



Tree Check
Arboriculture Ltd.

Tree Survey and Categorisation Plas Farm Hydro Swansea SA8 3JQ



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06/03/24

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Introduction

This survey was overseen by Ben Clark, Arboricultural Consultant, and Director at Tree Check Arboriculture Ltd. with over 8 years' experience in the arboriculture industry and holding the following qualifications:

- Level 4 Diploma in Arboriculture
- BSc. Geology (University of Southampton)
- LANTRA Professional Tree Inspection Certificate (PTI)
- Various NPTC qualifications in tree surgery.

Ben is a technician member of the arboricultural association and attends regular training and seminars to remain up to date with current arboricultural practices.

The methodology of this report is based on the recommendations provided by the British Standards Institute document BS5837: Trees in Relation to Design, Demolition and Construction – Recommendations, as well as other recommendations provided by institutions such as the Arboral Association.

Brief

Tree Check has been instructed by Adam Cropper of Eller Green to carry out a tree survey and categorisation at Plas Farm Hydro, Swansea. Based on the findings, we were also instructed to carry out an impact assessment to consider proposed development on site, as well as produce a method statement to protect retained trees

The following information was available:

- Topographical Survey provided by Eller Green

It should be noted that none of the trees recorded in this report were shown on the topographical plan, and their locations in the Tree Constraints Plan are based on GPS and should be taken as indicative only. All locations and distances should be checked on site.

The site was visited on the 28-Feb-2024 during damp weather conditions considered reasonable for this type of survey.

Scope

- The purpose of this survey was to assess the location, size and general condition of the trees on and around site as well as determine their retention value and categorise them in accordance with the British standard: BS5837- Trees in Relation to Design, Demolition and Construction – Recommendations
- Trees have only received a cursory inspection and this report does not constitute a full tree condition/safety survey. Ongoing inspection should proceed as per the landowner's tree management plan. A suitably qualified arboricultural specialist should be consulted if a tree management plan is not already in place.
- A [Tree Constraints Plan](#) has been produced to indicate the locations of trees and the BS5837 calculated rooting areas. in relation to the site.
- Where trees have been noted to be hazardous in terms of unacceptable third-party risk this has been noted and recommendations given.
- General management recommendations have been given where appropriate.
- The inspection was carried out at ground level from inside the site and along adjacent public roads where appropriate. Trees were not climbed and no internal decay detection was used. It is our policy to recommend further investigation with decay detection equipment where features observed during visual inspection warrant such action.
- All heights of trees were estimated from ground level.
- Branch spread was measured from the base of the trees in four cardinal directions using a laser tape measure.
- Stem Diameter was measured at 1.5m above ground level using a diameter tape measure.

- Data on the observed structural condition of the tree has been entered, e.g., collapsing, leaning and the presence of any observed decay or physical defect has been noted.

Site Description

What3Words: ///corporate.tasks.twice

Nearest Postcode: SA8 3JQ



The site is set at an elevation of 153-218m above sea level on a western facing slope and is fairly exposed to prevailing southwesterly winds.

No soil analysis was carried out on site, however, data obtained from Cranefield Soil and Agrifood Institute ^[1] suggests the area is dominated by slowly permeable seasonally wet acid loamy and clayey soils

The tree cover on site is relatively dense a variety of mature deciduous trees, wooded areas and areas of scrub.

The site is composed of a number of agricultural fields bordering a woodland. It is our understanding that there is a proposal to divert water from the stream that runs through the woodland in order to generate hydro electric power.

Section I: Interpretation

BS Categories

Trees have been assigned retention categories in accordance with BS5837. These are as follows:

Category A- Trees with a high retention value which are either arboriculturally important, important within the landscape, or culturally/ecologically important.

Category B- Trees with a moderate retention value i.e. they are good examples of their species, provide some notable amenity value to the area, or provide significant ecological or cultural value.

Category C- Trees with a low retention value. Including trees with defects which reduce their amenity value or expected lifespan but not to the extent that they cannot be realistically retained within the development.

Category U- Trees of which retention is considered unrealistic within the context of the development due to poor condition and low life expectancy.

See [Table I](#) in the appendix section of this report for more information on the allocation of categories and subcategories.

Tree Age Ratings

Y- Young trees in their early stage of growth, have undergone minimal secondary thickening and are still primarily composed of active tissue.

EM- Early mature trees that have started to show characteristics of maturity such more developed crowns and increased stem thickness.

M- Mature fully developed trees.

OM- Over mature trees that are starting to show signs of decline.

A- Ancient trees that have reached a notably old age for their species and are therefore considered to be important.

V- Veteran trees with notable features such as wounds, cavities, cracks, etc. that provide significant habitat value. These are usually older trees.

Root Protection Areas (RPA's)

Root Protection areas have been calculated according to BS5837 and represent the estimated minimum rooting area required by the tree to carry out its functions.

Excavation in this area can cause physiological or structural harm to a tree and the movement of machinery or personnel over this area can cause soil compaction and in turn, physiological harm to the tree.

These areas may need to be segregated from the rest of this site using tree protective fencing and if excavations in these areas are unavoidable in the context of the design, then they should be carried out in accordance with an arboricultural method statement produced by a suitably trained and qualified arboriculturalist.

