



ROAVR | GROUP

Project: 23_5837_09_57
Site: The Angel, The Ash, Little Hadham, SG112DG
Client: Emily Nunes



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Document Title:	Tree Survey & Arboricultural Impact Assessment
Document Author:	Peter Haine FdSc ARb, MArborA
Project Title:	The Angel, The Ash, Little Hadham, SG112DG

Revision History.

Date:	Version number:	Summary of changes:
04/11/2023	10	First Draft
04/11/2023	10	First Issue

Distribution.

Approved by:	Signature	Date:	Version:
Matt Harmsworth	MWH	04/11/2023	10
Emily Nunes	EN	04/11/2023	10
			Reviewed before issue.

Re-Survey Date.

SurveyType:	Lifecycle:	Re-surveyDate:
BS5837:2012	Planning Only	n/a

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Summary:

This is a BS5837 compliant arboricultural assessment report providing detailed and sufficient information for the Local Planning Authority to be able to consider the effect of the proposed development on local character and amenity from a tree perspective.

Our brief has been to obtain details of the tree population on site with a view to assessing any arboricultural constraints.

This report was commissioned in relation to the proposed development at The Angel, The Ash, Little Hadham, SG112DG.

The report details all trees over 75mm at 1.5m above ground level that are relevant to the siting of the proposed development. The position of the trees on the site is illustrated on the tree constraints plan and information about the tree stock and its current condition is given within the arboricultural data tables.

It will assist the planning process by discussing the impact that the proposals will have on the existing tree stock.

An Arboricultural Impact Assessment is included at Section 4 which details the constraints placed on the proposed development from the rooting area of the trees below ground and above ground by virtue of their size and position.

Report Author.

ROAVR (ROAVR Group) was formed in 2010 and since then has carried out arboricultural consultancy nationwide with directly employed consultants. Our consultants are all members of the Arboricultural Association and the report author is listed in the document control sheet.

Validation Statement for the Local Planning Authority.

This report includes the following for LPA validation purposes:

- A **tree survey and tree constraints plan** showing the existing trees, their category rating and above and below ground constraints shown on an OS extract OR a topographical survey
- An **arboricultural im pact assessm ent** which describes how the development will affect local character from a tree perspective
- An **appendices** high lighting tree related information including the **arboricultural data tables**

Customer Action Points.

- Use the tree constraints plan to formulate a layout that avoids root protection areas
- Update your plans and reissue to ROAVR for comment and a full arboricultural im pact assessm ent and m ethod statement

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Tree Survey & Arboricultural Impact Assessment to BS 5837 2012 of trees at:

The Angel, The Ash, Little Hadham, SG112DG.

1 Scope

- 1.1 We have recently been instructed to undertake an appraisal of mature tree cover at The Angel, The Ash, Little Hadham, SG112DG.
- 1.2 The data was collected to the British Standard BS5837 'Trees in Relation to Design, Demolition and Construction - Recommendations' 2012.
- 1.3 The survey has been commissioned to offer guidance on the arboricultural constraints with a view to the future development of the site.
- 1.4 The trees were inspected on the 13/10/2023 following the guidance in the British Standard by ROAVR. The crowns and stems were inspected from the ground using the 'Visual Tree Assessment (VTA)' method; non invasive techniques were used at this stage. Although a sounding hammer was used to determine the presence of any decay.
- 1.5 The site was assessed and data was collected on all woody vegetation falling within the scope of the British Standard. Trees were grouped or designated woodlands as per the allowance in the British Standard when the area in question was uniform in terms of species, age or geography.

Photographic Plates.



Aerial im age plate showing site layout, T1(centre) and of her tree cover to the south. (ROAVR, June 2023)



Photographic plate showing existing timber barn and T1 to rear of barn. (ROAVR, October 2023)



*Photographic plate showing existing timber barn and T1 to the right of barn.
(ROAVR, October 2023)*



Photographic plate showing T2-T8 (ROAVR, October 2023)



Photographic plate showing T1 and surrounding hard surfaces (ROAVR, October 2023)



Photographic plate showing cracks in existing hard surfaces within RPA of T1 (ROAVR, October 2023)



Photographic plate showing proposed location of barn (ROAVR, October 2023)

