



Outline Trees, Arboricultural Consultancy
Report Reference: JH0423FROGHALLFM
April 2023



**British Standards 5837:2012 Tree Survey,
Tree Survey Plan & Tree Constraints Plan**

at

Frog Hall Farm, Atherstone

QUALITY ASSURANCE			
Client:	Mrs Helen Fisher		
Project:	Frog Hall Farm, Crow Lane, Sheepy Magna, Atherstone, Leicestershire, CV9 3QX		
Project Ref:	JH0423FROGHALLFM		
Report Content:	British Standards 5837:2012 Tree Survey Schedule, Tree Survey Plan & Tree Constraints Plan		
Written, Checked & Issued by:	Jason Humphreys FdSc (Arb) MArborA		30 th April 2023

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1 Executive Summary

1.1 The Project, Purpose and Scope of this Report

The primary purpose of this report is to provide site-specific arboricultural detail, which will assist in subsequent layout design, by identifying those trees most suitable for retention and the constraints that they might place on subsequent development.

An existing topographical survey provided the basis for the actual Tree Survey and the subsequent production of the following documents:

- BS 5837:2012 Tree Survey Schedule (TSS) - Appendix A
- Current Tree Survey Plan (TSP) - Appendix B
- Preliminary Tree Constraints Plan (TCP) - Appendix C

1.2 Findings and Recommendations

The tree survey recorded the details of 15 individual trees and 2 tree groups. Full results of the tree survey are provided in the Tree Survey Schedule (Appendix A) and summarised in Section 4.2.

The recommended removal of 2 Category U and several Category C trees and groups are shown clearly on the Tree Constraints Plan at Appendix C, which have been recommended due to either the longevity or the physiological or structural condition of the trees, or to maximise the development space available.

The planting of new trees will mitigate the loss of canopy cover and any perceived amenity value associated with the tree removals (see Sections 5.8, 5.9 & 5.14).

The projected RPAs (see Section 5.5) of the surveyed trees shown in the Tree Survey Plan (Appendix B), were drawn as circles, with their diameters calculated as per section 4.6 of BS5837:2012.

Construction and development within the projected RPAs should be avoided (see Section 5.5) but if absolutely necessary, then specialised engineering solutions may be appropriate e.g., no-dig surfacing for paths and driveways within the projected RPAs and the use of non-traditional foundations, which would otherwise likely require root severance.

Tree Protection Measures will be necessary, in order to minimise the potential for any foreseeable detrimental impact occurring to the retained trees.

None of the trees appear to be afforded statutory protection from either a TPO or being located in a Conservation Area (see Section 4.1). Subsequently, pre-application tree works could, if necessary be carried out prior to the submission of a planning application, without any further recourse to the LPA.

A Site Arboriculturist (SA) should be appointed, prior to the commencement of any works on site and retained for the duration of the project and should be available to oversee the supervision of any key aspects, and activities.

2 Limitations, Regulations & Location

2.1 Tree Survey & Report Limitations

Recommendations included within this report are the professional opinion of an experienced Arboriculturist¹ and are the view of the Author (see Section 3.2). This is based on a review of the information provided by The Client, the brief and a survey of the site. This report pertains to these results only. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information.

Whilst not definitive, the findings and any associated recommendations detailed within this report are considered to be reasonable, practicable and in the interests of promoting sensible arboricultural management.

No liability can be accepted by the Author in respect of the trees, unless the recommendations of this report are carried out under his supervision and within his timescale. Acceptance of this report represents an agreement to adopt the recommendations and guiding principles detailed within.

The findings and recommendations contained within this report are, assuming its recommendations are observed, valid for a period of twelve months from the date of survey. Trees are living organisms and their condition can change significantly over a relatively short period of time – good practice dictates they are inspected on a regular basis for reasons of safety.

Tree rooting characteristics and soils are both enormously variable as are their interactions. This makes attempts to quantify subsidence risk assessment impossible. No effort has been made to assess subsidence risk potential nor should any be construed.

The report relates only to the trees referred to in this report, which are recorded in the attached tree survey schedule (Appendix A) and shown on the annotated plans at Appendices B & C.

Where trees were extensively ivy clad, this was recorded in the tree survey schedule. It is not possible to ascertain the presence of cavities or other defects beneath the ivy and, therefore, ivy should be removed and a re-inspection carried out.

2.2 Regulatory and Policy Framework

Tree Preservation Orders (TPOs) and Conservation Areas place various statutory restrictions on the felling, pruning or damaging of trees, subject to various exemptions (Department for Communities and Local Government, 2014). See section 4.1 for site-specific information.

Tree felling on non-residential land is also controlled by the need to obtain a Felling Licence from the Forestry Commission before felling more than 5m³ of timber in any calendar quarter, subject to various exemptions and variations (Forestry Commission, 2007).

There is an overriding exemption for the above statutory controls for tree felling and pruning for works where it has been deemed necessary to implement development that has already received full planning permission.

¹ As per the Terms and Definitions detailed in British Standards 5837:2012-Trees in relation to design, demolition and construction – Recommendations.

2.3 Site Location

The site is Frog Hall Farm, Crow Lane, Sheepy Magna, Atherstone, Leicestershire, CV9 3QX. Approximate OS Grid reference SK 306 010.

<https://what3words.com////reduce.hires.costs>

The location of the site is shown in Figure 2.1 below, with the approximate extent of the site, indicated by a red line. The details of 2 trees (T16 & T17), which are located outside of the extents of the topographical survey, in the area circled in blue, were also recorded.