Remaining Contribution

Remaining contribution has been estimated based on the trees overall condition, approximate age, and the life expectancy of the species in question. This is based on the assumption that new factors are not introduced that will affect the trees life expectancy, such as pathogens, climate factors or other biotic or abiotic influences.

Terminology

See appendix v for a glossary of the terms commonly used in tree reports.

Trees and groups are numbered with the following prefixes:

- **T**- individual trees.
- **G**- groups of trees with similar characteristics and rooting areas.
- **H**- Hedgerows.
- **W**- woodland groups, designated as such due to the presence of woodland features such as natural regeneration,

Section 2: Findings

Species Recorded

The following tree species were recorded on site (in alphabetical order):

- Common ash - *Fraxinus excelsior*
- Common beech - *Fagus sylvatica*
- Common hawthorn - *Crataegus monogyna*
- Common holly - *Ilex aquifolium*
- Crab apple - *Malus sylvestris*
- Cypress - *Cupressocyparis* sp.
- Goat willow - *Salix caprea*
- Hazel - *Corylus avellana*
- Mixed species - Mixed species
- Pedunculate oak - *Quercus robur*
- Rhododendron - *Rhododendron ponticum*
- Silver birch - *Betula pendula*
- Sycamore - *Acer pseudoplatanus*

Retention Categories

No Category A trees were identified on site.

The following Category B trees were identified on site:

- | | |
|-------|-------|
| • G10 | • G7 |
| • G11 | • T1 |
| • G13 | • G15 |
| • G14 | • T2 |
| • G2 | • T6 |
| • G5 | • T7 |

T8 was identified as category U due to its poor condition, making it unsuitable for retention in the context of proposed development.

All remaining trees are category C and pose no major constraints on the site.

Findings Table

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
G1	N/A	Hazel (<i>Corylus avellana</i>) Common holly (<i>Ilex aquifolium</i>) Sycamore (<i>Acer pseudoplatanus</i>)	10	400	3	3	3	3	10	10	Small, unremarkable trees growing from rocks above stream.	No action required.	EM	20-40	C2	72	4.8	1
G2	N/A	Sycamore (<i>Acer pseudoplatanus</i>) Common ash (<i>Fraxinus excelsior</i>) Cypress (<i>Cupressocyparis</i> sp.)	14	600	3	3	3	3	8	8	Trees of reasonable form growing from banking above stream.	No action required.	M	20-40	B2	162	7.2	2
G3	N/A	Common ash (<i>Fraxinus excelsior</i>) Common holly (<i>Ilex aquifolium</i>) Common hawthorn (<i>Crataegus monogyna</i>)	10	500	2	2	2	2	6	6	Medium to large trees of poor form on stream banking. Ash Dieback Disease (<i>Hymenoscyphus fraxineus</i>) health stage 1-2.	Reinspect annually in the summertime to monitor the progression of Ash Dieback Disease.	M	20-40	C2	113	6.0	3
G4	N/A	Goat willow (<i>Salix caprea</i>) Common ash (<i>Fraxinus excelsior</i>) Hazel (<i>Corylus avellana</i>) Common hawthorn (<i>Crataegus monogyna</i>)	7	350	2	2	2	2	2	2	Unremarkable trees of average form along stream and acting as a boundary between fields.	No action required.	EM	10-20	C2	55	4.2	4

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
G5	N/A	Silver birch (<i>Betula pendula</i>) Pedunculate oak (<i>Quercus robur</i>) Hazel (<i>Corylus avellana</i>) Sycamore (<i>Acer pseudoplatanus</i>) Goat willow (<i>Salix caprea</i>)	12	500	7	7	7	7	4	4	Trees of reasonable form. Growing at the edge of field and down to stream.	No action required.	M	20-40	B2	113	6.0	/
G6	N/A	Pedunculate oak (<i>Quercus robur</i>) Common hawthorn (<i>Crataegus monogyna</i>) Hazel (<i>Corylus avellana</i>)	9	350	5	5	5	5	5	5	Medium sized trees of fair form bordering fields. Recently heavy pruning has been carried out on to facilitate drainage works.	No action required.	EM	10-20	C2	55	4.2	5
G7	N/A	Common ash (<i>Fraxinus excelsior</i>) Pedunculate oak (<i>Quercus robur</i>) Common holly (<i>Ilex aquifolium</i>)	16	700	4	4	4	4	8	8	Large trees mostly of good form with multiple failed and dead trees throughout. Ash Dieback Disease (<i>Hymenoscyphus fraxineus</i>) health stage 1-2.	Monitor the progression of Ash Dieback. Remove failed and dead trees.	M	20-40	B2	221	8.4	6
G8	N/A	Pedunculate oak (<i>Quercus robur</i>)	11	350	5	5	5	5	2	5	Group of smaller trees of fair form. Suppressed by neighbouring trees.	No action required at this time.	M	20-40	C2	55	4.2	7

