



Arboricultural Report

**Alteration and extension of a garage
Queensbridge House
Overton-on-Dee
LL13 0LE**

Commissioned by:
James Bennett
Greenspace Architects

Surveyed and reported on by:
David Bailey
BSc(hons), M.Arbor.A, cert.Arb(RFS)

Report Date:
3 November 2022

50 Chestnut Road, Loggerheads, Market Drayton, Shropshire TF9 4BL
Tel: 01630 673216 Mob: 07813 808174

Web: www.oldoaktreecare.co.uk

email: oldoaktree@talktalk.net



Contents

	Page
1.0 Summary	2
2.0 Instructions	2
3.0 Preliminary matters	3
4.0 Method of survey	4
5.0 Site details	4
6.0 Summary of trees	5
7.0 Arboricultural impact assessment	6
8.0 Tree protection	7
9.0 Conclusion	8

Appendix A:	Tree constraint plan	PC22/568/TCP
Appendix B:	Tree protection plan	PC22/568/TPP
Appendix C:	Tree categorisation	Table 1 of BS5837:2012
Appendix D:	Protective fencing	Figures 2&3 of BS5837
Appendix E:	Tree schedule with key	

1.0 Summary

- 1.1 *xxxThe proposal is to build a new dwelling on the tennis court of Hilcote Grange.*
- 1.2 *xxxThere are five B and six category C trees on the site. Additionally, there are three groups. Two of the groups are category C and one is U.*
- 1.3 *xxxNo tree will need to be removed to allow the development to take place, but as a matter of good management to reduce risk posed by trees in Group 13, the dead elms and dying back sycamores in this group should be removed. A small amount of crown raising on Ch9 will provide sufficient clearance for the garage.*
- 1.4 *Correctly placed fencing will ensure retained trees can be suitably protected during the build.*
- 1.5 *The proposal is arboriculturally sound and complies with BS5837.*

2.0 Instructions

- 2.1 I am instructed by James Bennett of Greenspace Architects to carry out a survey and record all significant trees at Queensbridge House that may be affected by a proposed development.
- 2.2 The proposal is to extend a garage and create access for it at the above property.



- 2.3 There are several trees close to the proposed development, some of high quality. Consideration is to be made to justify any trees removed or work to them and ensure retained trees are not significantly damaged by the proposal.
- 2.4 I am to produce a tree report to support the planning application. The report is to be compliant with BS5837:2012¹ hereafter referred to as BS5837.

3.0 Preliminary matters

- 3.1 The survey and report cover only arboricultural matters relating to trees that may be affected by the development. It deals with identifying the benefits and constraints trees will impose upon the development site, which trees will need to be removed and how the remaining specimens can be protected and how retained trees will affect the site.
- 3.2 Statutory protection of trees, either tree preservation orders, conservation area status or historical planning conditions has not been investigated. The status of trees can be obtained from Shropshire Council Natural Environment Team².
- 3.3 Plans supplied to myself:

- i) Site proposal supplied by Greenspace Architects.

Plans I have produced to accompany this report:

- i) Tree Constraints Plan PC22/568/TCP
ii) Tree Protection Plan PC22/568/TPP

- 3.4 Where buildings are constructed close to trees, reference should be made to the NHBC Standards 2022³. This document, updated yearly, gives appropriate foundation depths for buildings close to trees. It is recommended that the soil's modified plasticity index is investigated to consider the likelihood of soil movement with moisture change. This will allow the appropriate foundation depth to be calculated.
- 3.5 The data, views and opinions of this report relate to the survey undertaken on the date shown and does not take into account the effects of extreme weather conditions, vandalism or accidental damage. Neither can the effects of poorly executed tree surgery work, not complying to current good practice, be predicted. Old Oak Tree Care cannot accept liability in connection with these factors. This report requires renewal in two years from the date of survey, or as soon as site conditions, tree health or tree structural conditions significantly alter.

