



Arboricultural Report

**New agricultural building
Land to the southwest of Top Farm
Erbistock
Wrexham**

Commissioned by:
Gareth Edwards
DPA

Surveyed and reported on by:
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Report Date:
6 June 2023

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Appendix A:	Tree constraint plan	PC22/618/TCP
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Appendix C:	Tree categorisation	Table 1 of BS5837:2012
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1.0 Summary

- 1.1 The proposal is to build a new agricultural building on the corner of a field.
- 1.2 There are five category B trees and one category C group on or next to the site.
- 1.3 No trees need to be removed to allow the development to take place. A small amount of crown raising on the side of one tree will be required to allow space for the building. The amenity provided by the tree will not be affected.
- 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 Gareth Edwards of Design and Planning Associates Ltd to carry out a survey at land to the southwest of Top Farm and record all significant trees that may be affected by the proposed development.
- 2.2 The proposal is to build a new agricultural building at the corner of a field.



- 2.3 There are a number of trees in and on the boundary of the site. 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 (TPOs), conservation area status or historical planning conditions has not been investigated. The existence of any statutory protection of trees can be gained from the Council².
- 3.3 Plans supplied to myself:

- i) Site topographical survey and proposal supplied by DPA.

Plans I have produced to accompany this report:

- i) Tree Constraints Plan PC22/618/TCP
ii) Tree Protection Plan PC22/618/TPP

- 3.4 Where buildings are constructed close to trees, reference should be made to the NHBC Standards 2023³. 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 Wrexham Borough County Council Planning Department planning@wrexham.gov.uk 01978 298994

³ National House Builders Council Standards 2023 Part 4, Chapter 2 Building near trees <https://nhbc-standards.co.uk/>



4.0 Method of survey

- 4.1 The survey was undertaken on 24 May 2023.
- 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 the corner of an agricultural field set in a rural location.
- 5.2 To the north is a lane with agricultural fields beyond it. In a westerly and southerly direction is a sunken lane leading to a number of properties and fields. To the west is the field in which the building is to be placed
- 5.3 The level of the land slopes gently down from north to south with the lane to the east and south falling away to considerably lower than the field
- 5.4 There are a number of trees within and on the boundary of the site, some large and many self-set. Most trees are found on the bank to the east and south of the site.
- 5.5 Viewing the Cranfield soil map⁴, it appears that the soil is freely draining slightly acid and loamy. 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.	0
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.	1-C
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
Ok1	Oak	18	750	B	Much deadwood in tree
Sy2	Sycamore	20	650	B	0
Be3	Beech	23	1000	B	Branch has failed at top but otherwise OK
Be4	Beech	23	950	B	Some damage where tree overhangs site
G5	Group	15	300	C	Group of cherry, hawthorn, hazel and ash
Ok6	Oak	21	975	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 needs to be removed to allow the proposal to be built.
- 7.2 A small amount of crown raising will need to occur on Sy2 to allow the building to be constructed. The crown should be raised from 6m on its western aspect to 8m high to prevent branches coming into contact with the new building and allow space for workers constructing it.
- 7.3 The small amount of tree work will be of no harm to the sycamore and the amenity provided by trees to the area will not be affected.
- 7.4 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, for multiple stemmed trees, 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, No RPA has been altered.
- 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 presented 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 and the minimum distances shown in purple.
- 8.6 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.

9.0 Conclusion

- 9.1 The proposal is to build a new agricultural building on the corner of a field.
- 9.2 There are five category B trees and one category C group on or next to the site.
- 9.3 No trees need to be removed to allow the development to take place. A small amount of crown raising on the side of one tree will be required to allow space for the building. The amenity provided by the tree will not be affected.
- 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

Land sothwest of Top Farm,
Erbistock, Wrexham

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

SCALE :
1 : 500 @ A3

DATE :
08/06/2023

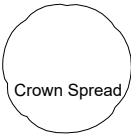
David Bailey Old Oak Tree Care 01630 673216
07813 808174 oldoaktree@talktalk.net



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Map reference:
PC23/618/TCP

Legend



Crown Spread



Root Protection Area



Category 'A'