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
G9	N/A	Common ash (<i>Fraxinus excelsior</i>) Rhododendron (<i>Rhododendron ponticum</i>) Goat willow (<i>Salix caprea</i>) Silver birch (<i>Betula pendula</i>)	10	300	3	3	3	3	0	0	Unremarkable scrubby growth.	No action required at this time.	EM	10-20	C2	40	3.6	8
G10	N/A	Pedunculate oak (<i>Quercus robur</i>) Sycamore (<i>Acer pseudoplatanus</i>) Rhododendron (<i>Rhododendron ponticum</i>)	16	740	8	8	8	8	4	4	Large mature trees with an understory of rhododendron	No action required at this time.	M	10-20	B2	247	8.9	/
G11	N/A	Common beech (<i>Fagus sylvatica</i>) Pedunculate oak (<i>Quercus robur</i>) Common holly (<i>Ilex aquifolium</i>)	14	500	6	6	6	6	2	2	Trees of good form acting as a boundary between fields.	No action required at this time.	M	10-20	B2	113	6.0	/
G12	N/A	Hazel (<i>Corylus avellana</i>) Common hawthorn (<i>Crataegus monogyna</i>) Sycamore (<i>Acer pseudoplatanus</i>) Crab apple (<i>Malus sylvestris</i>)	9	300	3	3	3	3	1	1	Small trees of fair form at edge of garden next to the stream.	No action required at this time.	EM	20-40	C2	40	3.6	/

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
G13	N/A	Sycamore (<i>Acer pseudoplatanus</i>) Common ash (<i>Fraxinus excelsior</i>) Pedunculate oak (<i>Quercus robur</i>)	14	700	5	5	5	5	7	8	Woodland area made up of large trees of good form. A section has been recently cleared by National Grid.	No action required at this time.	M	20-40	B2	221	8.4	9
G14	N/A	Common ash (<i>Fraxinus excelsior</i>) Sycamore (<i>Acer pseudoplatanus</i>) Pedunculate oak (<i>Quercus robur</i>)	14	700	5	5	5	5	7	8	Woodland area made up of large trees of generally good form. A section has recently been cleared by national Grid	No action required at this time.	M	20-40	B2	221	8.4	/
G15	N/A	Sycamore (<i>Acer pseudoplatanus</i>) Pedunculate oak (<i>Quercus robur</i>)	12	750	8	8	8	8	0	2	Large trees of good form, growing along boundary wall.	No action required at this time.	M	20-40	B2	254	9.0	/
T1	N/A	Common ash (<i>Fraxinus excelsior</i>)	16	1100	10	10	10	10	8	6	Large mature tree of good form. Growing from the embankment, above stream.	No action required at this time.	M	20-40	B2	547	13.2	10
T2	N/A	Common ash (<i>Fraxinus excelsior</i>)	15	850	7	7	7	7	12	10	Large mature tree growing out of rocks above stream.	No action required at this time.	M	20-40	B2	326	10.2	11
T3	N/A	Pedunculate oak (<i>Quercus robur</i>)	12	800	3	3	3	3	5	5	Mature tree with most of the crown damaged and/or snapped out.	No action required.	M	10-20	C2	289	9.6	12

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
T4	0759	Common ash (<i>Fraxinus excelsior</i>)	14	490	6	6	6	6	6	8	Large twin stemmed tree on edge of banking. Ash Dieback Disease (<i>Hymenoscyphus fraxineus</i>) health stage 1-2.	Reinspect annually in the summertime to monitor the progression of Ash Dieback Disease	M	<10	C2	108	5.9	/
T5	No ne	Common ash (<i>Fraxinus excelsior</i>)	14	580	6	6	6	6	6	8	Large tree on the edge of the embankment. Ash Dieback Disease (<i>Hymenoscyphus fraxineus</i>) health stage 1-2.	Reinspect annually in the summertime to monitor the progression of Ash Dieback Disease	M	<10	C2	152	7.0	/
T6	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	750	8	8	8	8	4	5	Tree of good form on banking above stream.	No action required at this time.	M	20-40	B2	254	9.0	/
T7	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	750	8	8	8	8	4	5	Tree if good amongst scrub area between fields.	No action required at this time.	M	20-40	B2	254	9.0	/
T8	N/A	Sycamore (<i>Acer pseudoplatanus</i>)	14	720	7	7	7	7	1	2	Large tree with extensive dieback throughout crown and large areas of dysfunctional sapwood characterised by peeling and moribund bark on the main stem.	Fell to ground level.	M	<10	U		8.6	13
T9	N/W	Hazel (<i>Corylus avellana</i>)	10	200	3	3	3	3	1	0	Small tree of fair form.	No action required.	M	10-20	C2	18	2.4	14
T10	NA	Rhododendron (<i>Rhododendron ponticum</i>)	6	150	5	5	5	5	0	0	Small shrubby tree growing from wall.	No action required.	SM	10-20	C2	10	1.8	/