Figure 2.1: Map view of the Site © Crown Copyright and Database rights 2023 Ordnance Survey

3 Survey Methodology

3.1 Tree Survey Methods

The site was visited on Thursday 11th August 2022, to carry out an assessment of the relevant trees in accordance with BS 5837:2012 – Trees in relation to Design, Demolition and Construction - Recommendations.

Each of the surveyed trees and/or groups has been plotted and recorded as an individual tree or a tree group, in accordance with the criteria detailed in section 4.4.2.5 of BS 5837:2012.

Any survey work undertaken will have been subject to limitations, including seasonal and phenological aspects.

Trees were assessed from ground level using the Visual Tree Assessment (VTA) method (Mattheck 2007). No climbed inspection, removal of ivy or detailed investigation of decay, beyond the use of any methodology described in the Tree Survey Schedule, was made.

The weather on the day of the survey was clear, sunny and hot adequate for conducting the survey during which, the following information was collected for each tree/group:

- Sequential reference number;
- Species;
- Height;
- Stem diameter @ 1.5m height;
- Branch/Canopy spread (North, East, South & West);
- Lowest recorded crown height;
- Existing height above ground level of the first significant branch (FSB) and its direction of growth (e.g. 3 NW);
- Life stage (See Key at Appendix F):
 - **Y** – Young,
 - **SM** – Semi Mature,
 - **EM** – Early Mature,
 - **M** – Mature,
 - **OM** – Over Mature;
- General observations, particularly of structural and physiological condition (See Key at Appendix F);
- Estimated remaining contribution;
- Retention category 'U' or 'A' to 'C' grading with the subcategory 1, 2 or 3 reflecting arboricultural, landscape or cultural values, respectively (See Table at Appendix H).

3.2 Survey Personnel

The Author, Jason Humphreys FdSc (Arb) MArborA is a former Local Planning Authority Arboricultural Officer and experienced Arboriculturalist with over 20 years of experience in the Horticultural and Arboricultural Industry.

He is a professional member of the Arboricultural Association (MArborA), and holds a Foundation Degree in Science (Arboriculture), the Technician's Certificate in Arboriculture and the LANTRA Professional Tree Inspection certificate.

4 Results

4.1 Statutory Tree Protection

No formal attempt was made to establish whether or not any of the surveyed trees were afforded any degree of Statutory Tree Protection i.e., whether or not they were protected by a Tree Preservation Order (TPO) or located within a Conservation Area.

It appears however, from a check using Hinckley & Bosworth Borough Council's online TPO Map <https://www.hinckley-bosworth.gov.uk/tpomap> (15/08/22 - see screenshot below), that none of the surveyed trees are protected by a TPO, or that the site is located in a Conservation Area.

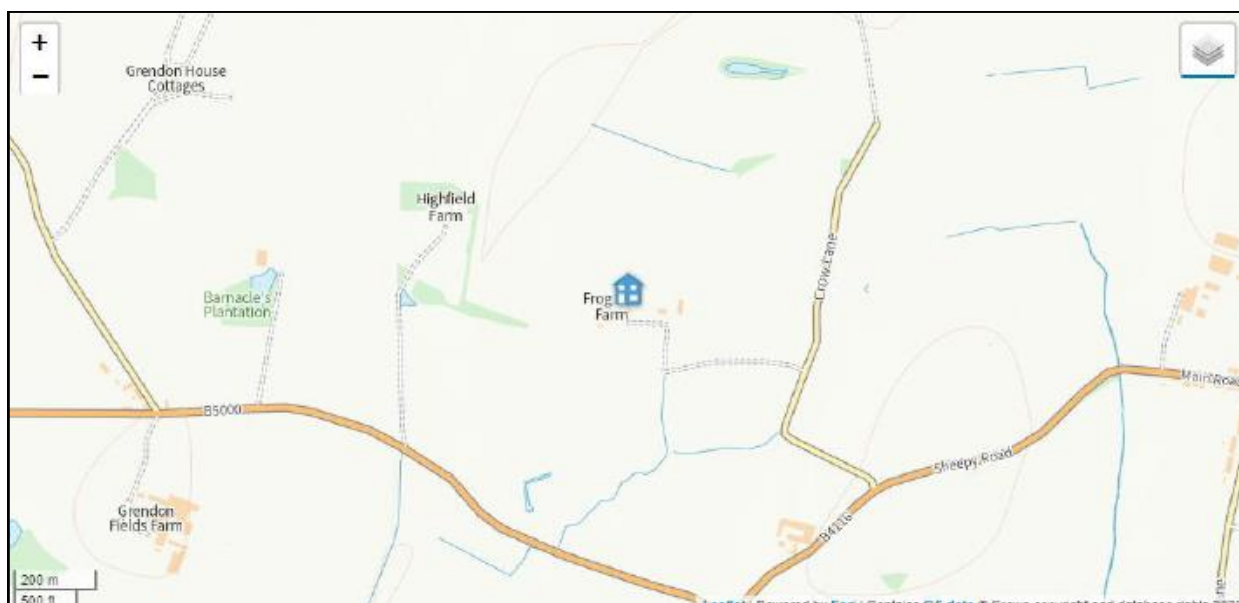


Figure 4.1: Screenshot from Hinckley & Bosworth Borough Council's online TPO Map © Crown Copyright and Database rights 2023 Ordnance Survey

In this instance, and upon consideration of the above points, it is the Author's understanding that pre-application tree works could, if necessary be carried out prior to the submission of a planning application, without any further recourse to the LPA.