2. Site Conditions & Site Surroundings

- 2.1 The site is situated in Little Hadham in the East Hertfordshire Council control area. The site is located in a village approximately three miles to the west of Bishops Stortford and has a rural village feel.
- 2.2 The site is home to a residential dwelling, a listed timber barn, shared drive and private parking area, with associated hard and soft landscape.
- 2.3 The wider locality is predominantly rural. The site is accessed via a shared driveway directly off Stortford Road.
- 2.4 A desktop assessment has highlighted that site is within a Conservation Area but that there are no TPO protected trees on or adjacent to the plot.
- 2.5 All desktop assessment data was cross checked and validated on the 04/11/2023 using the web portal provided by the local planning authority.

https://ehdc.cloud.cadcorp.com/ehdc_WebmapPublic/Map.aspx?mapName=Planning



Image plate showing the desktop analysis results of the surveyed plot. (East Herts D, 2023)

- 2.6 Works to protected trees require consent from the local planning authority. In the case of TPO's an application must be made. In the case of conservation areas a notification must be made. TPO applications take up to eight weeks, conservation area notifications take six weeks.
- 2.7 Certain exemptions apply; for example the removal of deadwood. In the case of dangerous trees 5-days written notice should be given to the local authority (in the cases of immediate danger the work should proceed, but the local authority contacted as soon as possible afterwards) with the works evidenced by photographs and video where possible. You should also check to ensure the works are exempt from the requirements of a felling licence.

<https://www.legislation.gov.uk/ukxi/2012/605/regulation/14/made>

- 2.8 It should be noted that planning consent overrides protected trees, where the works or removal are necessary for development to proceed and have been highlighted in the tree survey documents.
- 2.9 Bats. Under current legislation it is an offence to 'intentionally or recklessly disturb a bat' or 'damage, destroy or block access to the resting place of any bat'. For further details consultation must be made with the Statutory Nature Conservancy Organisation. Where relevant any current ecological surveys for the site will take precedence in this matter. Trees provide numerous 'potential roosting features' for a wide range of bat species. It is therefore crucial that any trees proposed for removal are checked by an appropriately competent person before any felling or ivy stripping works commence.

<https://www.bats.org.uk/advice/bats-and-the-law>

- 2.10 Birds. It is an offence to kill, injure or take any wild bird; or take, damage or destroy the nest of any wild bird while it is in use or being built. Therefore work likely to disturb nesting birds must be avoided from late March to August. All birds, their nest and eggs are protected by law.

<https://www.rspb.org.uk/birds-and-wildlife/advice/wildlife-and-the-law/wildlife-and-countryside-act/>

3. Drawings

- 3.1 Appended to this report is a tree constraints plan and a tree assessment plan.
- 3.2 The tree constraints plan has been produced using a supplied topographical survey. Tree positions and data have been applied using our survey handset as an onsite exercise with the constraints plan being produced as a PDF through Auto CAD.
- 3.3 An autoCAD .dwg file of the tree constraints is available on request for project stakeholders to utilise.
- 3.4 The *Tree Constraints Plan* shows the existing layout. For each tree the stem location is indicated and scaled according to its diameter, the canopy is indicated according to measurements taken along the four cardinal points of the compass. Root protection areas (RPAs) are indicated which are calculated according to the guidelines within BS 5837 (2012).
- 3.5 Where appropriate, the shapes of the RPAs have been amended to reflect actual site conditions or where trees have been heavily pruned. The 'original' RPAs are indicated as a dashed line whereas the amended RPAs are indicated as a solid line. Any variation to this approach will be highlighted on the appropriate plans.
- 3.6 The *Tree Assessment Plan / Arboricultural Impact Assessment* indicates the tree constraints with the proposals overlaid. Where applicable, this plan shows where works are proposed in Root Protection Areas and which trees are to be pruned or removed. This plan accompanies the Impact Assessment which is to be found in Section 4.
- 3.7 The *Tree Protection Plan (if applicable)* shows the protection measures that are to be installed during the construction phase.

4. Arboricultural Impact Assessment - Site Specific

Tree Quality Statement.

The tree cover at The Angel includes a significant large mature Horse Chestnut tree, with a high level of amenity value, as well as some other smaller mature trees with good amenity value.

4.1 Description of The Proposed Development

The drawings listed in the table below were used by ROAVR to produce the Arboricultural drawings referenced in this report. If your plans change (either before or after planning submission), then the tree drawings will require updating. This report cannot be submitted in support of a scheme that varies from the drawing reference number shown in box one below as the Impact Assessment (Section 4) will not be valid.