Section 3: Preliminary Management Recommendations

- Use the findings of this report to inform the site design and minimize tree losses and damage to retained trees. Considering the following points:
 - Any excavation works within the Root Protection Areas (RPAs) of retained trees, including drainage and service installation, as well as foundation laying should be avoided wherever possible.
 - Installation of hard surfaces over the RPAs of trees should be avoided wherever possible.
 - Avoid creating level changes within the RPAs of trees.
 - If works within the RPAs of retained trees cannot be avoided, specialist engineering techniques should be provided in an arboricultural method statement.
 - If an incursion into the Root Protection Area (RPA) is significant enough that an Arboricultural Method Statement cannot adequately minimize the risk of damage or loss, the tree should be considered lost to development. This should be clearly stated in the Arboricultural Impact Assessment, and the affected tree should be removed before commencing construction works, following planning approval.
 - Category C trees do not necessarily constrain the site design but can be retained if desired, as long as their presence does not conflict with the desired layout.
 - Make efforts to retain category A and B trees.
 - Consult the project arboriculturalist on the future stem thickening of trees near proposed light structures and surfacing, such as footpaths, walls, and fencing, or use the guidance provided in Table A of BS5837.
 - Consider the shading impact of retained trees on buildings. Position spaces requiring natural light away from trees or facing away from trees to prevent future pressure for tree removal.
- Commission an Arboricultural Impact Assessment upon completion of the design to determine if retained trees are at risk of damage from the proposed development.
- Commission an Arboricultural Method Statement, where necessary, to minimize the risk of damage or loss of retained trees.
- Obtain relevant approval from the Local Planning Authority (LPA) before proceeding with tree clearance works. **Removal of category U trees can proceed immediately where they pose a current safety concern.**
- Reinspect retained trees upon completion of the development.
- Install barrier fencing around all RPAs and tree crowns, where possible, to protect all trees before commencing any works on the site. This should establish a construction exclusion zone.
- Follow the steps outlined in the Arboricultural Method Statement when construction activities within the RPAs of retained trees are unavoidable.
- It is strongly advised that all proposed tree management works are completed prior to the start of the development. Failure to do so may increase the risk of damage or injury.
- Unless specified in this report, the assessment of trees does not consider any habitat constraints that may be present. Ensure that tree surgeons commissioned for tree work are aware of their responsibilities under the Wildlife and Countryside Act (1981) regarding protected species.
- Conduct relevant soil analysis by geophysical engineering specialists to determine constraints related to shrinkable clay soils.
- Ensure that all tree work is carried out by suitably qualified operatives in accordance of the relevant industry best practices and British Standard (BS3998: Tree Work: Recommendations).
- Trees require regular inspection and maintenance particularly in situations where they are close to high usage areas such as residential properties and roads. The recommended date for next inspection is: 28/08/2025.

Appendices

Appendix i: Photographs taken on site.

Appendix ii: Tree constraints plan showing the location of trees and their root protection areas

Appendix iii: A cascade chart from BS5837: 2012- Trees in relation to design, demolition, and construction– Recommendations explaining the categorisation of trees.

Appendix iv: A diagram showing the recommended configuration for tree protective fencing, from BS5837: 2012- Trees in relation to design, demolition, and construction– Recommendations.

Appendix v: A Glossary of terms and phrases commonly used in tree reports.

Appendix vi: references.

Appendix i: Photos

Photo 1: [G1](#)- Small unremarkable trees set above the stream and growing in rocky conditions.



Photo 2: [G2](#)- Large trees on far side of the stream.



Photo 3: [G3](#)- Ash trees infected with Ash Dieback Disease Health stage 1-2.



Photo 4: [G4](#)- Small, unremarkable trees between fields and subject to powerline maintenance pruning.



Photo 5: [G6](#)-Small trees between fields with evidence of recent heavy pruning works.



Photo 6: [G7](#)- trees generally of reasonable form but with several failed and dead trees within the group.



Photo 7: G8- woodland group.



Photo 8: [G9](#)- Dense area of unremarkable trees and shrubs.



Photo 9: [G13](#)- Large trees of reasonable form adjacent to the area that has been cleared by National Grid recently.



Photo 10: T1- Large tree at the edge of the stream.



Photo 11: [T2](#)- Large Ash tree growing from banking above stream.



Photo 12: [T3](#)- Oak tree with much of its crown failed.