Following planning submission and/or a formal enquiry regarding the protected status of the surveyed trees, the LPA may subsequently consider that there is expediency for making some of the trees the subject of a TPO.

4.2 Tree Survey

The tree survey recorded the details of 15 individual trees and 2 tree groups. Full results of the tree survey are provided in the Tree Survey Schedule (Appendix A). The survey results include two trees identified as T17 & T18, which are located either side of the access road, as indicated in Figure 2.1.

The overall condition of the trees, can at best, be described as fair (see Life Stage & Condition Key at Appendix F) and any tree works detailed in the Tree Survey Schedule, at Appendix A, have been identified **solely** in the context of the site's current use and should be considered irrespective of any development proposals and should not be inferred as being necessary to implement any proposed development.

No trees, of high quality and value (Category 'A'), were recorded during the survey. Trees assigned to this category would include attractive trees with high visibility and no significant defects, which are able to make a substantial contribution for a minimum of 40 years.

Three trees of moderate quality and value category (Category 'B'), were identified during the survey. Trees assigned to this category include healthy attractive trees with remediable defects that are in a condition as to be able to make a significant contribution for a minimum of 20 years.

Ten individual trees and 2 tree groups of low quality and value category (Category 'C'), were identified during the survey. Trees in this category include unremarkable trees of limited merit that are easily replaced, small-growing, young species which have a relatively low potential amenity value, and low landscape benefits. Trees assigned to this category typically also include self-seeded trees of limited life span, small and young trees and trees of poor form and limited amenity value.

Two trees were identified as being unsuitable for retention (Category 'U'). Trees assigned to this category are 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 and/or are considered to be unsuitable for retention in the proximity of new development or areas of public open space.

5 Arboricultural Impact Assessment (Generic)

5.1 Tree Survey Schedule & Management Recommendations

Preliminary management recommendations shown in bold text, in the Tree Schedule (Appendix A) have been identified **solely** in the context of the current layout and existing site use and should not be interpreted as being necessary to implement any proposed development.

Tree works, which have been recommended as being necessary, or appropriate to directly or indirectly implement and/or facilitate development, whilst attempting to provide a desirable layout juxtaposition, are shown clearly on Appendix C.

5.2 Trees Suitable for Retention

Where possible, it is generally considered desirable for Category 'A' and Category 'B' trees to be retained and incorporated into new developments and layouts. Category 'U' trees are not considered to be appropriate for retention.

In assessing the arboricultural impact on the retained trees of the proposed development and which trees might be suitable for retention in the context of the proposed layout, the following factors should all be considered in the layout design:

- Shading
- Future Pressure for Tree Removal and Pruning
- Seasonal Nuisance
- Infrastructure
- Direct Damage
- Root Protection Areas
- Future Management
- Anticipated Demolition, Excavation, Ground Works & Construction Activities

5.3 Shading

Shading can be represented using drawn segments, with radii equivalent of the current tree height, taken from the centres of those surveyed tree stems that are considered to be relevant, drawn from due north-west to due-east. These segments represent a basic illustration of the shade pattern through the main part of the day and are based on advisory comments detailed in section 5.22, Note 1 of BS 5837:2012.

The Tree Constraints Plan at Appendix C, shows segments, which are intended to represent the shaded areas as described above.

5.4 Direct Damage

Any proposed layout should consider the likelihood of direct damage occurring from incremental root, stem or branch growth. Layout design should ensure that this aspect is considered to ensure that provisions are made for a retained tree's ultimate growth, so as to reduce the need for frequent remedial pruning or other foreseeable maintenance.

Additional tree works, not shown on Appendix C, may prove necessary to address this specific issue.

5.5 Root Protection Areas (RPAs)

The projected RPAs of the surveyed trees shown in the Tree Survey Plan (Appendix B), were drawn as circles, with their diameters calculated as per section 4.6 of BS5837:2012.

For the most part and upon consideration of their immediate growing environments, the projected RPAs of the surveyed trees, are considered to be a relatively practical reflection of anticipated root morphology and distribution and are shown on the Tree Survey Plan at Appendix B.

Layout design should ensure the RPAs have been considered at their full extents, which are shown on the Tree Survey Plan at Appendix B and by default have a preference to ensure that any new structures, buildings and infrastructure are located outside of their projected extents.

Upon confirmation of a proposed layout, further consideration should be given to the practical aspects of the construction and its associated activities, as the adoption of Tree Protection Measures (TPM) may prove necessary, through the use of protective fencing and/or temporary ground protection.

5.6 Demolition, Excavation, Ground Works & Construction Activities

The potential for foreseeable, detrimental damage occurring to the surveyed trees, will be minimised during development, provided that the recommended tree protection measures are adopted prior to the commencement of any works on site and then retained, throughout the duration of the project.

All plant and vehicles engaged in any demolition, ground works, excavation or construction works should either operate outside the projected RPAs of the retained trees, or if necessary, use temporary ground protection.

Where the use of temporary ground protection proves necessary to facilitate access within the projected RPAs of the surveyed trees, an appropriate specification (dependent on the anticipated nature of the necessary incursions), will be adopted.

5.7 Hard Surfacing Within the Root Protection Area

The use of a 3-dimensional, cellular confinement type of 'no-dig' surfacing may prove to be suitable, where there is a requirement for paths, driveways or parking spaces, within the projected RPAs of the retained trees.

Arboricultural Practice Note (APN) No. 12 and Arboricultural Guidance Note (AGN) No. 12 describe in detail the requirements of a no-dig type installation and also identify 3 principles of no-dig surfacing, which are:

- No Digging
- No Soil Level Changes
- No Compaction

No-dig surfacing is not always a practical solution for all projects as it presents practical and topographical constraints, that may preclude its use.