¹ BS5837:2012 Trees in relation to design, demolition and construction: Recommendations – British Standards Institute

² Shropshire Council Natural Environment Team. 01743 253333

³ National House Builders Council Standards 2022 Part 4, Chapter 2 Building near trees. www.nhbc.co.uk



4.0 Method of survey

- 4.1 The survey was undertaken on 27 October 2022.
- 4.2 Trees were surveyed to measure height, trunk diameter, crown spread and height, health, structural condition, estimated remaining life expectancy and overall quality. This and other information was gathered to comply with section 4.4.2 of BS5837. Trees were categorised utilising the same standard, see Appendix C.
- 4.3 Stem diameters were measured using a surveyor's tape. Crown spreads and heights were measured using a laser rangefinder. Heights were estimated using the height function of the laser rangefinder.
- 4.4 All measurements and observations were made from the ground and no soil or tissue samples were taken. Although significant visually apparent hazards within trees will be identified and commented upon, the survey is not a dedicated health and safety survey of the identified trees.
- 4.5 Where trees could not be reached when off site or inaccessible, dimensions were estimated.

5.0 Site details

- 5.1 The site is a garage and its surroundings within the grounds of Queensbridge House.
- 5.2 To the north is the entrance drive with woodland beyond it. In an easterly direction is the house. To the south and west are the gardens of the property with many mainly mature trees within it.
- 5.3 The level of the land is approximately flat but some localised sharp drops are found.
- 5.4 There are a number of trees and groups within the garden mainly mature and significantly adding to the character of the house from both an amenity and historical perspective.
- 5.5 Viewing the Cranfield soil map⁴, it appears that the soil is slowly permeable, seasonally wet slightly acid but base-rich loamy and clayey. Soil of this kind provides a good medium for tree growth. The modified plasticity index of the soil is not known.

⁴ Cranfield Soil and Agrifood Institute Soilscales. www.landis.org.uk/soilscales/



6.0 Summary of trees

6.1 All data gathered on trees is supplied in appendix E. Table 1 and 2 below give a summary of the information.

Category	Description of category	Number
A	High quality with an estimated remaining life span of at least 40 years. Particularly good examples of their species, especially if rare or unusual. They will be visually important and may have significant conservation or historical values.	0
B	Moderate quality and expected to remain between 20 to 40 years. Might have been included as a category A, but downgraded by impaired conditions. Possibly lacking special qualities to be regarded as Category A. Group which collectively increase its value from C to B or a particularly effective screen.	5
C	Low quality with an expected lifespan of 10 to 20 years or below 150mm in diameter. Unremarkable trees, either young, impaired or poor species. Unlikely to increase in quality as time goes by. No conservation or cultural value.	4
U	Those in such a condition that they cannot be realistically retained as living trees for longer than 10 years. Serious structural or physiological problems. Also dead trees.	0
Group	Trees of similar species, size or character which are grouped together. The number of the group is given together with the categorisation.	0
Hedge	Groups of trees planted in lines as a hedge. Trees originally planted as a hedge but have not been managed in some time, reverting back to a line of trees. The number of the hedge is given together with its categorisation.	0

Table 1: Number of categorised trees, groups and hedges. A brief description of categorisation together with colour coding. Appendix E gives full detail.

6.2 A brief description of pertinent data relating to all trees is given in table 2. A key to the table is found below it.

No.	Species	Height	Stem Dia.	Cat.	Comment
Ce1	Cedar	15	400	C	Significant defoliation
Cy2	Cypress	15	325	C	0
Li3	Lime	18	350	B	0
As4	Ash	23	650	C	small signs of ash dieback
Li5	Lime	21	450	B	0

RO6	Red Oak	14	275	B	0
Sy7	Sycamore	4	50	C	0
Li8	Lime	23	500	B	0
Li9	Lime	23	400	B	0

Table 2: Summary of trees (Key below)

No: Tree identifier using letters to indicate species and a sequential number.

G indicates a group, H indicates a hedge.

Species: Tree species using the common name.

Height: Height in metres.

Stem Dia: Stem diameter measured at 1.5 metres from the ground in millimetres.

Cat: Category in relation to BS5837. See Appendix C for details on categorisation.

Note: Numbers for sub-categorisation are not used.

Comments: Comments, if necessary. 0 if none.

