being transplanted without preparation, up to 30cm girth and not yet sexually mature), EM – Early Mature (not yet having reached 75% of expected mature size), M – Mature (anything else up to



normal life expectancy for the species), OM – Over Mature (anything beyond mature and in natural decline), V – Veteran.

- **General observations** are recorded in relation to a tree's structural and/or physiological condition (i.e. the presence of any decay and physical defect) and /or any preliminary management recommendations that may be appropriate.
- **Physiological condition** is described as Good (no indications of impaired physiological function and in optimum condition for age and species), Fair (with indicators of reduced vitality. Some intervention may be required), Poor (with significantly impaired physiological function for age and species).
- **Structural condition** is described as Good (without any observable significant biomechanical structural weaknesses), Fair (with minor biomechanical structural flaws. Some remedial action may be required), Poor (with significant biomechanical weaknesses requiring intervention particularly where risk management is required).
- **Useful life expectancy (ULE)**, or the length of time a tree's is estimated to be able to make a useful contribution, is expressed in years as: <10, 10+, 20+, 40+
- **Quality** of individual trees, groups of trees and woodlands is assessed in terms of quality and benefit within the context of proposed development and graded into one of four categories (A, B, C and U) which are differentiated on the tree survey constraints plan by the colours highlighted below:

Category A	Trees of high quality with an estimated remaining life expectancy of 40 years. Retention is desirable.
Category B	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. Retention is desirable.



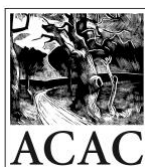
Category C	Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. Trees could be retained but are not considered a significant constraint to the development.
Category U	Unsuitable for retention. Trees in such a poor condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. These trees may have high conservation value.

- A, B and C trees have also been given a sub-category of 1, 2 or 3 which reflects their arboricultural, landscape or cultural and conservation values. Each sub-category has an equal weight, for example a B1 tree has the same retention priority as a B3 tree.
- The tree survey schedule also describes each tree's root protection area (RPA) in terms of radius (metres) and overall area (sq metres).
- This survey is for planning purposes only and is not intended as a tree condition survey. However, the base line data may be used as a guide for future detailed tree surveys if required.