5.8 Future Pressure for Tree Pruning/Removal

Whilst the presence of retained and newly planted trees can often enhance the immediate environment upon completion, any proposed layout should provide sufficient space that will allow for future tree growth (existing and new) and to provide a subsequently reduced need for future, frequent remedial pruning.

5.9 Seasonal Nuisance

Foliage, fruit and cone fall can be considered by some to be a nuisance and requests to Local Planning Authorities to carry out pruning works to negate these issues are often refused, due in part to their brief, seasonal nature of the problem.

The seasonal leaf, seed and/or fruit fall from the trees should be considered to ensure that this aspect will have no significant impact on the proposals, or on the anticipated levels of use and/or enjoyment that the owners/occupiers of any new dwellings and their private amenity areas, might reasonably come to expect.

5.10 Infrastructure

The location and routing of new services and drainage runs should ensure that they are located outside of the projected RPAs of any retained trees.

Layout design should consider any subsequent impact on lighting, signage, CCTV sightlines or visibility splays, from the retained (and new) trees.

5.11 Miscellaneous

No aspects to consider at this stage.

5.12 Trees to be removed

Recommended tree works have been shown clearly in Appendix C.

5.13 Trees to be pruned

Tree pruning works, including facilitation pruning works for construction/demolition access may prove necessary and this aspect should be considered during the layout design stage.

Any unforeseen facilitation pruning works should be identified at the pre-contractors site meeting.

5.14 Landscaping

Landscaping plans should ensure any new tree and shrub species are appropriate for their location by having regard to their ultimate size, shape and form and their management requirements as well as those aspects detailed in sections 5.2, 5.3, 5.4, 5.8 & 5.9.

Table A.1 from BS 5837:2012 provides detail on recommend planting distances of new and young trees from new structure and infrastructure to minimise the likelihood of foreseeable direct damage caused by future tree growth.

Table 5.1: Table A.1 from BS 5837:2012 © BSi

Table A.1 Minimum distance between young trees or new planting and structure to avoid direct damage to a structure from future tree growth

Type of structure	Minimum distance between young trees or new planting and structure, in metres (m)		
	Stem dia. <300 mm ^{A)}	Stem dia. 300 mm to 600 mm ^{A)}	Stem dia. >600 mm ^{A)}
Buildings and heavily loaded structures	—	0.5	1.2
Lightly loaded structures such as garages, porches etc.	—	0.7	1.5
Services			
<1 m deep	0.5	1.5	3.0
>1 m deep	—	1.0	2.0
Masonry boundary walls	—	1.0	2.0
In-situ concrete paths and drives	0.5	1.0	2.5
Paths and drives with flexible surfaces or paving slabs	0.7	1.5	3.0

^{A)} Diameter of stem at 1.5 m above ground level at maturity

Where necessary, the subsequent reinstatement of any areas within the projected RPAs of the retained trees should be carried out by hand.

5.15 Tree loss evaluation

None of the trees recommended for removal are understood to be afforded statutory protection from a TPO, or indeed, considered to be worthy of statutory protection from a TPO and it is the Author's opinion that their loss will have only a discernible impact on any perceived amenity value afforded from outside the site, that they might contribute to.

It is the Author's opinion, that the proposed tree removals will have no significant impact on the overall character of the area, or on the immediate street-scene.

New tree planting can provide mitigation for the loss of canopy cover, as well as providing an excellent opportunity to increase the current range of species, across the site.

5.16 Issues to be addressed by an Arboricultural Method Statement

An Arboricultural Method Statement (AMS) details a recommended sequence and construction methodology for the implementation of those aspects that have the potential to result in loss or damage to retained trees. By carefully following and adopting the detailed recommendations and guidance, foreseeable detriment to the retained trees can be minimised.

5.17 Tree Protection Plan

The TPP (Appendix C), when read in conjunction with an AMS, should inform on and describe the recommended Tree Protection Measures recommended for the future project, in the context of the proposed layout.

Adopting the recommendations detailed in the AMS, will help to minimise the potential for any detrimental impact that the construction activities might have on the retained trees.