7.0 Arboricultural impact assessment

- 7.1 No tree requires removal to allow the development to take place. Although there are a number of trees close to the proposal, construction will take place on existing concrete hardstanding of paths, shed bases and parking areas. These will protect roots of trees where they are covered by them.
- 7.2 The hardstanding where the campervan parking area is likely to require repair and possibly reinforcing. Such operations will need to avoid straying from the existing footprint. However, reinforcing might be made more practical by placing buttresses outside of the existing concrete to reinforce it. Foundations for such buttresses should be minimal and be no larger than 300mm from the existing concrete. Section 8 gives details on how these can be dug and put in place without causing significant harm to the trees.
- 7.3 Repair or renewal of the existing surfaces is likely to require the use of poured concrete which could mean significant poisoning of the soil and trees. Section 8 gives details of required methodology to prevent harm to nearby trees.
- 7.4 Although no plans are in place to add more to the existing hardstanding it may be that the drive will have to be slightly altered to make access to the campervan parking easier to navigate. Although outside of any RPA, it will be important to construct this without significant harm to the soil or roots, Section 8 gives details of this.
- 7.5 Red oak RO6 is a developing tree which is likely to become larger in the future and overhang the drive and parking area further. A light crown raise from 2m to 3m on the western and southern aspect of this tree will prevent branches from contacting vehicles without causing a significant change to the shape of the tree. Its amenity will not be harmed.

7.6 No other tree will be affected by the proposed development.

8.0 Tree protection

- 8.1 Appendix A and B show the category of trees, their crown spread and their root protection area (RPA), an area of rooting around the tree which if retained will provide suitable medium for the tree to continue to grow without significant harm.
- 8.2 RPAs do not show the entire rooting area of the tree. They may show just $\frac{1}{2}$ or $\frac{1}{3}$ of it depending upon site conditions. The RPA is usually drawn as a circle 12 times the diameter of the tree at 1.5m from the ground or its mathematical equivalent given in BS5837. However, site conditions may require the RPA to be drawn differently depending upon the most likely area where good rooting is found for the tree. In this case RPAs have not been altered as although there are a number of barriers to effective rooting, alteration of the RPAs does not further inform protection of trees to any extent.
- 8.3 Protected RPAs are to be kept clear of refuse, materials, fuels and chemicals. These items are to be prevented from leaking into RPAs, either above or below ground.
- 8.4 Protective fencing should be in place before any plant, materials, deliveries, site offices or skips arrive. No demolition or construction work is to take place until protective fencing is installed and approved for use.
- 8.5 Protective fencing similar to that shown in BS5837, shown in Appendix D, is to be used to protect RPAs from vehicular and foot access. The fencing is to be securely joined and attached to immovable objects to prevent it from being moved. Fencing should be firmly attached into the ground and will require tools to move it. The positioning of fencing is shown in appendix B.
- 8.6 The minimum distance required for protective fencing is shown in purple on the tree protection plan, Appendix B.
- 8.7 Any boundary fencing passing through RPAs should have post holes dug by hand avoiding severance of tree roots over 25mm in diameter. Should gravel boards be used, they are not to be dug into the ground.
- 8.8 Underground services are not to enter RPAs. There is sufficient space for services to be laid all around the building without entering RPAs. Should a service run be required within an RPA then a site-specific method statement is to be produced to show how this will not cause damage to trees.
- 8.9 The use of temporary ground protection next to the the campervan parking area will allow easy access for construction workers and prevent the need to move

fencing. Indentations in the ground should be filled with sharp sand to create a flat surface and then 18mm shuttering board should be laid on it and pinned in place to prevent it from moving.

- 8.10 Should current concrete surfaces need to be repaired or renewed it will be important to ensure that poured concrete is not allowed to fall or drip onto soil where it will cause damage. The use of shuttering board snugly butted up to existing surfaces and held in place with driven pins will avoid this without the need for excavations or major works. Once the concrete has gone off the pins and board can be removed.
- 8.11 Should the car parking area for the camper van require reinforcing or uprights need installing to support the roof, they will need to be placed within the RPA of trees. To prevent significant damage, post holes will need to be hand dug with them being as small as possible. Firstly, a hole will need to be cut in the shuttering board to allow access and then the post holes dug by hand. It is unlikely that large roots are to be encountered but if they do then the post holes will need to be moved to allow at least 25mm clearance from all large roots.
- 8.12 Large roots are considered to be over 25mm in diameter. Such roots will need to be retained and protected. Should a large root be found it should be carefully unearthed to assess its size. Large roots will need to be wrapped in a clean damp cloth whilst exposed to protect it from drying and UV light. Smaller roots below 25mm in diameter can be cut neatly with secateurs. Once the hole is dug it should be lined with a thin visquine to prevent poured concrete from leaching harmful chemicals into the soil.
- 8.13 Should any widening of the access drive be required, which it may not, it will need to occur without encroachment into RPAs. This can occur on the eastern side of the drive at its entrance and when closer to the garage on the western side. Protective fencing is positioned to help to facilitate this whilst protecting as much rooting area for the trees as is possible.