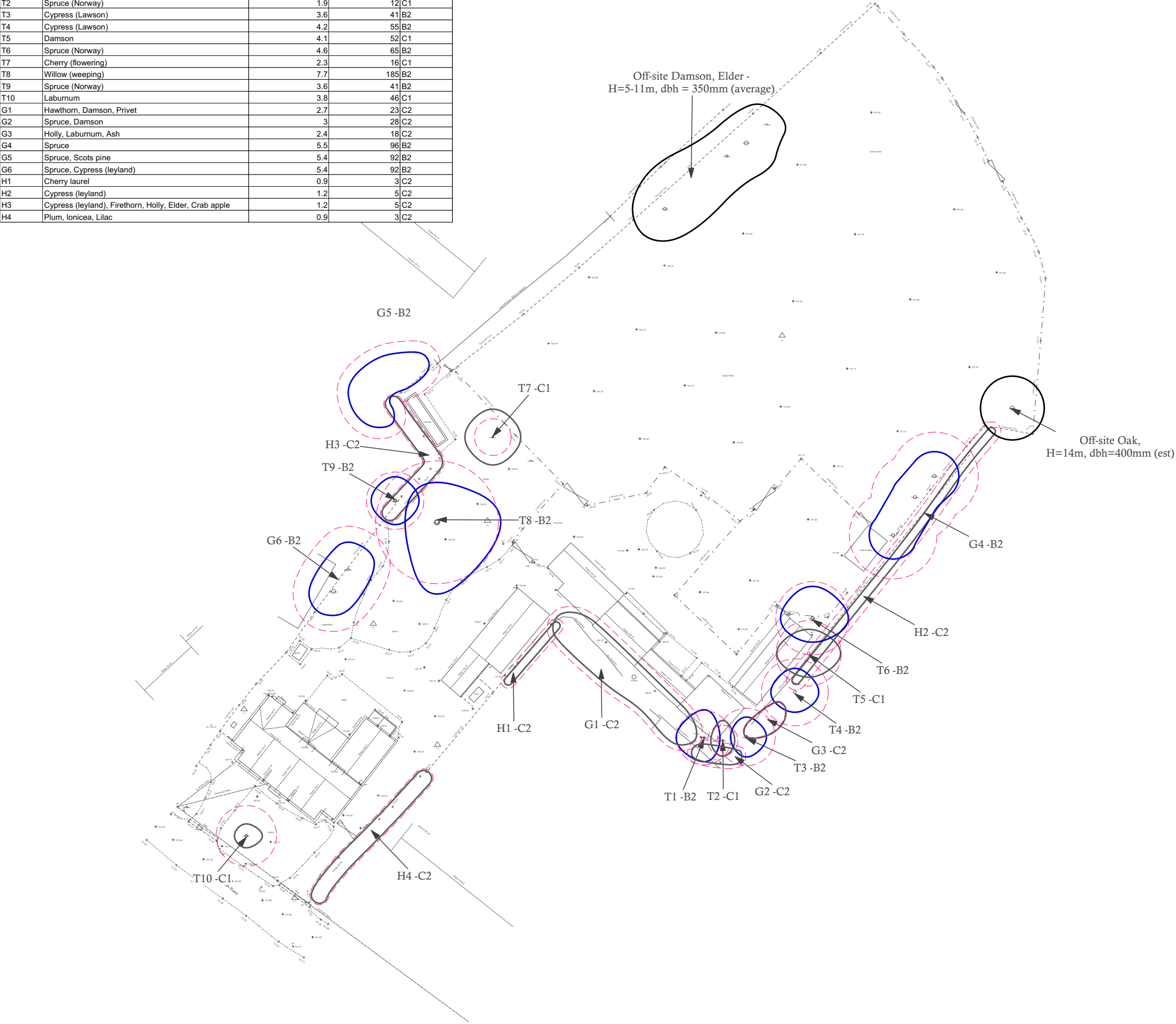
APPENDIX 2

TREE SURVEY AND CONSTRAINTS PLAN



Tree No	Species	RPA Radius M	RPA Area M2	Category
T1	Spruce (Norway)	3.4	35	B2
T2	Spruce (Norway)	1.9	12	C1
T3	Cypress (Lawson)	3.6	41	B2
T4	Cypress (Lawson)	4.2	55	B2
T5	Damson	4.1	52	C1
T6	Spruce (Norway)	4.6	65	B2
T7	Cherry (flowering)	2.3	16	C1
T8	Willow (weeping)	7.7	185	B2
T9	Spruce (Norway)	3.6	41	B2
T10	Laburnum	3.8	46	C1
G1	Hawthorn, Damson, Privet	2.7	23	C2
G2	Spruce, Damson	3	28	C2
G3	Holly, Laburnum, Ash	2.4	18	C2
G4	Spruce	5.5	96	B2
G5	Spruce, Scots pine	5.4	92	B2
G6	Spruce, Cypress (leyland)	5.4	92	B2
H1	Cherry laurel	0.9	3	C2
H2	Cypress (leyland)	1.2	5	C2
H3	Cypress (leyland), Firethorn, Holly, Elder, Crab apple	1.2	5	C2
H4	Plum, Ionicea, Lilac	0.9	3	C2

- KEY
- BS 5837 : 2012 Categories
- Tree Category A - High Quality
-
- A Category - Hedgerow, Group, Woodland

Tree Category B - Moderate QualityTree Category C - Low QualityTree Category U - Unsuitable for Retention

LAGONDA STUD, POTTERS HEATH ROAD, WELWYN

TREE SURVEY & CONSTRAINTS PLAN

DWG NO- ACU_077_01

DATE- 01/02/2023

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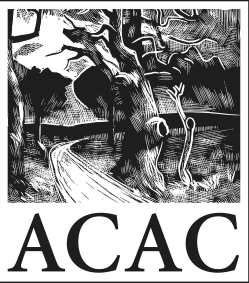
SCALE - 1:500 @ A3

REVISION-

SHEET- 1/1

APPROVED BY - AC

CLIENT - BRIARWOOD LANDSCAPE ARCHITECTURE



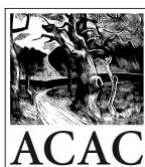
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T 07879050389
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North Woodchester, GL5 5NF

APPENDIX 3

STATUTORY CONTROLS



Statutory Tree Protection

A TPO prevents the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of trees or woodlands without the prior consent of the Local Planning Authority (LPA).