Drawing Name / No.	Date Issued To ROAVR	ROAVR Drawings Issue Date:
No drawing issued at this stage	n/a	20/10/2023

4.1.1 It is proposed to relocate the listed timber barn to a new location within the plot. An extension to the rear of the dwelling, and changes to the hard surfaces are also under consideration.

4.1.2. The table below summarises the potential impact on trees due to various activities.

Trees Potentially Affected:

Tree or Tree Group	Impacts
Tree T1	Barn is located within the Root Protection Area, care with disassembly and relocation will be required. Any alterations to hard surfaces may impact roots. A proposed extension may lie within the Root Protection Area.
Trees T2-T8	No direct impacts, can be retained and protected
Hedgerow H1	No direct impacts, can be retained and protected

4.2. Tree Removal.

4.2.1. No trees require removal to facilitate any of the proposals.

4.2.2. Details specific to each tree can also be found in the Tree Data Schedule.

4.3. Mitigation Planting.

4.3.1. No mitigation planting is necessary.

4.4. Impact on Tree Canopies.

4.4.1. No pruning works are required to facilitate the proposed development.

4.5. Impact on Tree Roots.

4.5.1. The existing barn is located within the Root Protection Area of T1. While the tree and barn appear to have coexisted harmoniously for some time, the careful removal of the barn will be an overall benefit to the tree. The rooting area of T1 is largely covered with buildings or impermeable surfaces, if the existing footprint of the barn is returned to grass or other permeable surface then air and water will be able to reach the soil, which will be beneficial to the tree's roots.

4.5.2. The new position for the barn should be set outside the Root Protection Areas of all surveyed trees; two potential locations are shown on the appended Tree Assessment Plan. Repair or renovation of the barn in its existing location is likely to cause damage to the roots of T1, even if specialist foundations are used, due to its proximity to the stem of the tree. Rebuilding the barn on a low wall set on conventional foundations would cause extensive damage to the tree's roots, and would be likely to result in the death of the tree.

4.5.3. Any alterations to the existing hard surfaces within the Root Protection Area of T1 will require some care and planning to avoid damage to underlying roots. Surface cracks in the tarmac indicate that root mass is present and close to the surface.

4.5.4. Any proposals for an extension will need to take into account the presence of tree roots within the Root Protection Area of T1. If development is proposed within the RPA of T1 then a specialist foundation design will be required. This will need to be submitted with the Arboricultural Method Statement as part of the planning submission. Mini piles or screw piles and a raised raft or ring beam may be a suitable solution.

4.6. New Surfaces.

4.6.1. No new hard surfaces are proposed within the Root Protection Areas of any trees.

4.7. Underground Services.

4.7.1. No underground services are to be installed through any Root Protection Areas.

4.8 Changes in Ground Levels.

4.8.1 No changes in ground levels are proposed.

4.9 Soil Compaction.

4.9.1 The majority of tree roots lie within the upper soil horizons. This is because the availability of oxygen decreases with depth and roots need to breathe to stay alive. In addition, nutrients are more readily available in the form of organic matter close to the soil surface.

4.9.2. Healthy soils contain about 25% air space between solid particles. Increased loading of the soils caused by construction activity causes air to be squeezed out as the soil becomes compacted preventing roots from breathing. Even an increase in pedestrian activity may cause some soil compaction.

4.9.3 It is important therefore that ground compaction and soil disturbance over Root Protection Areas should be avoided during the construction phase. This may be done by installing protective fencing and ground protection measures as recommended within a tree protection plan.

4.10 Demolition & Dismantling Activities.

4.10.1 The tree protection measures specified within a TPP should be installed prior to the commencement of all demolition or dismantling of the barn to prevent any detrimental impact on tree health. Where this is not practicable, demolition of structures within Construction Exclusion Zones shall be undertaken very early on in the demolition phase and the protective barriers installed immediately thereafter.

4.11. Hazardous Materials.

4.11.1 All hazardous materials (including cement and petrochemical products) will need to be controlled according to COSHH regulations in order to ensure there is no detrimental impact on tree health. Provision shall need to be made to ensure that cement and cement run-off are contained outside of all Root Protection Areas.