9.0 Conclusion

- 9.1 The proposal is to renew outbuildings and build a parking area for a campervan.
- 9.2 There are five B and four category C trees on the site which is a mature rural house set in extensive gardens.
- 9.3 No tree will need to be removed to allow the development to take place. However, care will be needed to ensure trees are not harmed by the development due to their proximity to it. Systems and methodology of work are put in place to prevent this.

- 9.4 Correctly placed fencing will ensure retained trees can be suitably protected during the build.
- 9.5 The proposal is arboriculturally sound and complies with BS5837.



Appendix A

Queensbridge House, Overton-on-Dee,
Wrexham

Tree Constraints Plan
Showing all trees, crown dimensions, tree
categories and root protection areas (RPAs)

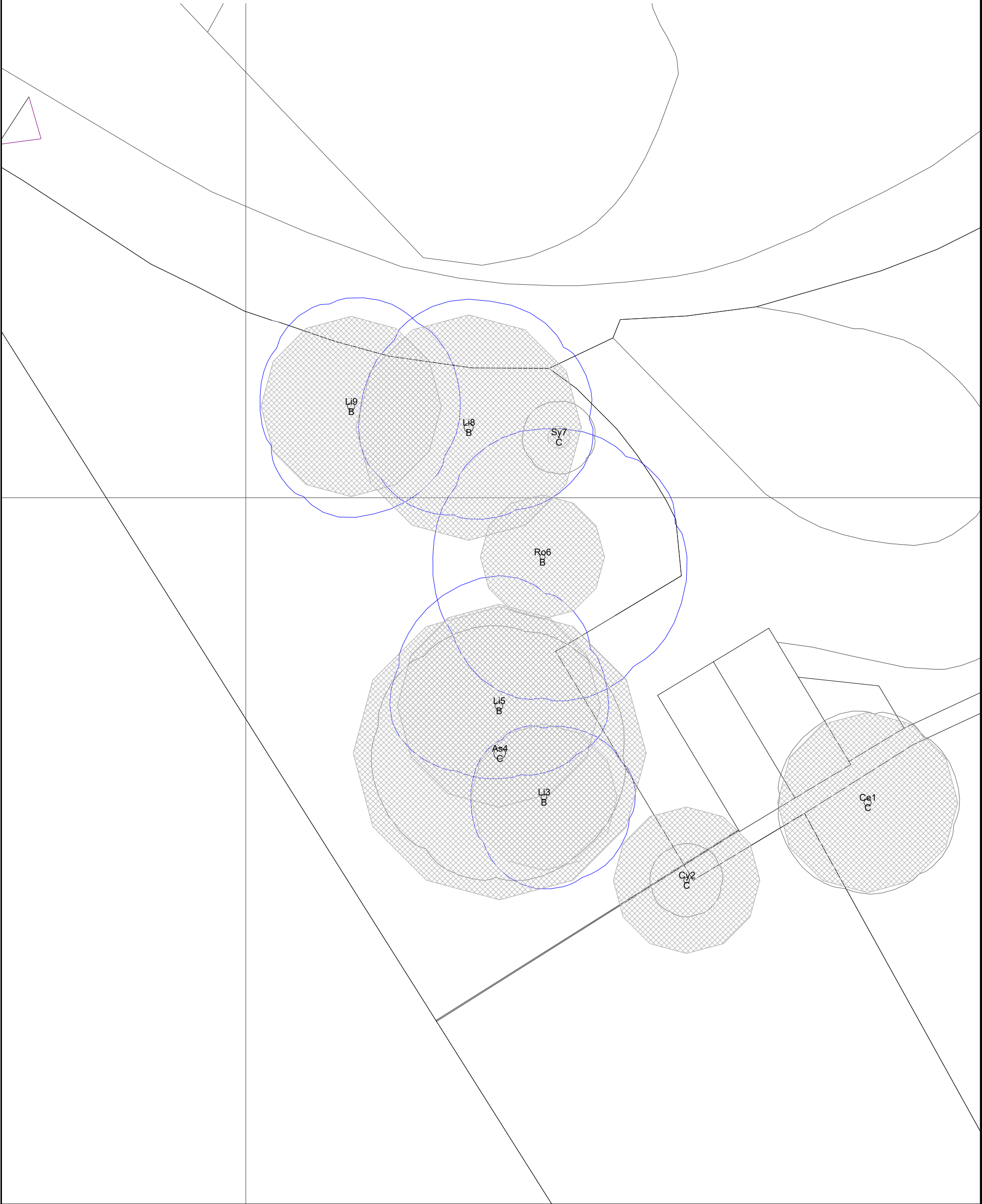
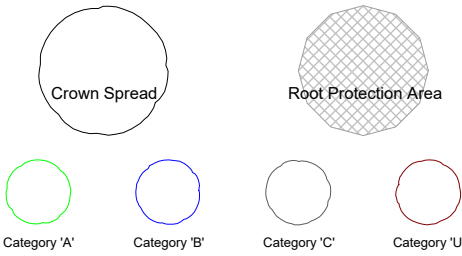
SCALE : 1 : 200	@ A3	DATE : 10/11/2022
David Bailey Old Oak Tree Care 01630 673216 07813 808174 oldoaktree@talktalk.net		