Appendix A Tree Survey Schedule



Tree Ref. No.	Species	Height (m)	Stem Ø (mm)	Protective Linear Radius (m)	RPA m ²	Branch Spread (m)				Height (m)		Life Stage	Condition, General Observations and Preliminary Management Recommendations (In bold).	Estimated Remaining Contribution	Category
						N	E	S	W	Significant Branch	Canopy				
T1	<i>Malus spp.</i> (Apple)	12	420	5.0	80	4	4	4.5	4	2.5NE	1	M	Fair condition. Stem divides below 1.5m. Pruning of lower branches evident. Stem diameter recorded immediately below stem bifurcation at 0.5m height. Subdominant stem extends south. No works necessary.	10+	C2
T2	<i>Pyrus communis</i> (Common Pear)	12	340	4.1	52	4.5	3.5	3.5	3.5	2S	1.2	M	Fair condition. Pruning of lower branches evident. Deadwood in lower branches. Some broken stubs present. Remove dead wood >30mm diameter. Remove broken/damaged branches.	10+	C2
T3	<i>Abies spp.</i> (Fir)	5.5	120	1.4	7	1.5	1	1	1	0.5	0	EM	Fair condition. Peripheral tree. Growing at edge of shrub bed. No works necessary.	40+	C3
T4	<i>Fraxinus excelsior</i> (Ash)	16	485	5.8	106	6	6.5	5	5.5	1.5SE	0.5	M	Fair condition. Stem divides above 1.5m. Included bark present in fork. Deadwood in lower branches. Remove dead wood >30mm diameter.	10+	C2
T5	Common Pear	6	190	3.2	33	3	3	2.5	2	2W	1	M	Fair condition. Multiple stems at ground level. Pruning of lower branches evident. Some minor deadwood present. No works necessary.	10+	C3
T6	<i>Aesculus hippocastanum</i> (Horse Chestnut)	13	495	5.9	111	5.5	3	5	6	2S	0	M	Fair condition. Stem divides above 1.5m. Included bark present in fork. Branches encroaching upon building. Suppressed crown development. Foliage affected by Leaf miner (<i>Cameraria ohridella</i>). Some resinous exudations present around stem division; possible <i>Phytophthora</i> . Prune clear of building.	10+	C2
T7	<i>Populus nigra</i> (Black poplar)	19	970	11.6	426	9	5	11.5	11.5	5SW	2	M	Fair condition. Dense Ivy cover obscuring assessment of main stem and branch unions. Branches encroaching upon building. Suppressed crown development. Pruning of lower branches evident. Sprawling shape and form. Sever Ivy to facilitate its removal and allow future inspection. Remove dead wood >30mm diameter. Prune clear of building.	20+	B2
T8	Black poplar	14	720	8.6	235	8	6	7	3	3S	2	M	Fair condition. Broken branches in crown. Suppressed crown development. Remove broken/damaged branches.	20+	C2
T9	Black poplar	14	750	9.0	255	8.5	10	10	2	3S	2	M	Fair condition. Suppressed crown development. Access limited by dense vegetation; diameter estimated. Remove broken/damaged branches.	20+	C2
G10	Ash	14	220	2.6	22	4	4	4	4	-	2	M	Fair condition. Clump of ash forming part of overall group. No works necessary.	10+	C2