It is also an offence to carry out any works to a tree in a Conservation Area with a trunk diameter greater than 75mm diameter at 1.5 height without formal consent from the Local Planning Authority (LPA).

Anyone who commits an act in contravention of a TPO is liable, on conviction in a Magistrates Court, to a fine of up to a £20,000. For a serious offence, a person can be committed for trial in the Crown Court and if convicted, can be liable for an unlimited fine.

On many non-residential sites there is also a statutory restriction relating to tree felling that relates to quantities of timber that can be removed within set time periods. Therefore, you must obtain a felling license from the Forestry Commission if you plan to remove more than 5 cubic metre's of timber within a calendar quarter (3 months).

Although preliminary visual checks from ground level of likely wildlife habitats are made at the time of surveying, detailed ecological assessments should be made by a suitably qualified Ecologist. This falls outside the scope of the Arboriculturist.

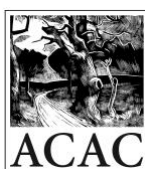
Trees which contain holes, splits, cracks and cavities could potentially provide a habitat for bats in addition to birds and small mammals. It is recommended that in line with any accompanying specialist advice, any tree works should only be carried out following a detailed climbing inspection to the tree to ensure that protected species or their nests/roosts are not disturbed. If any are found, the Project Manager, Site Owner or Consulting Arboriculturist should be informed and appropriate action taken as recommended by a Statutory Nature Conservation organisation such as Natural England.

It is advised that tree/hedgerow works are carried out with the understanding that birds will generally nest in trees, hedges and shrubs in summer months (March and August). Ideally, operations should be avoided during this period however, visual inspection can be carried out by the contractor before works commence.

Any proposed tree works must adhere to the statutory controls outlined above.

Statutory Wildlife Protection

Although preliminary visual checks from ground level of likely wildlife habitats are made at the time of surveying, detailed ecological assessments of wildlife habitats are not made by the arboriculturist and fall outside of the scope for this report.



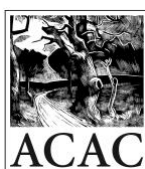
Trees which contain holes, splits, cracks and cavities could potentially provide a habitat for protected species such as bats in addition to birds and small mammals. It is advised that in some instances specialist ecological advice may be required. This may result in tree works being carried out following a detailed climbing inspection to the tree to ensure that protected species or their nests/roosts are not disturbed. If any are found, the site manager, site owner or consulting arboriculturist should be informed and appropriate action taken as recommended by the appointed Ecologist or the relevant Statutory Nature Conservation Organisation (SNCO): Natural England, Scottish Natural Heritage or Natural Resources Wales.

It is advised that tree/hedgerow works are carried out with the understanding that birds will generally nest in trees, hedges and shrubs between March and August. This period only provides a basic indication of likely nesting times which may change due to the climate.

Irrespective of the time of year and other than any actions approved under General Licence, it is an offence to intentionally kill, injure or take any wild bird or to intentionally take, damage or destroy the nest or eggs of any wild bird. Ideally, tree operations should be avoided during the likely bird nesting period. However, any tree works should always only be carried out following a preliminary visual check of the vegetation.

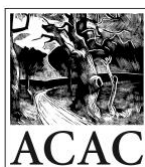
Any proposed tree works that are planned to be carried out on site must be carried out in accordance with any relevant statutory controls, outlined above.

Sources: The Town and Country Planning Act 1990, the Wildlife and Countryside Act 1981 (as amended), The Countryside and Rights of Way Act 2000 (as amended), The Conservation of Habitat and Species Regulations 2010.



APPENDIX 4

NATIONAL PLANNING POLICY



The National Planning Policy Framework (NPPF, updated December 24)

Paragraph 193 (c)

‘Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused unless there are wholly exceptional reasons, and a suitable compensation strategy exists’.

In relation to the above the following definitions apply:

‘Ancient woodland: An area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites (PAWS)’, and

‘Ancient or veteran tree: A tree which, because of its age, size and condition, is of exceptional biodiversity, cultural or heritage value. All ancient trees are veteran trees. Not all veteran trees are old enough to be ancient, but are old relative to other trees of the same species. Very few trees of any species reach the ancient life-stage.’