©2022 Old Oak Tree Care
This plan is to be reproduced in colour
B+W copies will not contain all information

Map reference:
PC22/568/TCP

Legend





Appendix B

Queensbridge House, Overton-on-Dee

Tree Protection Plan
Showing all retained trees, crown dimensions, tree categories, RPAs, protective fencing and special engineering

SCALE : 1 : 200	@ A3	DATE : 10/11/2022
David Bailey Old Oak Tree Care 01630 673216 07813 808174 oldoaktree@talktalk.net		



©2022 Old Oak Tree Care
This plan is to be reproduced in colour
B+W copies will not contain all information

Map reference:
PC22/568/TPP

Legend

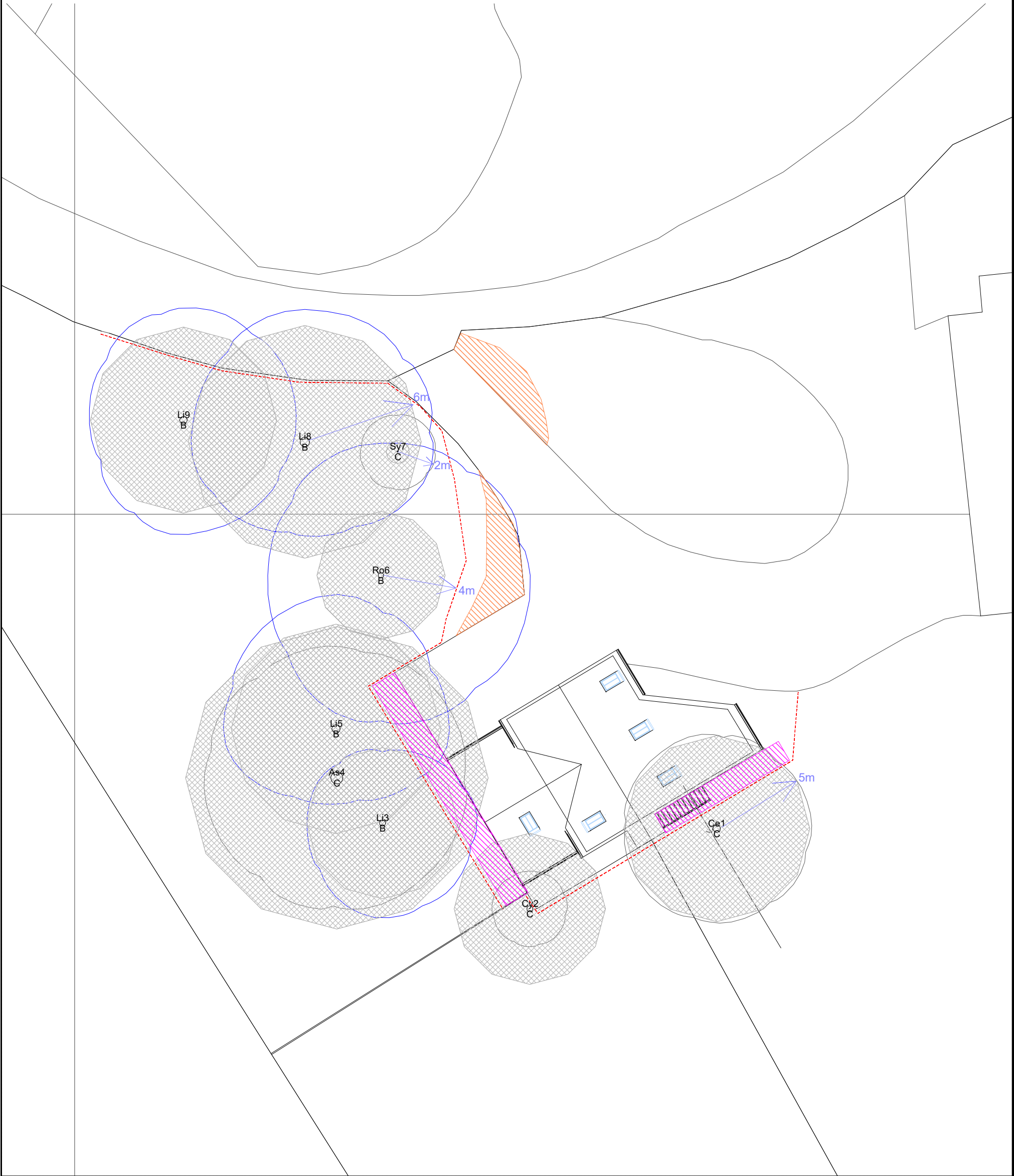
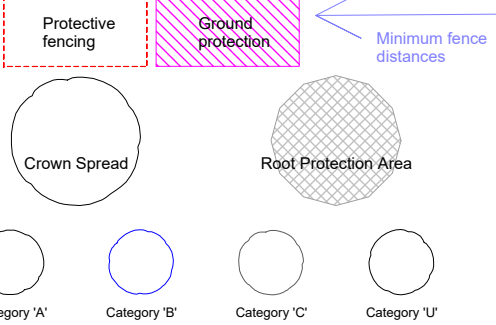


Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)	Identification on plan
Trees unsuitable for retention (see Note)		
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>	See Table 2
Trees to be considered for retention		
1 Mainly arboricultural qualities 2 Mainly landscape qualities 3 Mainly cultural values, including conservation		
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees with material conservation or other cultural value
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 with no material conservation or other cultural value

Figure 2 Default specification for protective barrier

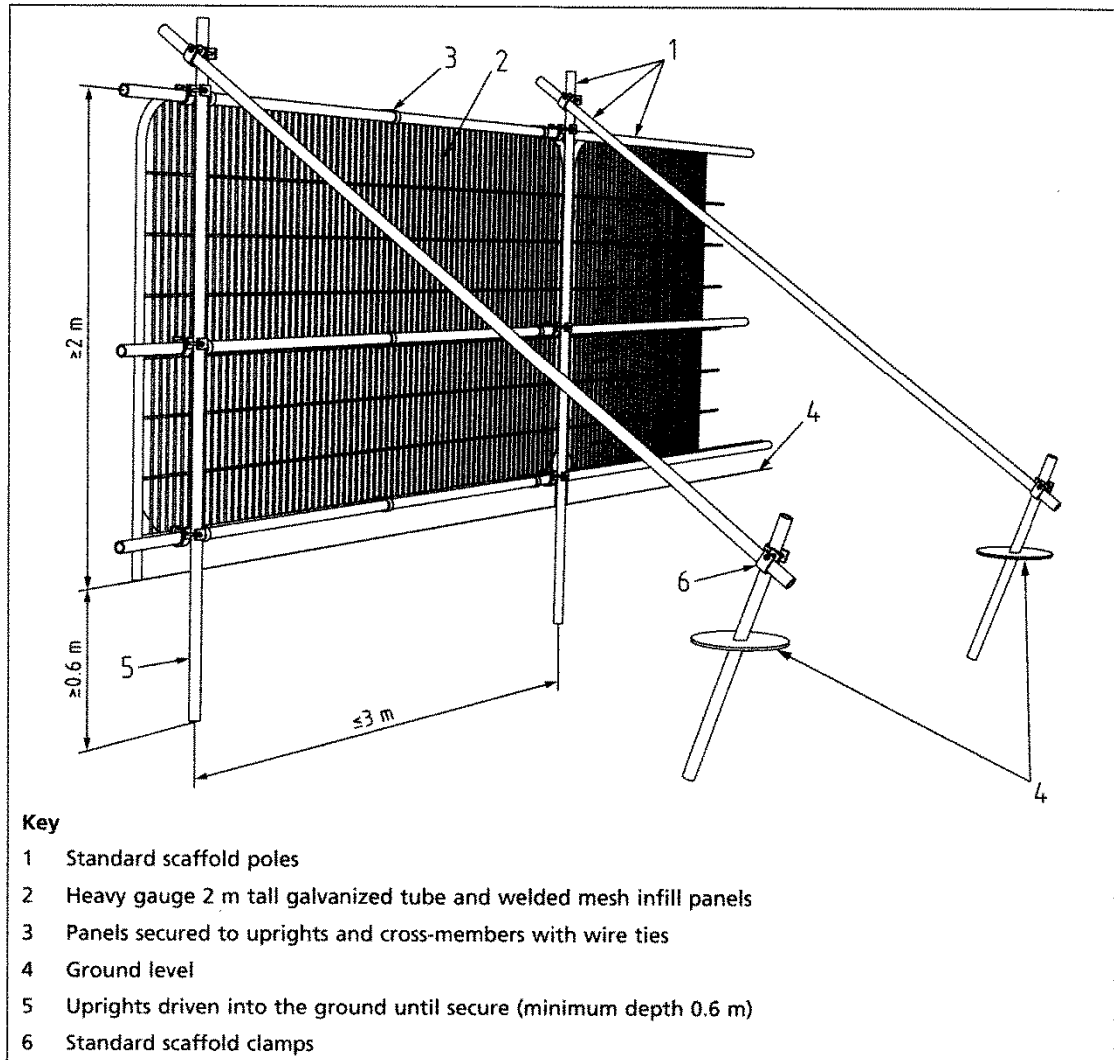
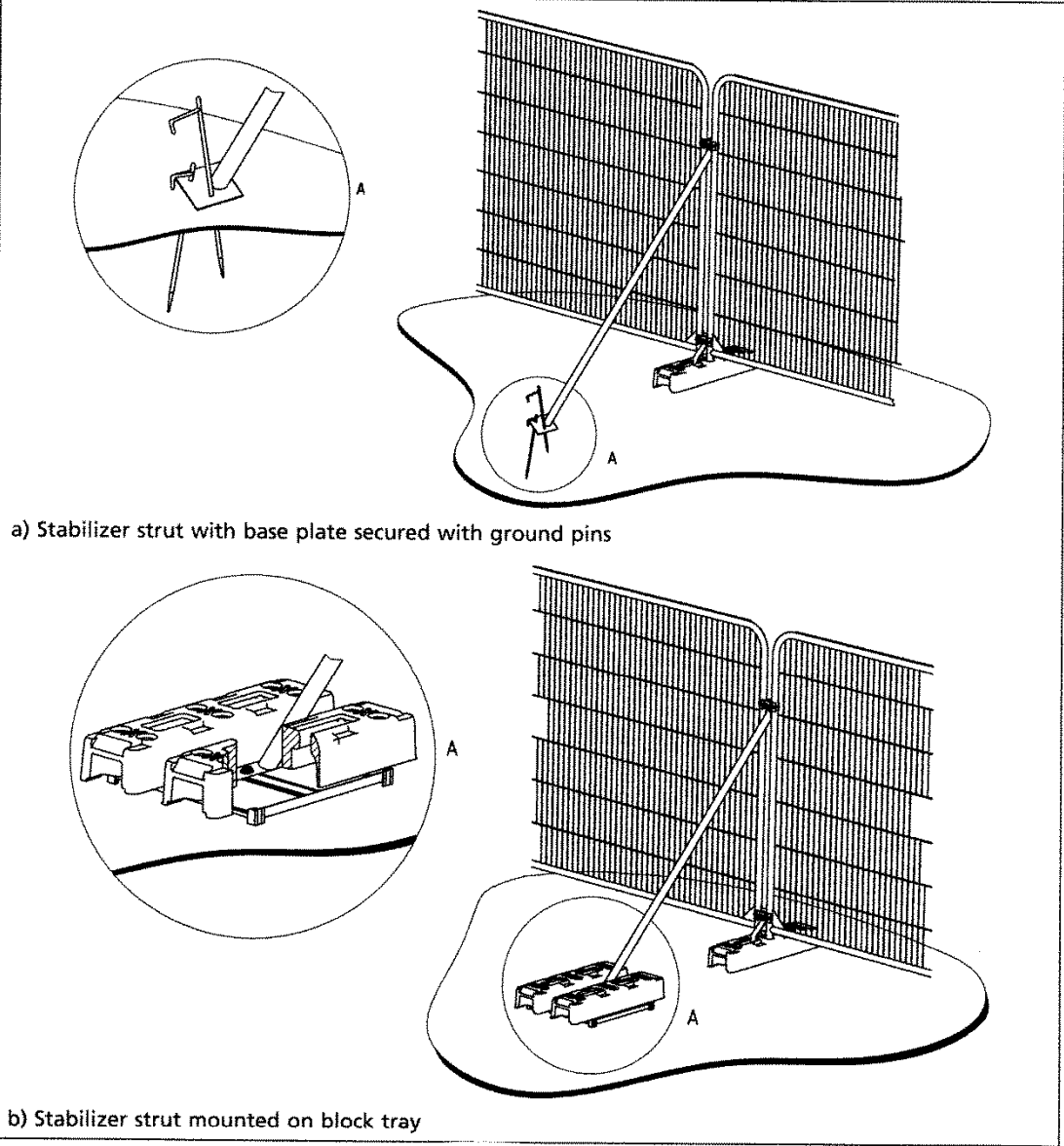