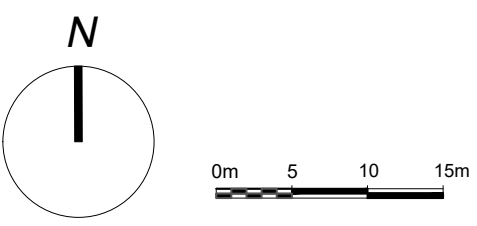
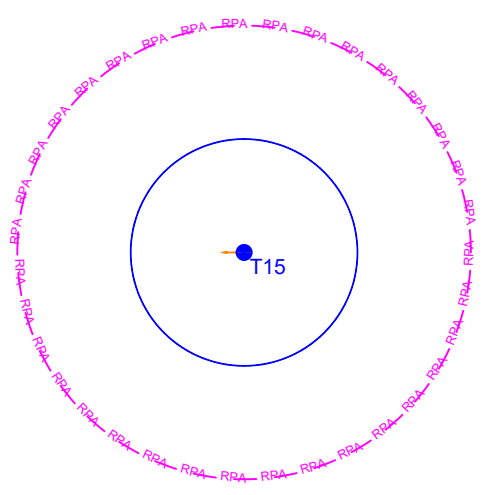
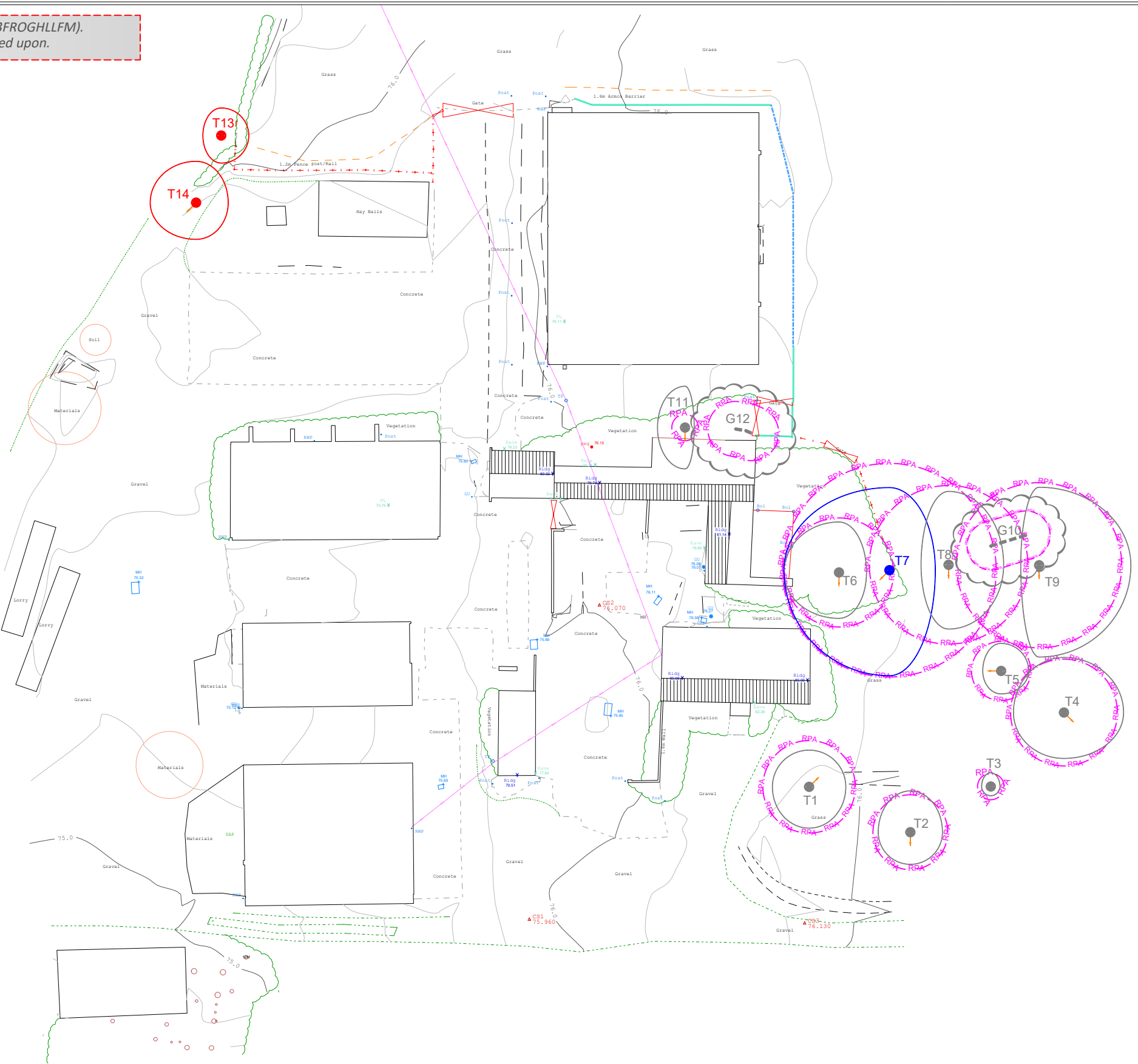
Tree Ref. No.	Species	Height (m)	Stem Ø (mm)	Protective Linear Radius (m)	RPA m ²	Branch Spread (m)				Height (m)		Life Stage	Condition, General Observations and Preliminary Management Recommendations (In bold).	Estimated Remaining Contribution	Category
						N	E	S	W	Significant Branch	Canopy				
T11	Ash	5.5	85	1.4	7	4.5	1	4.5	3	2S	0.5	EM	Fair condition. Stem divides below 1.5m. Included bark present in fork. Branches encroaching upon building. Suppressed crown development. Prune branches clear of building.	10+	C3
G12	<i>Salix caprea</i> (Goat Willow)	7.5	250	3.0	28	4.5	4.5	4.5	5.5	-	0.5	M	Fair condition. Included bark present in fork. Branches encroaching upon building. Group of 3 tress with crossing/rubbing stems at western end. Prune southern branches clear of building.	10+	C3
T13	Unknown	15	450	5.4	92	3	3	3	2	-	4	M	Dead. Dismantle fell.	<10	U
T14	<i>Quercus robur</i> (English Oak)	14	785	9.4	279	4.5	3.5	4	5	4SW	2.5	M	In Decline condition. Major bark wounding on stem. Dieback in crown. Major deadwood in crown. Deadwood throughout crown. Extensive wound and decay; possible lightning damage. Unsuitable for retention in proximity of new development; poor structure due to extensive decay. Consider removal; interim works to remove dead wood >30mm diameter.	10+	U
T15	English Oak	17	1290	15.0	707	7.5	7.5	7.5	7.5	7W	7	M	Fair condition. Pruning of lower branches evident. Crop production and land management within projected RPA. Compact crown shape. Laetiporus brackets around old pruning point. No works necessary.	20+	B2
T16	<i>Acer campestre</i> (Field Maple)	9	460	5.5	96	4.5	4.5	4.5	4.5	2W	2	M	Fair condition. Stem divides below 1.5m. Included bark present in fork. Stem diameter recorded immediately below point of bifurcation. No works necessary.	20+	B2
T17	Horse Chestnut	9	500	6.0	113	5	4	3.5	2.5	1.5E	2	M	Fair condition. Dense Ivy cover obscuring assessment of main stem and branch unions. Unbalanced crown shape and form. Pruning of lower branches evident. Hedgerow tree. Diameter estimated. Sever Ivy to facilitate its removal and allow future inspection.	10+	C3



Appendix B Current Layout & Tree Survey Plan



Plan to be read in conjunction with Tree Survey Schedule and associated report (Ref: JH0423FROGHLFM).
The original of this drawing was produced in colour - a monochrome copy should not be relied upon.



Key & Notes		Cat C Trees & Groups		W1,W2,W3 etc...	Woodland Tag	Shade Segment	Ground Protection Areas		Date: August 2022	Plan to be read with associated report.		Outline Trees Arboricultural Consultancy 4 Kings Drive Littleover Derby	
Cat A Trees & Groups		Cat U Trees & Groups		B1, B2, B3, B4 etc...	Shrub Tag	H1,H2, H3 etc...	Specialized Foundations		Title: Existing Tree Survey Plan		DWG:JH- TSP - 1 of 1		
Cat B Trees & Groups		Trees/Groups for removal		Hedgerows		No-dig Surfacing Areas	Fencing Location	RPA Extent	Site: Frog Hall Farm, Crow Lane, Atherstone, Leics. CV9 3QX		1:500 @A3		

Appendix C Preliminary Tree Constraints Plan



Plan to be read in conjunction with Tree Survey Schedule and associated report (Ref: JH0423FROGHLLFM).
The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

Trees T13 & T14, both unsuitable for retention
(Category U) and recommended for removal.

T11 & G12, both unremarkable and recommended
for removal to maximize available space.