‘Irreplaceable habitat: Habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen.’

The following text is taken from the Standing Advice produced by the Forestry Commission and Natural England (updated January 2022) as included in the National Planning Policy Guidance:

Ancient and veteran trees

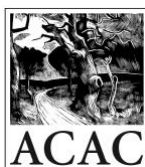
‘Ancient and veteran trees can be individual trees or groups of trees within wood pastures, historic parkland, hedgerows, orchards, parks or other areas. They are often found outside ancient woodlands. They are also irreplaceable habitats’.

Ancient trees

‘An ancient tree is exceptionally valuable. Attributes can include its:

- great age
- size
- condition
- biodiversity value as a result of significant wood decay and the habitat created from the ageing process
- cultural and heritage value

Very few trees of any species become ancient’.



Veteran trees

‘A veteran tree may not be very old, but it has significant decay features, such as branch death and hollowing. These features contribute to its exceptional biodiversity, cultural and heritage value’.

‘All ancient trees are veteran trees, but not all veteran trees are ancient. The age at which a tree becomes ancient or veteran will vary by species because each species ages at a different rate’.

Buffer zones beyond the RPA:

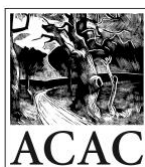
‘A buffer zone’s purpose is to protect ancient woodland and individual ancient or veteran trees. The size and type of buffer zone should vary depending on the scale, type and impact of the development’.

Ancient woodland buffer:

‘For ancient woodlands, you should have a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, you’re likely to need a larger buffer zone. For example, the effect of air pollution from development that results in a significant increase in traffic’.

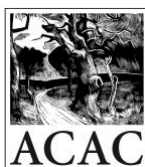
Ancient and veteran tree buffer:

‘A buffer zone around an ancient or veteran tree should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree’s canopy if that area is larger than 15 times the tree’s diameter’.