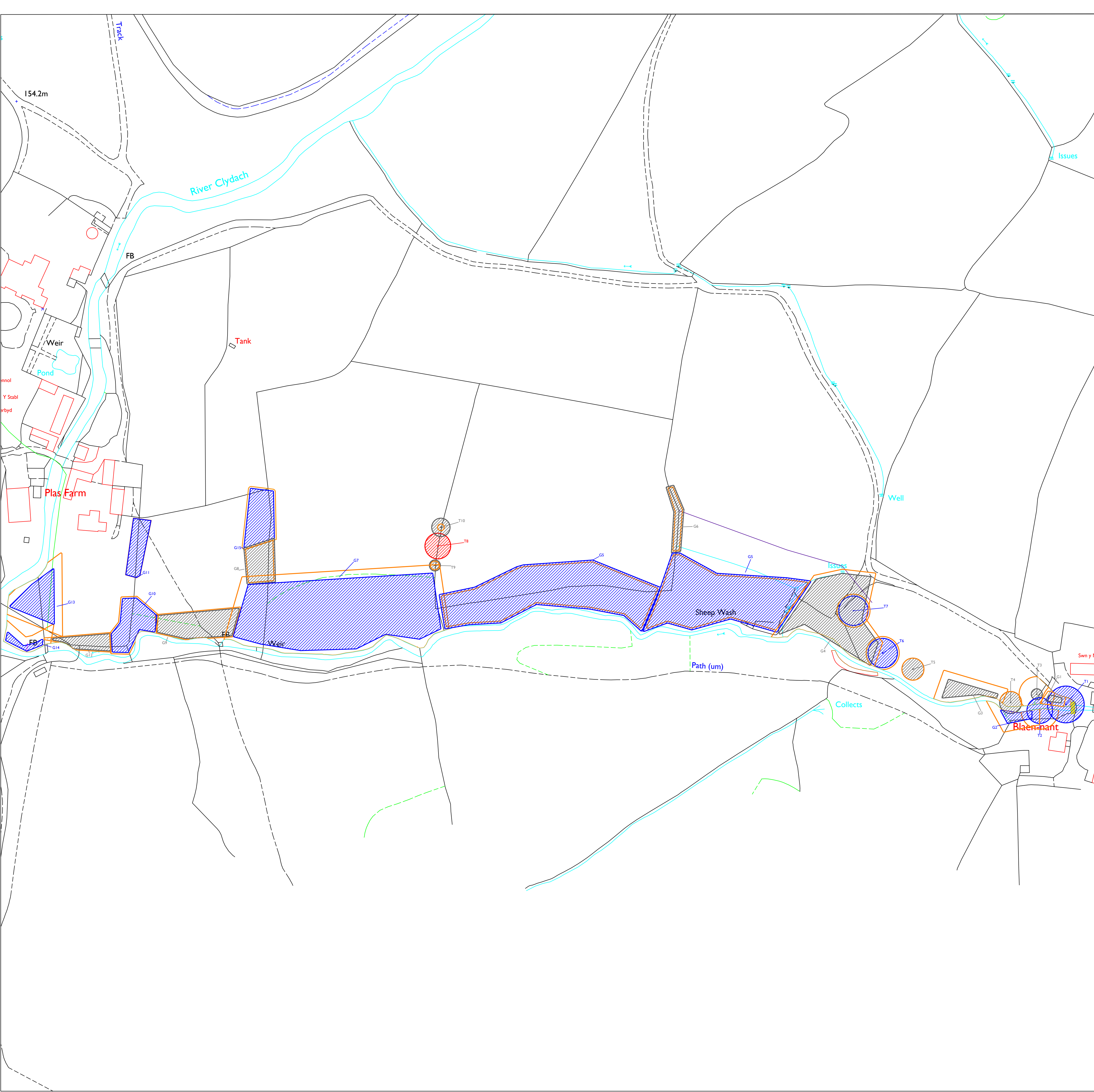


Photo I3: [T8](#)- Dysfunctional bark on much of the main stem.



Photo 14: T9- Smal Hazel tree.





Ref	Tag	Species	Height	Stem Diam (mm)	Life Stage	Life Expectancy	Retention Category	RPA Area (m ²)	RPA Radius (m)
G1	N/A	Hazel (Corylus avellana) Common holly (Ilex aquifolium) Sycamore (Acer pseudoplatanus)	10	400	EM	20-40	C2	72	4.8
G2	N/A	Sycamore (Acer pseudoplatanus) Common ash (Fraxinus excelsior) Cypress (Cupressocyparis sp.)	14	600	M	20-40	B2	163	7.2
G3	N/A	Common ash (Fraxinus excelsior) Common holly (Ilex aquifolium) Common hawthorn (Crataegus monogyna)	10	500	M	20-40	C2	113	6
G4	N/A	Goat willow (Salix caprea) Common ash (Fraxinus excelsior) Hazel (Corylus avellana) Common hawthorn (Crataegus monogyna)	7	350	EM	10-20	C2	55	4.2
G5	N/A	Silver birch (Betula pendula) Pedunculate oak (Quercus robur) Hazel (Corylus avellana) Sycamore (Acer pseudoplatanus) Goat willow (Salix caprea)	12	500	M	20-40	B2	113	6
G6	N/A	Pedunculate oak (Quercus robur) Common hawthorn (Crataegus monogyna) Hazel (Corylus avellana)	9	350	EM	10-20	C2	55	4.2
G7	N/A	Common ash (Fraxinus excelsior) Pedunculate oak (Quercus robur) Common holly (Ilex aquifolium)	16	700	M	20-40	B2	222	8.4
G8	N/A	Pedunculate oak (Quercus robur) Common ash (Fraxinus excelsior) Rhododendron (Rhododendron ponticum) Goat willow (Salix caprea) Silver birch (Betula pendula)	11	350	M	20-40	C2	55	4.2
G9	N/A	Pedunculate oak (Quercus robur) Sycamore (Acer pseudoplatanus) Rhododendron (Rhododendron ponticum)	16	740	M	10-20	B2	248	8.9
G10	N/A	Common beech (Fagus sylvatica) Pedunculate oak (Quercus robur) Common holly (Ilex aquifolium)	14	500	M	10-20	B2	113	6
G11	N/A	Hazel (Corylus avellana) Common hawthorn (Crataegus monogyna) Sycamore (Acer pseudoplatanus) Crab apple (Malus sylvestris)	9	300	EM	20-40	C2	41	3.6
G12	N/A	Sycamore (Acer pseudoplatanus) Common ash (Fraxinus excelsior) Pedunculate oak (Quercus robur)	14	700	M	20-40	B2	222	8.4
G13	N/A	Common ash (Fraxinus excelsior) Sycamore (Acer pseudoplatanus) Pedunculate oak (Quercus robur)	14	700	M	20-40	B2	222	8.4
G14	N/A	Sycamore (Acer pseudoplatanus) Pedunculate oak (Quercus robur)	12	750	M	20-40	B2	254	9
G15	N/A	Common ash (Fraxinus excelsior)	16	1100	M	20-40	B2	547	13
T1	N/A	Common ash (Fraxinus excelsior)	15	850	M	20-40	B2	327	10
T2	N/A	Pedunculate oak (Quercus robur)	12	800	M	20	C2	290	9.6
T3	N/A	Common ash (Fraxinus excelsior)	14	490	M	<10	C2	109	5.9
T4	9	Common ash (Fraxinus excelsior)	14	580	M	<10	C2	152	7
T5	N/A	Pedunculate oak (Quercus robur)	15	750	M	20-40	B2	254	9
T6	N/A	Pedunculate oak (Quercus robur)	15	750	M	20-40	B2	254	9
T7	N/A	Sycamore (Acer pseudoplatanus)	14	720	M	<10	U	235	8.6
T8	N/A	Hazel (Corylus avellana)	10	200	M	20	C2	18	2.4
T9	W	Rhododendron	6	150	SM	20	C2	10	1.8
T10	NA	(Rhododendron ponticum)							