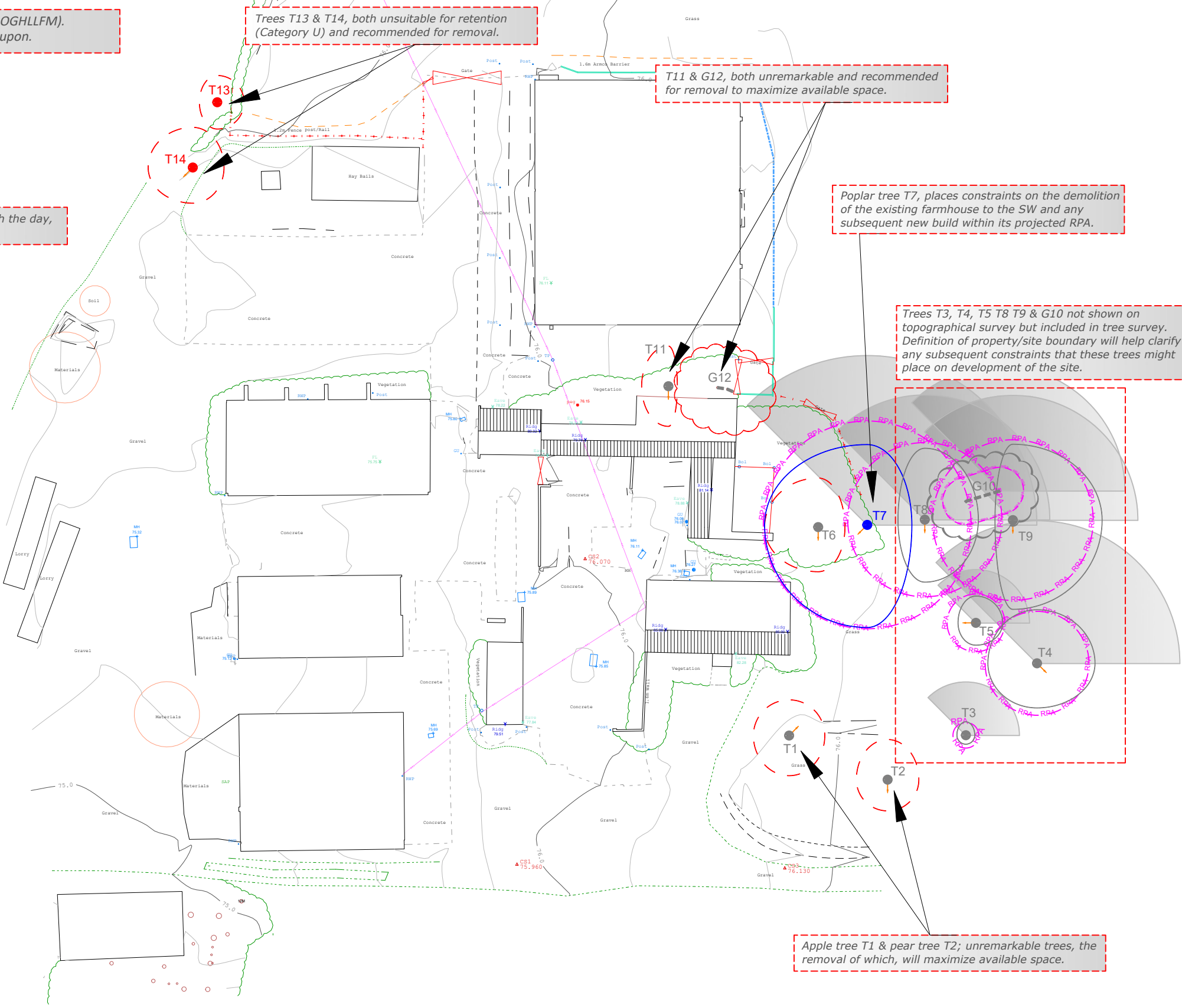
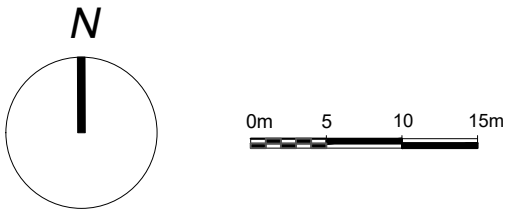
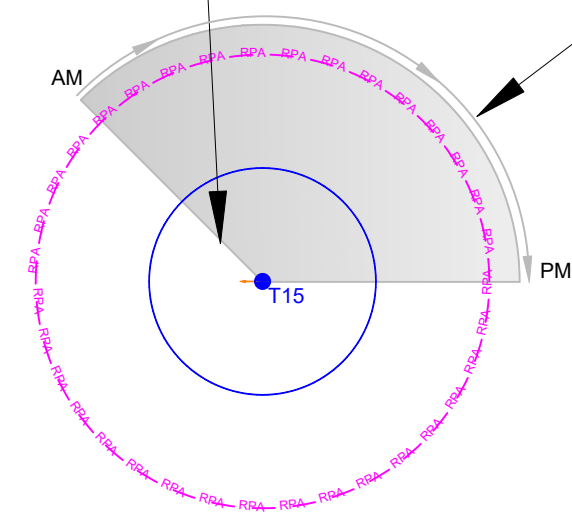
Projected RPA of oak tree T15, likely to have been
impacted by the cultivation of the soil within its
projected RPA.

Indicative shade pattern as cast through the day,
as per BS 5837.

Poplar tree T7, places constraints on the demolition
of the existing farmhouse to the SW and any
subsequent new build within its projected RPA.

Trees T3, T4, T5 T8 T9 & G10 not shown on
topographical survey but included in tree survey.
Definition of property/site boundary will help clarify
any subsequent constraints that these trees might
place on development of the site.