4.12. Cabins and Site Facilities.

4.12.1. Consideration should be given to the location of any site welfare facilities in terms of potential impact on trees. Where it is proposed to install cabins or site facilities in Root Protection Areas, the appointed arborist should be consulted and approval obtained from the local authority.

4.13. Boundary Treatments.

4.13.1. No changes are proposed to the existing boundary features that might impact on trees.

4.14. Impact of Retained Trees on the Development.

4.14.1. Adequate space has been allowed between all retained trees and the proposed development works. Consequently the proposal shall not result in increased pressure to remove or prune any of the retained trees.

4.15. Summary.

4.15.1. The existing timber barn requires repair or renovation, including the construction of adequate foundations. If these works are carried out in the current location of the barn they are likely to result in significant damage to the tree's roots, as the barn is in close proximity to T1.

A proposal to relocate the barn elsewhere within the plot would improve the rooting area of T1, and would not impact on any other trees, provided the works are carefully planned and an Arboricultural Method Statement is produced and adhered to.

The appended Tree Assessment Plan shows two locations for the barn which would not impact on trees.

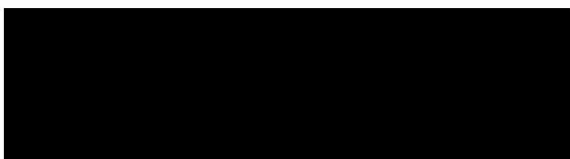
When plans are ready for the barn relocation, ROAVR can produce a full Impact Assessment and Method Statement suitable for supporting a planning application.

5. Limitations

- 5.1 ROAVR has prepared this Report for the sole use of the above named Client/Agent in accordance with our terms of business, under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by us.
- 5.2 This Report may not be relied upon by any other party without the prior and express written agreement of ROAVR. The assessments made assume that the land use will continue for their current purpose without significant change. ROAVR has not independently verified information obtained from third parties.
- 5.3 This report, video walkthrough, data tables and raw data remain the copyright of ROAVR until such time as any monies owed are settled in full and the report may be withdrawn at any time.
- 5.4 This report, site visit, plans and conclusions are proportional to the proposals and in some cases a simple plan based impact assessment may be all that is required.
- 5.5 Important - to ensure fair allocation of resources, we allow you ten working days to review the report and issue any feedback, beyond that changes are chargeable.

Should you require any further information, please do not hesitate to contact us at any time.

Mr. Peter Haine FDSc Arb
Consultant Arborist



Prepared by: Peter Haine
Checked by: Matt Harmsworth

Appendix 1– Site Location



Site location plan. (Google, 2023).

Appendix 2 – Arboricultural Data Tables

Tree Number	Species	Age Class	DBH	Height (crown height)	N	E	S	W	Condition	Life Expectancy	Physical Description	Comments	Managment Recommendations	RPA offset from stem.	Category Rating
T1	<i>Aesculus hippocastanum</i> (Horse Chestnut)	OM	1410	18(4)	6.5	6.5	6.5	6.5	Good	40+	Tree located within hard surface area. Epicormics on stem. Branches encroaching upon building.	None	None	15	A1
T2	<i>Crataegus monogyna</i> (Hawthorn)	SM	135	4(1.5)	2	2	2	2	Fair	10+	Mechanical Damage.	None	None	1.62	C1
T3	<i>Prunus avium</i> (Wild Cherry)	M	350,350	7(2)	4	4	4	4	Good	20+	Garden ornamental	Off site	None	5.94	B1
T4	<i>Malus</i> (Apple)	SM	130,110	3.5(1)	1.5	1.5	1.5	1.5	Fair	10+	Garden fruit tree	Off site	None	2.04	C1
T5	<i>Taxus baccata</i> (Yew)	M	170,110	5(1)	3	3	2	2	Fair	10+	Stem divides at ground level.	None	None	2.42	C1
T6	<i>Sambucus nigra</i> (Elder)	EM	180	5(2)	2	2	1	1	Poor	<10	Poor shape & form. Leaning East. Mechanical Damage. Dieback in crown. Low bud/leaf density. Broken branches in crown.	Low quality tree	None	2.16	U
T7	<i>Fraxinus excelsior</i> (Ash)	M	620,360	15(3)	6	6	6	6	Good	20+	Broken branches in crown.	Included union.	None	8.6	B1
T8	<i>Prunus domestica</i> (Damson)	M	330,350,450	7(1)	2	3.5	3.5	3.5	Fair	10+	Leaning South. Stem divides at ground level. Mechanical Damage.	None	None	7.38	C1
H1	<i>Crataegus monogyna</i> (Hawthorn)	Y	50	1.5(0.5)	1	1	1	1	Fair	10+	Boundary hedge	None	None	0.6	C2

Arboricultural Data Tables Terms.