Key

- Category A. Trees with high retention value.
- Category B. Trees with moderate retention value.
- Category C. Trees with low retention value.
- Category U. Trees unsuitable for retention due to condition
- Root Protection Area (RPA)

Tree Key

- Canopy extents, hatched area represents area within the canopy.
- Location of tree base, taken from position on TOPO or GPS.

Reference number (T for trees, G for groups, W for woodlands, H for hedges).

RPA- an indication of the estimated minimum rooting area required by the tree. Calculated in accordance with BS5837.

Tree Protective Fence

Plas Farm, Swansea, SA8 3JQ	
1:1000 at A1	
Client	AT Environmental
Survey Code	24031
Drawn by	JC
Surveyed by	JC
Date	01/03/2024



Tree Check

Arboriculture Ltd.

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Appendix iii: Cascade Table for the Categorisation of Trees (BS5837)

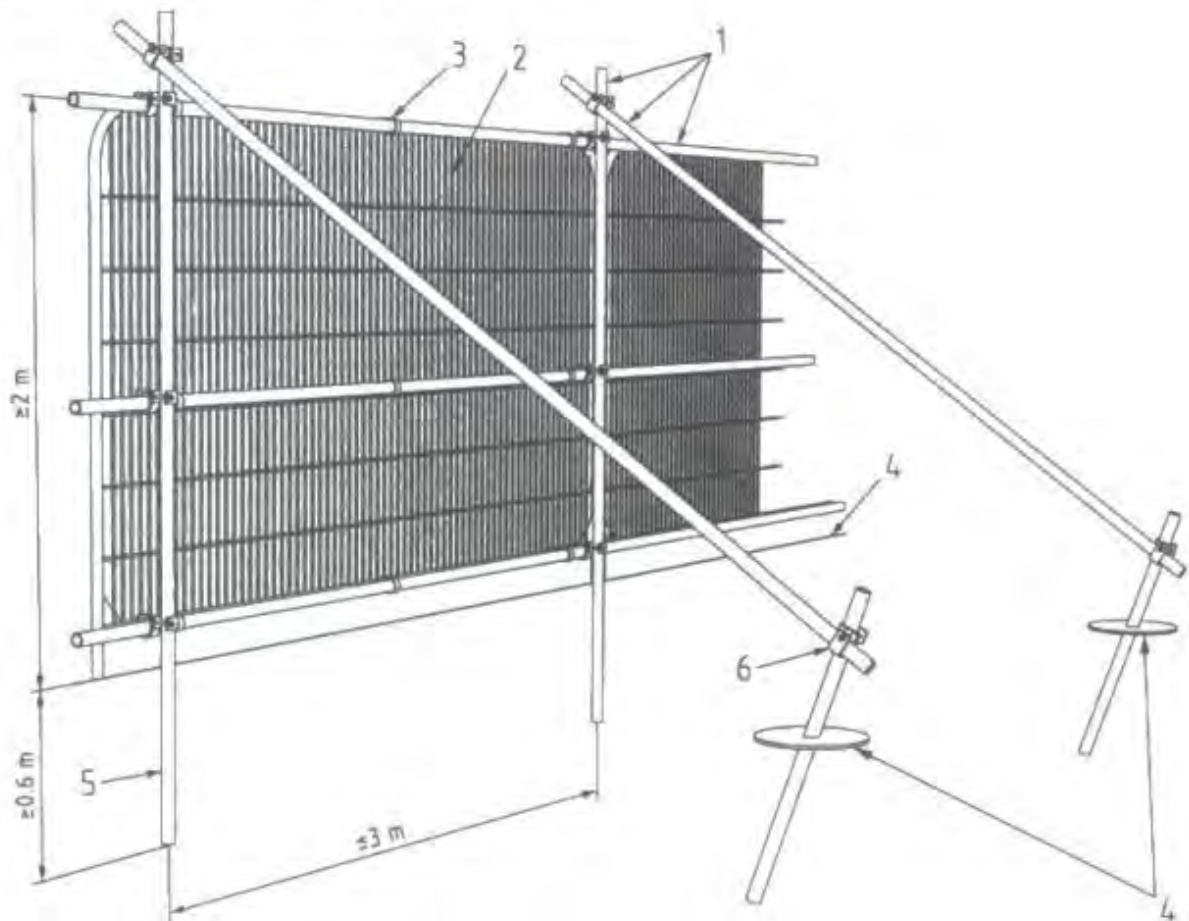
Table 1 – Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)		
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 U category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7		
	1 Mainly Arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation
Category A Those 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 essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as Arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation; historical, commemorative or other value (e.g. veteran trees or wood-pasture)
Category B Those of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural benefits
Category C Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	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