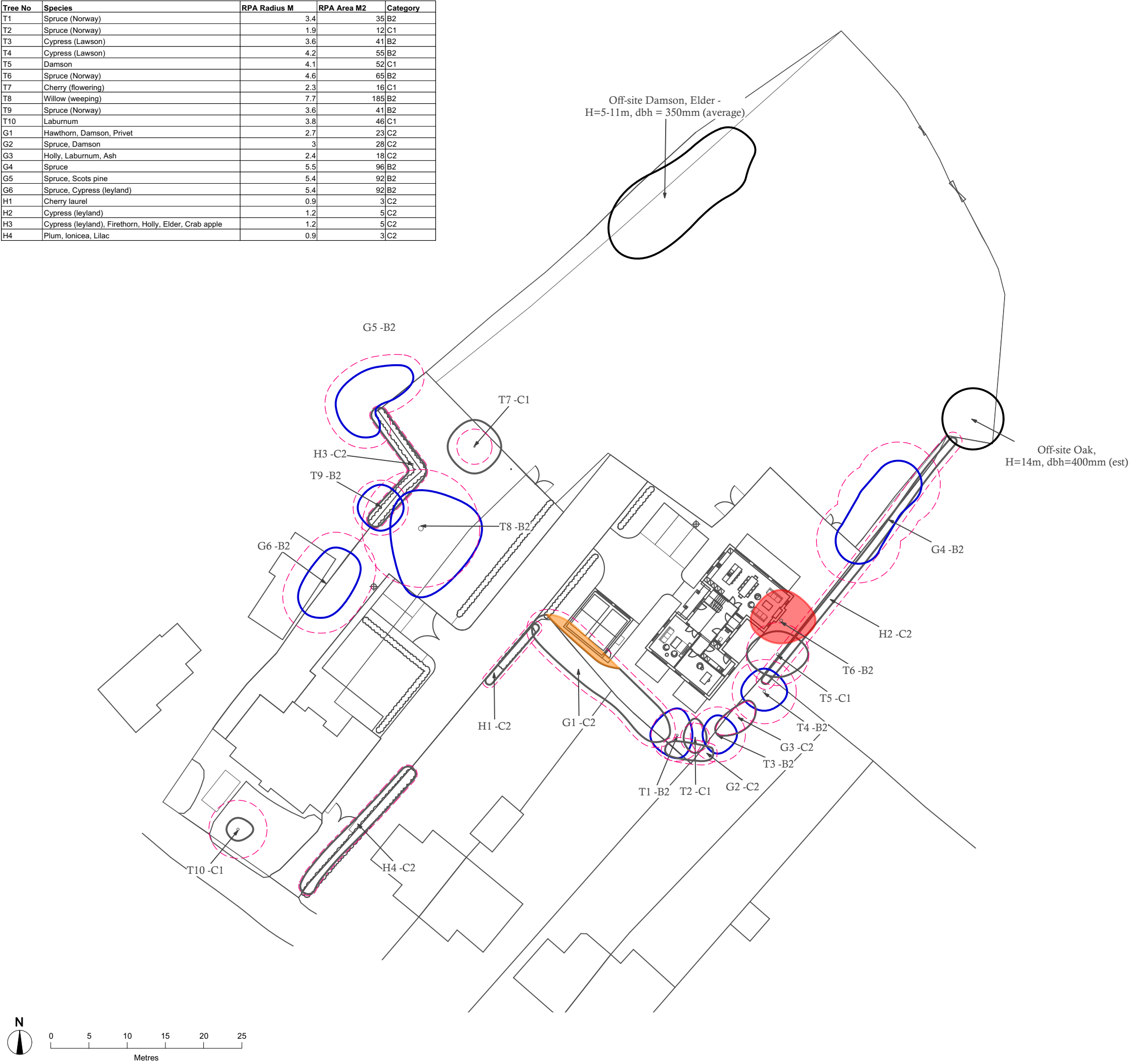
APPENDIX 5

TREE RETENTION AND REMOVAL PLAN



Tree No	Species	RPA Radius M	RPA Area M2	Category
T1	Spruce (Norway)	3.4	35	B2
T2	Spruce (Norway)	1.9	12	C1
T3	Cypress (Lawson)	3.6	41	B2
T4	Cypress (Lawson)	4.2	55	B2
T5	Damson	4.1	52	C1
T6	Spruce (Norway)	4.6	65	B2
T7	Cherry (flowering)	2.3	16	C1
T8	Willow (weeping)	7.7	185	B2
T9	Spruce (Norway)	3.6	41	B2
T10	Laburnum	3.8	46	C1
G1	Hawthorn, Damson, Privet	2.7	23	C2
G2	Spruce, Damson	3	28	C2
G3	Holly, Laburnum, Ash	2.4	18	C2
G4	Spruce	5.5	96	B2
G5	Spruce, Scots pine	5.4	92	B2
G6	Spruce, Cypress (leyland)	5.4	92	B2
H1	Cherry laurel	0.9	3	C2
H2	Cypress (leyland)	1.2	5	C2
H3	Cypress (leyland), Firethorn, Holly, Elder, Crab apple	1.2	5	C2
H4	Plum, Ionicea, Lilac	0.9	3	C2

- KEYBS 5837 : 2012 Categories
- Tree Category A - High Quality
-
- A Category - Hedgerow, Group, Woodland

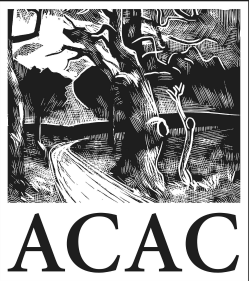
Tree Category B - Moderate QualityTree Category C - Low QualityTree Category U - Unsuitable for Retention