Tree ID	Reference no. T1, T2 etc. for trees; H for hedgerows; G for Groups and W for woodlands.
Tag Number	If the tree has been tagged with an 'arbo' tag then the physical tag number is listed in this column.
TPO Number	If the tree is subject to a TPO and it is known to us this will be recorded here.
In Conservation Area	Y/N - If the tree is located within a Conservation Area we may confirm that here.
Tree Type	Beech, Oak etc.
Common Name	Common Beech, Evergreen Oak etc.
Latin Name	Fagus sylvatica; Quercus robur - Latin names.
Maturity	The estimated age class of the tree (relative to species) o Y - Young o SM - Semi-mature o EM - Early-mature o M - Mature o OM - Over-mature or V - Veteran
Potential for Bat Habitat	Y/N - if the tree has cracks, cavities or suitable bat habitat it may require further ecological surveys and form a constraint on development.
Measurements Estimated (Y/N)	Y/N - if the tree is off site, covered with ivy, or some other restriction the British Standard allows for measurements to be estimated.
Height	Height of the tree in metres.
Height & Direction of 1st Significant Branch	Recorded to consider access.
Number of Stems	Number of clear stems.
Diameter at Breast Height	Diameter of stem (mm) at breast height (1.5 metres above ground).
Crown Spread	The maximum spread of the tree's canopy measured from the stem in four directions (North, East, South, West).
Canopy Height	The height between ground level and the lowest part of the canopy when considering access.
Crown / stem / Basal Condition	Good, Fair, Poor condition comments.
Category	Tree categorisation based on section 4.5 of BS 5837 (2012) Trees in relation to design, demolition and construction –Recommendations. Four categories are used (A, B, C, U) with categories A, B & C being assigned one of three separate sub categories (1, 2 or 3): A –Trees of high quality with an estimated remaining life expectancy of at least 40 years. B –Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. 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
Life Expectancy	Estimated safe, usable life expectancy.

Sub-Category	<p>Subcategories:</p> <p>1: Mainly arboricultural & aesthetic qualities 2: Mainly landscape qualities 3: Mainly cultural values, including conservation U –Trees 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</p>
Physical Condition	Good, Fair, Poor condition considering the tree structure, form and vitality.
Management Recommendations	Recommendations (regardless of the development proposals if available) for removal, retention and/or remedial arboricultural works.
Comments	A brief description of the tree which refers to tree form, condition, health and significant defects. Comments regarding environmental conditions affecting the tree (e.g. ground conditions) will also be included where relevant.

Arboricultural data tables are essentially an asset register of the trees and tree cover on and adjacent to a development site. The information included within the tables is used to produce a tree constraints plan (TCP) which shows in 2D the constraints and opportunities on a particular site.

Appendix 3 – Arboricultural Plans

Key

Trees
Showing Canopy extents, category colour and tag number (with category).