Figure 3 Examples of above-ground stabilizing systems



Appendix E Tree Schedule - Key

Where measurements are estimated due to lack of access or vegetation, a * denotes this.

Tree Number -	Identification for specific tree. Using a couple of letters to help with species identification together with a number. Groups or hedges will be identified as Gr.
Species-	Tree species, using common name.
Height-	Taken using angular triangulation function of a laser rangefinder.
Diameter-	Taken by measuring circumference with a tape measure and applying Pi equation or by measuring circumference by eye if entire circumference is not accessible (in this case denoted by *).
Crown spread-	Radius of crown at four cardinal points, north, east, south and west measured by laser rangefinder. (Estimates denoted with a *).
Crown height-	Height of lowest branch at each cardinal point. Measured by laser rangefinder. (Estimates denoted with a *).
Age bracket-	Estimated life stage of tree ranging from young, mid-aged, early-mature, mature and over-mature.
Physiological condition-	Assessment of health and vitality of the tree. Good, fair, poor or dead. Fair or poor will have more details attached.
Structural condition-	Assessment of physical structure of tree. Good, fair, poor or dead. Fair or poor will have more details attached.
Years remaining-	Estimate of likely useful life of tree taking into account age, species, character, situation and likely management requirements.
Quality assessment-	Subjective assessment. Either A-very good, B-good, C-reasonable or U-unsuitable for retention. See appendix C for more details.
RPA radius-	Positioning of root protection area (RPA) measured from centre of the tree to the radius. This is for circular RPAs. Where RPAs have been adjusted for site conditions and are no longer circular this value will not be correct.
RPA area-	Area of RPA irrespective of its shape.
Notes:	Any notable comments on group make up, physiological, structural condition or notable features.

Appendix E		Tree Schedule																	
Tree number	Species	Height (m)	Diameter (mm)	N Crown spread (m)	E	S	W	N Crown Height (m)	E	S	W	Age bracket	Physiological Condition	Structural Condition	Years remaining	Quality assessment	RPA radius(m)	RPA Area (m2)	Notes
Ce1	Cedar	15	400	5	5	5	5	3	3	3	3	mature	fair	good	10 to 20	C	4.8	72	0
Cy2	Cypress	15	325	2	2	2	2	1	1	1	1	early-mature	good	good	20 to 40	C	3.9	48	0
Li3	Lime	18	350	4	5	5	4	1	1	1	1	mature	good	good	20 to 40	B	4.2	55	0
As4	Ash	23	650	7	7	7	7	12	12	12	12	mature	good	good	10 to 20	C	7.8	191	small signs of ash dieback
Li5	Lime	21	450	7	6	4	6	9	9	9	9	mature	good	good	20 to 40	B	5.4	92	0
RO6	Red Oak	14	275	7	8	8	6	2	2	2	2	early-mature	good	good	20 to 40	B	3.3	34	0
Sy7	Sycamore	4	50	2	2	2	2	1	1	1	1	young	good	good	20 to 40	C	0.6	1	0
Li8	Lime	23	500	7	7	5	6	2	2	2	2	mature	good	good	20 to 40	B	6	113	0
Li9	Lime	23	400	6	6	6	5	7	7	7	7	mature	good	good	20 to 40	B	4.8	72	0