Apple tree T1 & pear tree T2; unremarkable trees, the
removal of which, will maximize available space.



Key & Notes		Cat C Trees & Groups		W1,W2,W3 etc...	Woodland Tag	Shade Segment	Ground Protection Areas		Date: April 2023	Plan to be read with associated report.		Outline Trees Arboricultural Consultancy 4 Kings Drive Littleover Derby	
Cat A Trees & Groups		Cat U Trees & Groups		B1, B2, B3, B4 etc...	Shrub Tag	H1,H2, H3 etc...	Specialized Foundations		Title: Preliminary Tree Constraints Plan		DWG:JH- TCP - 1 of 1		
Cat B Trees & Groups		Trees/Groups for removal		Hedgerows		No-dig Surfacing Areas	Fencing Location	RPA Extent	Site: Frog Hall Farm, Crow Lane, Atherstone, Leics. CV9 3QX		1:500 @A3		

Appendix D BS5837:2012 Cascade Chart for Tree Quality Assessment



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 (<i>e.g., where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning</i>). • 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 BS5837 Sect. 4.5.7.</i>			Colour; Red 
	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 (<i>e.g., the dominant and/or principal trees within an avenue</i>).	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 (<i>e.g., veteran trees or wood-pasture</i>).	Colour; Mid Green 
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 (<i>e.g., presence of significant though remediable defects, including unsympathetic past management and storm damage</i>), 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.	Colour; Mid Blue 
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.	Colour; Grey 



Appendix E Glossary of Terms & Definitions

Arboriculturist - person who, through relevant education, training and experience, has gained recognized expertise in the care of trees.

Branch/Crown Reduction - operation that results in an overall reduction in the height and/or spread of the crown of a tree by means of a general shortening of twigs and/or branches, whilst retaining the main framework of the crown.

Canopy/Crown - that part of a tree which is composed of the branches and foliage.

Cavity - hole in a tree resulting from decay or damage.

Crotch/Fork - forked region formed by the junction of a branch and the stem, or by two branches.

Crown Lifting - removal of lower branches to achieve a stated vertical clearance above ground level or other surface.

Epicormic Shoot - growth from dormant or adventitious buds on the stem or main branches.

Facilitation Pruning - tree pruning works, the nature and effects of which are without significant adverse impact on tree physiology or amenity value, which is anticipated as being necessary to provide access for construction associated activities on site.

Hazard Beam – a type of structural defect present on a branch, which has internal, longitudinal cracks present (see image below).



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Heartwood - central core of mature and hardened timber.

Included Bark - bark tissue lodged in the union between a branch and the parent stem, in the crotch of two branches, or between the bases of co-dominant stems, indicating potential weak attachment.

Minor Deadwood - deadwood which appears to have a stem diameter <30mm.

Root Protection Area (RPA) - 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 is treated as a priority.

Stem - principal above-ground structural component of a tree that supports the branches;

- 'Stem' is synonymous with 'trunk' for single-stemmed trees, particularly those of a large diameter.
- This either extends throughout most of the height of the tree (primary stem), or is one of a number of such components (secondary stems) which divide from each other either near the ground or at a higher level.
- Trees comprising two or more stems arising from, or immediately above, ground level are commonly referred to as 'twin-stemmed' or 'multi-stemmed'.

Stub - broken or severed short remaining section of a branch extending beyond a crotch.

Wound - injury to a tree caused in a biotic or abiotic manner.



Appendix F Life Stage & Condition Key

Condition	Life Stage *
Good	Newly Planted
Those trees that are relatively free from defects and any visible signs of structural defects, which also exhibit normal signs of vitality and vigour when compared with trees of a similar species in a similar environment.	Those trees that have been planted in the past 5 years.
Fair	Young
Those trees that exhibit some minor/manageable defects or display evidence of minor remedial pruning, which also exhibit normal signs of vitality and vigour when compared with trees of a similar species in a similar environment.	Those trees that are considered to be in the first third of their life expectancy.
Poor	Semi to Early Mature
Those trees that exhibit a high level of defects and/or significant past pruning works, which also exhibit relatively low signs of vitality and vigour when compared with trees of a similar species in a similar environment.	Those trees that have not yet reached maturity and can be considered to be in the second third of their life expectancy.
In Decline	Mature
Those trees that are close to the end of the useful life expectancy and displaying associated symptoms of branch die back and low vigour.	Those trees that can be described as being in the final third of their life expectancy.
	Over Mature
	Those trees that can be described as having exceeded their life expectancy that have yet to replicate those features typical of Veteran trees.
	Veteran
	A tree that exhibits typical signs and characteristics of such as described in the introduction of Veteran Trees: A guide to risk and responsibility (Davis, Fay & Mynors 2000)

* Typical useful life expectancy of common trees. (Taken from Helliwell's Amenity Tree Valuation notes)

300+	- Yew
200-300	- Oak, Sweet Chestnut, Plane, Sycamore, Lime
150-200	- Scots Pine, Hornbeam, Beech, Tulip tree, N Maple, Lebanon Cedar
100-150	- Ash, Spruce, Walnut, Red Oak, Horse Chestnut, Field Maple, Monkey Puzzle, Mulberry, Pear
70-100	- Rowan, Whitebeam, Apple, Wild Cherry, Catalpa, Robinia, Ailanthus
50-70	- Poplars, Willows, Cherries, Alders, Birches



Appendix G References

British Standards Institute (BSi) BS 5837:2012, Trees in relation to design, demolition and construction – Recommendations.

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