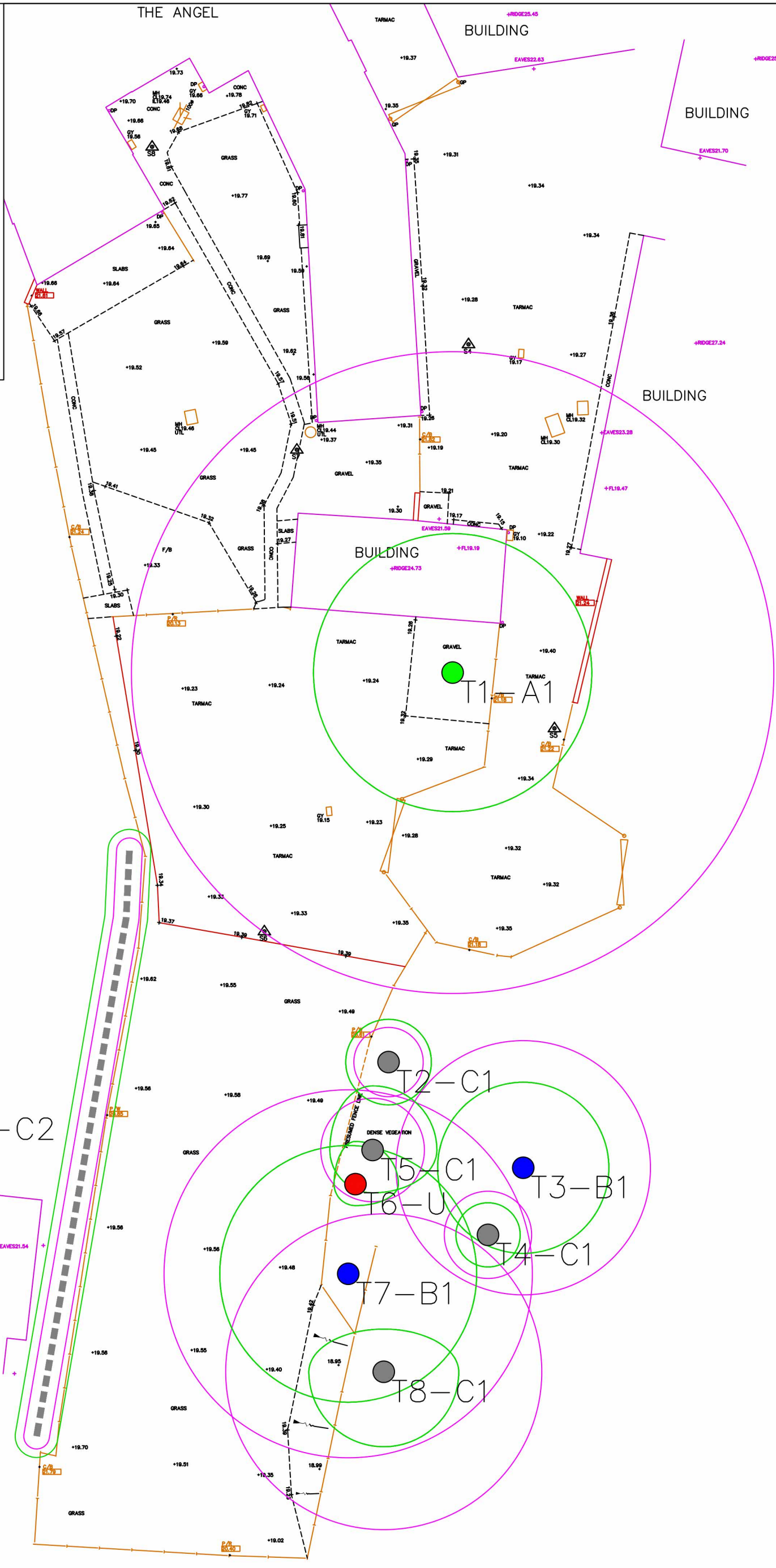
Category A
Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Category B
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

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.

Category U
Trees in such a condition that they can not realistically be retained as living trees in the context of the current land use for longer than 10 years.