LAGONDA STUD, POTTERS HEATH ROAD, WELWYN

TREE RETENTION & REMOVAL PLAN

DWG NO- ACU_077_02
DATE- 29/07/2025
DRAWN BY - AD
SCALE - 1:500 @ A3

REVISION- B
SHEET- 1/1
APPROVED BY - AC
CLIENT - BRIARWOOD LANDSCAPE ARCHITECTURE



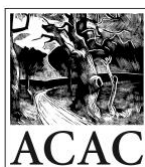
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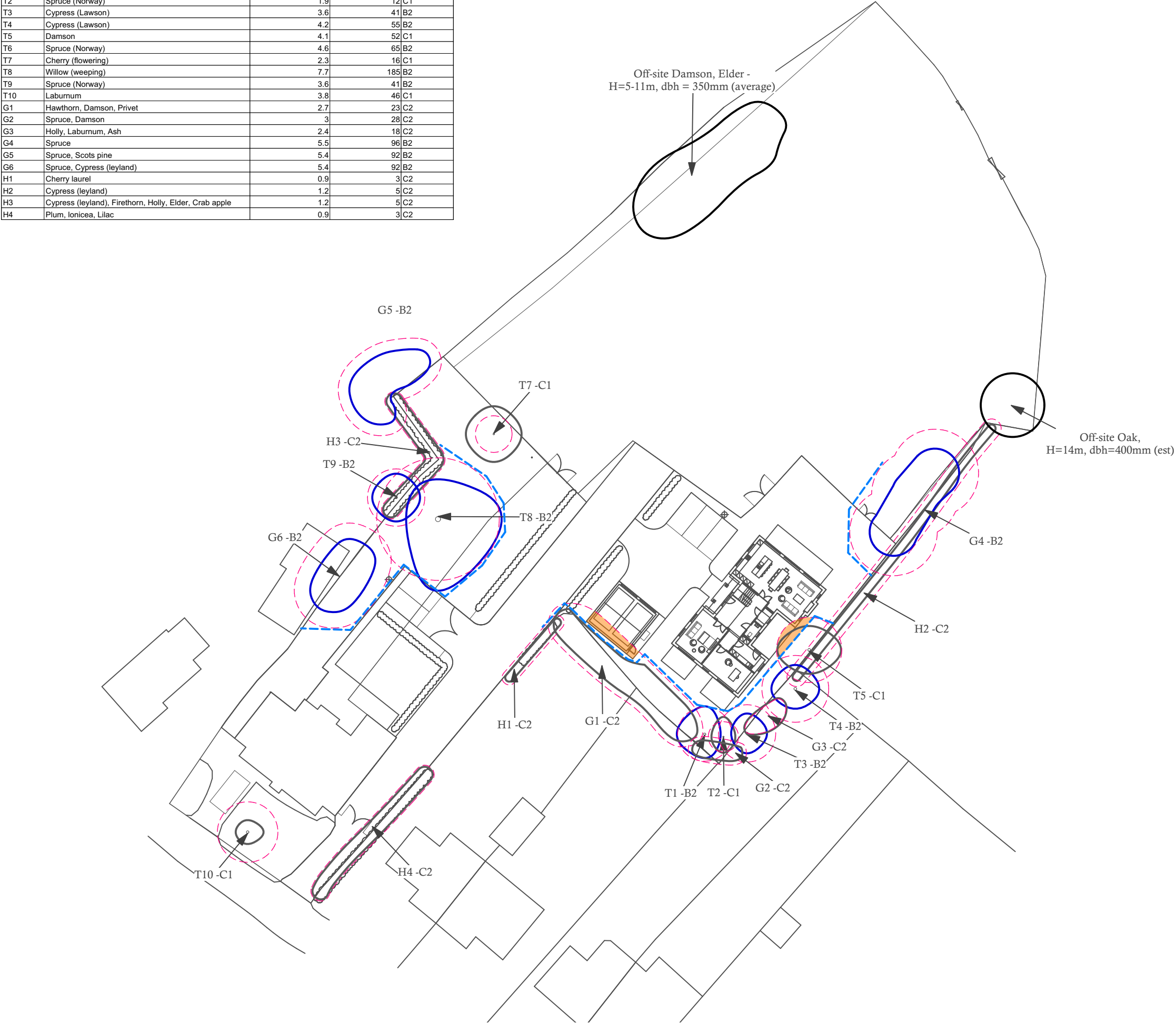
Coach House, Church Lane,
North Woodchester, GL5 5NF

APPENDIX 6

TREE PROTECTION PLAN



Tree No	Species	RPA Radius M	RPA Area M2	Category
T1	Spruce (Norway)	3.4	35	B2
T2	Spruce (Norway)	1.9	12	C1
T3	Cypress (Lawson)	3.6	41	B2
T4	Cypress (Lawson)	4.2	55	B2
T5	Damson	4.1	52	C1
T6	Spruce (Norway)	4.6	65	B2
T7	Cherry (flowering)	2.3	16	C1
T8	Willow (weeping)	7.7	185	B2
T9	Spruce (Norway)	3.6	41	B2
T10	Laburnum	3.8	46	C1
G1	Hawthorn, Damson, Privet	2.7	23	C2
G2	Spruce, Damson	3	28	C2
G3	Holly, Laburnum, Ash	2.4	18	C2
G4	Spruce	5.5	96	B2
G5	Spruce, Scots pine	5.4	92	B2
G6	Spruce, Cypress (leyland)	5.4	92	B2
H1	Cherry laurel	0.9	3	C2
H2	Cypress (leyland)	1.2	5	C2
H3	Cypress (leyland), Firethorn, Holly, Elder, Crab apple	1.2	5	C2
H4	Plum, Ionicea, Lilac	0.9	3	C2