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Appendix iv: Recommended Configuration for Tree Protective Fencing (BS5837)

Figure 2 Default specification for protective barrier



Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps

Appendix v: Glossary

Aerial Inspection: A close inspection of the aerial part of a tree, either by mobile elevated work platform (MEWP) or by a tree surgeon (climbing inspection). **Adaptive Growth;** The growth of new wood in response to a stress concentration in the structure of a tree

Adventitious; A shoot which arises from tissue other than a growing shoot apex or bud, for instance in callus associated with a wound.

Anchorage; The holding of the structural root system of a tree within the soil.

Architecture; the formation and distribution of a tree's branch system.

Arboricultural Impact Assessment: That part of the BS 5837 (2012) procedure that evaluates the tree-related constraints to a development (loss of trees, encroachment into root protection areas etc.).

Arboricultural Method Statement: That part of the BS 5837 (2012) procedure that sets out how site works should be carried out near trees to avoid accidental damage.

Arboriculturalist: A person skilled or knowledgeable in the field of arboriculture. The alternative term 'arboriculturalist' is sometimes used. A Person trained and experienced in the management of trees, and trees in relation to construction.,

Assessment: The process of examining the variables involving a trees condition and location in order to assess the risk posed by an individual tree.

Bole (trunk): The main , vertical stem or trunk of a tree.

Branch: a limb extending from the main stem or parent branch of a tree

Canopy: the combined foliage of a group of trees or a woodland, i.e. the combined area of numerous crowns.

Construction Exclusion Zone: The part of a development site from which all pedestrian and vehicular movements are excluded by protective fencing, typically to ensure the wellbeing of trees, during site works. Usually determined by the RPA of a tree.

Crown: in arboriculture the main foliage-bearing portion of a tree containing the leaves and branches

Defect: Any feature of a tree that is likely to make it less safe (in the case of a structural defect) or otherwise to reduce its health, longevity, landscape prominence or conservation value for any other reason.

Dysfunction: The cessation of physiological function in woody material, especially vascular functions such as water and sap transportation.

Failure: Fracture or deformation in any load bearing part of the tree, compromising stability or causing loss of support for part of, or all of the tree structure,

Group: More than one tree in close proximity that possess sufficient similarity or cohesiveness that they can be treated as a single entity for the purpose of this report.

Heave: deformation of shrinkable clay soil related to the expansion caused by rehydration.

Leader: the dominant, vertical shoot or stem of a tree.

Pruning: The cutting off or cutting back of tree branches or foliage to direct growth, remove an obstructing part, mitigate a nuisance, make safe, remove a diseased part, increase longevity, simulate natural damage, enhance habitat for wildlife etc.

Retained Tree: a tree that has been considered suitable for retention and therefore selected to remain as part of the final site layout.

Risk: the likelihood of a hazard to cause actual harm to people or property,

Root Protection Area (RPA): The area around the base of a tree that contains sufficient root volume to ensure the future well-being of the tree in the event of nearby soil disturbance (as on a development site). It is calculated according to guidelines in BS 5837 (2012).

Subsidence (branch): Branches, especially if spreading, tend gradually to subside under their own weight, and may eventually reach ground level in large open-grown trees. Rapid subsidence may result in crown separation or congested bark and can lead to branch failure where there is no support within the elastic limit of a given branch.

Subsidence (soil): Broadly, the downward movement of ground and an affected foundation influenced by soil properties, weather, foundation depth and nearby vegetation.

Targets: An element of tree risk: the subject of injury or damage within range of a hazard.

Tree: The definition of 'tree' is a composite of tree species, tree form and tree size. The blue book offers the following: A perennial plant with a self-supporting woody main stem, usually developing woody branches at some distance from the ground and growing to a considerable height and size. This definition has the three main elements in general form. **For the purposes of 5837 surveys, only plants with a stem diameter of 75mm or above are considered trees.**

Tree Constraint Plan (TCP): Site plan showing the tree-related constraints to development as envisaged in BS 5837 (2012). Common constraints are the loss of trees, encroachment into a tree's root protection area.