BS 5837:2012 Root Protection Area



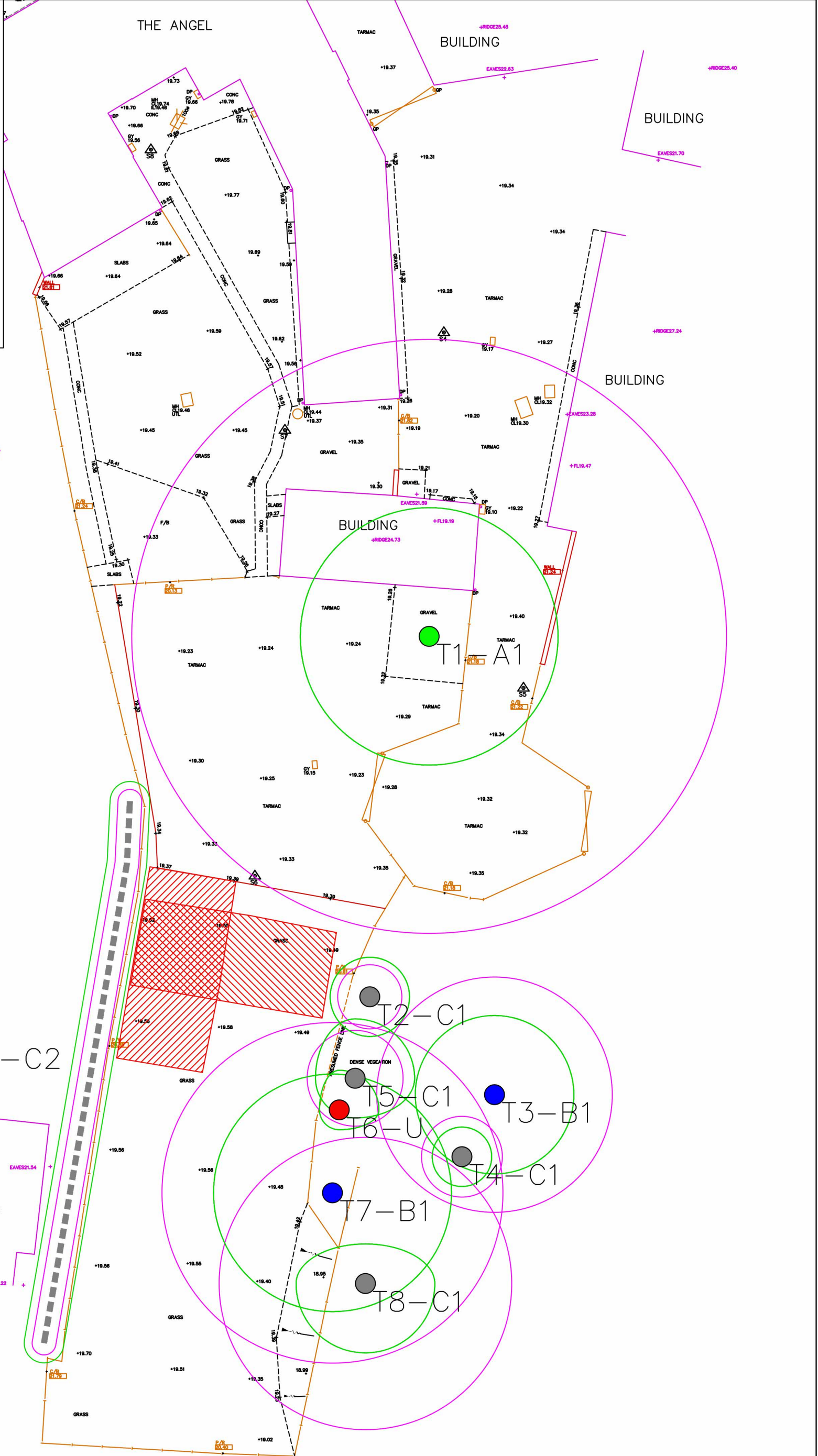
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Drawing Title	Tree Constraints Plan	Scale/Sheet	1:200 @ A3	Date	20/10/2023
Client	Emily Nunes	Drawing No	23_5837_09_57	Rev	1
Site/Project	The Angel, The Ash, Little Hadham, SG11 2DG	Drawn By	PH	Checked By	MH
<p>General Notes Do not scale off drawing - refer to the tree data schedule for accurate crown spread measurements. Depictions of tree canopies are based on measurements taken to four cardinal compass points. No liability of any kind is accepted for any omissions or inaccuracies in respect of this plan. The original of this drawing was produced in colour; a monochrome copy should not be relied upon. All rights reserved.</p>					

1:200
0 8m

Key

- Trees**
Showing Canopy extents, category colour and tag number (with category).
- Category A**
Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B**
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
- 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.
- Category U**
Trees in such a condition that they can not realistically be retained as living trees in the context of the current land use for longer than 10 years.
- BS 5837:2012 Root Protection Area**



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Drawing Title Tree Assessment Plan	Scale/Sheet 1:200 @ A3	Date 20/10/2023
Client Emily Nunes	Drawing No 23_5837_09_57	Rev 1
Site/Project The Angel, The Ash, Little Hadham, SG11 2DG	Drawn By/Checked By PH / MH	
General Notes Do not scale off drawing - refer to the tree data schedule for accurate crown spread measurements. Depictions of tree canopies are based on measurements taken to four cardinal compass points. No liability of any kind is accepted for any omissions or inaccuracies in respect of this plan. The original of this drawing was produced in colour; a monochrome copy should not be relied upon. All rights reserved.		

North arrow pointing up. Scale bar showing 0 to 8m. Text: 1:200