KEY BS 5837 : 2012 Categories

Tree Category A - High Quality

A Category - Hedgerow, Group, Woodland

BS:5837:2012 Figure 3 Examples of above-ground stabilizing systems

a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray

For more details refer to BS:5837:2012 'Trees in relation to design, demolition and construction - Recommendations' p.21

LAGONDA STUD, POTTERS HEATH ROAD, WELWYN

TREE PROTECTION PLAN

DWG NO- ACU_077_03

DATE- 29/07/2025

DRAWN BY - AD

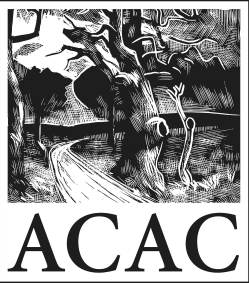
SCALE - 1:500 @ A3

REVISION- B

SHEET- 1/1

APPROVED BY - AC

CLIENT - BRIARWOOD LANDSCAPE ARCHITECTURE



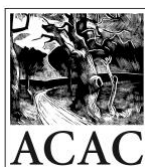
Andrew Cunningham -
Arboricultural Consultant (ACAC)
FdSc (Arb), Tech Cert (AA), M.Arbor.A

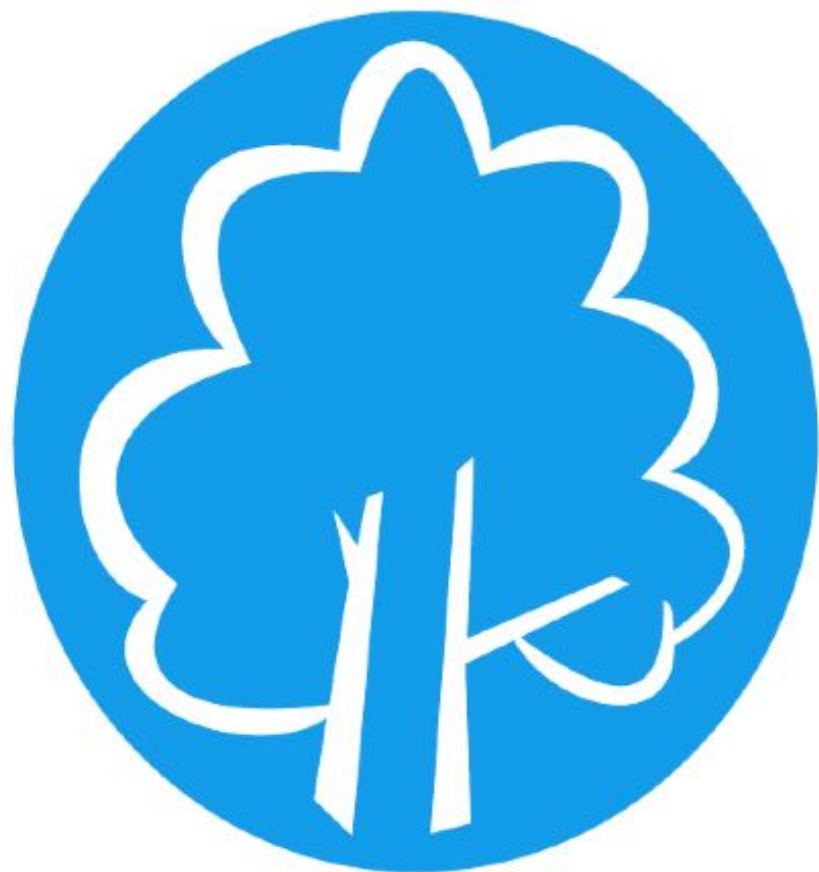
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APPENDIX 7

CONSTRUCTION EXCLUSION ZONE SIGN





**PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



**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**