Tree Condition Inspection/Survey: A procedure to inspect a tree or trees. Variables used to describe a tree include position (if not already plotted on a topographical survey), species identity, maturity, various dimensions (main stem diameter, height, crown radius etc.),

aspects of form, vigour, condition, incidence of pests, diseases, damage and defects, evidence of past management etc. Site factors, position in the landscape and site usage may also be relevant, usually including its position, species identity, dimensions, age class, condition, conservation value etc. as appropriate, and to identify and evaluate defects. It is also common to make management recommendations (see schedule of works). Tree inspection is a fundamental of tree management and advisory practice in arboriculture.

Tree Preservation Order: (UK) an order made by a local authority or other planning authority to protect a tree, group of trees, area of (scattered) trees or woodland under Part VIII of the Town and Country Planning Act 1990. There have been several amendments, the latest being the Town and Country Planning (Tree Preservation) (England) Regulations 2012. An order is generally made on the grounds of amenity and expediency. Anyone proposing works to a TPO tree must seek prior consent from the authority using the form IAPP. With the advent of the 2012 regulations, some of the detail in existing TPOs in England has been revoked.

Tree Protection Plan: scale drawing prepared by an arboriculturalist showing the final layout proposals, tree retention and tree and landscape protection measures detailed within the arboricultural method statement (AMS), which can be shown graphically.

Trunk: see bole.

Vigour: The health and resilience of a tree (from the Latin 'to be strong'), reflected in the capacity of the whole tree to grow (see growth rate). The term is often used as a description of overall condition on a qualitative scale from 'high' to 'low'.

Visual Tree Assessment (VTA): The standard approach to tree risk assessment consisting of the diagnosis of structural defects and the evaluation of their significance from visible signs and the application of biomechanical criteria. Simple equipment such as a sounding mallet, probe and binoculars are commonly used.

Wind exposure: the degree to which a tree or other object is exposed to wind, with regard both to duration and velocity, often taking into account prevailing wind directions.

Windthrow: the blowing over of a tree at its roots.

Appendix VI: References

1. Cranfield Soil and Agrifood Institute (2023). Soilscales soil types viewer - National Soil Resources Institute. Cranfield University. [online] www.landis.org.uk. Available at: <https://www.landis.org.uk/soilscales/>.
2. Claus Mattheck, Klaus Bethge and Karlheinz Weber (2015). The body language of trees encyclopedia of visual tree assessment. Karlsruhe Karlsruhe Inst. Of Technology - Campus North.
3. Hirons, A.D. and Thomas, P.A. (2018b). Applied tree biology. Chichester, West Sussex Wiley Blackwell.
4. British Standards Institution (2012). Trees in relation to design, demolition and construction : recommendations. London, Eng.: B.S.I.
5. British Standards Institution (2010). Tree work : recommendations. London: British Standards Institution.
6. Rose, B. (2020). THE USE OF CELLULAR CONFINEMENT SYSTEMS NEAR TREES: A GUIDE TO GOOD PRACTICE. [online] Stonehouse, Gloucestershire: Arboricultural Association. Available at: <https://www.trees.org.uk/News-Blog/Latest-News/New-guide-to-use-of-cellular-confinement-systems-n> [Accessed 25 Mar. 2023].

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The Client is the party commissioning and funding the survey. The Consultant is any person(s) employed by Tree Check Arboriculture LTD to carry out any related works, as well as Tree Check Arboriculture LTD as an entity.

Limitations

1. This survey reflects the condition of the trees as they were observed on 28-Feb-2024. The condition of trees can change quickly and if any significant change is observed then a qualified arboriculturist should be consulted regardless of the recommended reinspection period.
2. While every attempt has been made to provide accurate recommendations based on the condition of the observed trees, Tree Check Arboriculture Ltd. can accept no liability for damage, injury, or loss of property caused by faults that were not apparent at the time of inspection. These include but are not limited to faults that may only be visible seasonally such as fungal fruiting bodies, or faults that were obscured or inaccessible to the surveyor such as those high up in the crown or obscured by ivy.
3. During adverse weather conditions such as storms, otherwise healthy trees can fail. Trees should be visually inspected after any high winds.
4. This report cannot predict the reaction of inspected trees to external factors such as extreme climate events, accidents, or vandalism.
5. The author(s) can accept no liability for damages if the recommended works are not carried out as per this report in line with BS:3998.
6. Operational recommendations (e.g.) climb and dismantle, are for loose guidance only. It remains the responsibility of the assigned contractor to decide on the safest work method. Tree Check Arboriculture LTD. accepts no responsibility for damages occurring during the carrying out of recommended works.
7. This report does not cover any underground part of trees, nor does it consider any affect inspected trees may have on shrinkable clay soils since these issues are almost entirely restricted to areas of shrinkable clay soils and soil analysis was not specified in the brief.
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9. Certain areas of the site were inaccessible in the time scale of this survey due to dense vegetation cover. Areas and trees where this has been an issue are described in certain trees and groups in the survey table.
10. **The findings of this report cannot be relied upon after 12 months from the time of inspection or the recommended reinspection date (if sooner).**

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