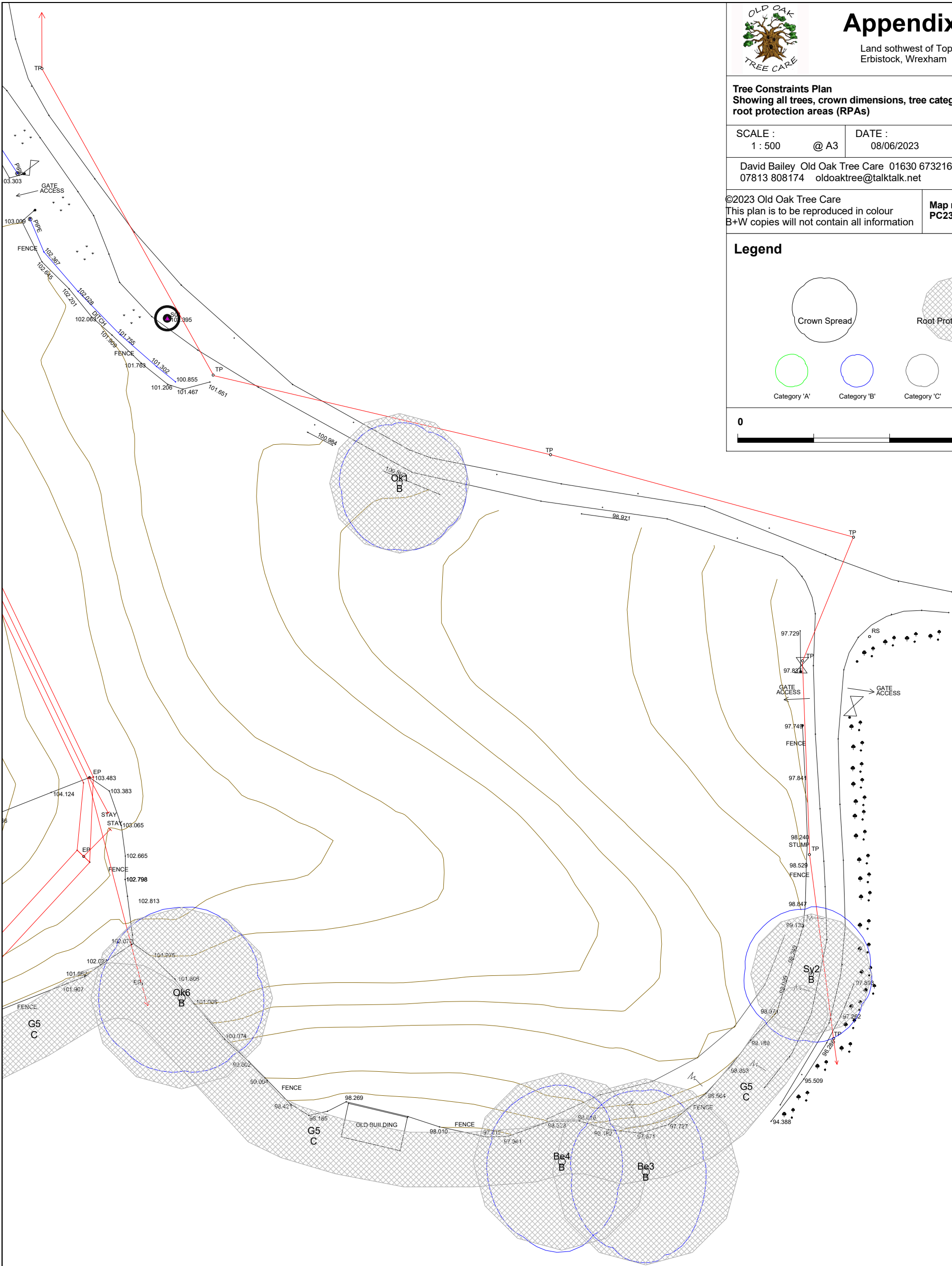
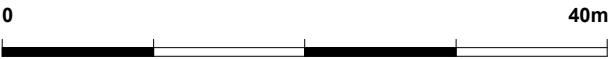
Category 'B'



Category 'C'



Category 'U'





Appendix B

Land to the southwest of Top Farm,
Erbistock, Wrexham

Tree Protection Plan
Showing all retained trees, crown dimensions, tree categories, root protection areas and protective fencing

SCALE :
1 : 500 @ A3

DATE :
08/06/2023

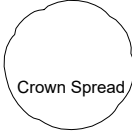


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Map reference:
PC23/618/TPP

Legend



Category 'A'

Category 'B'

Category 'C'

Category 'U'

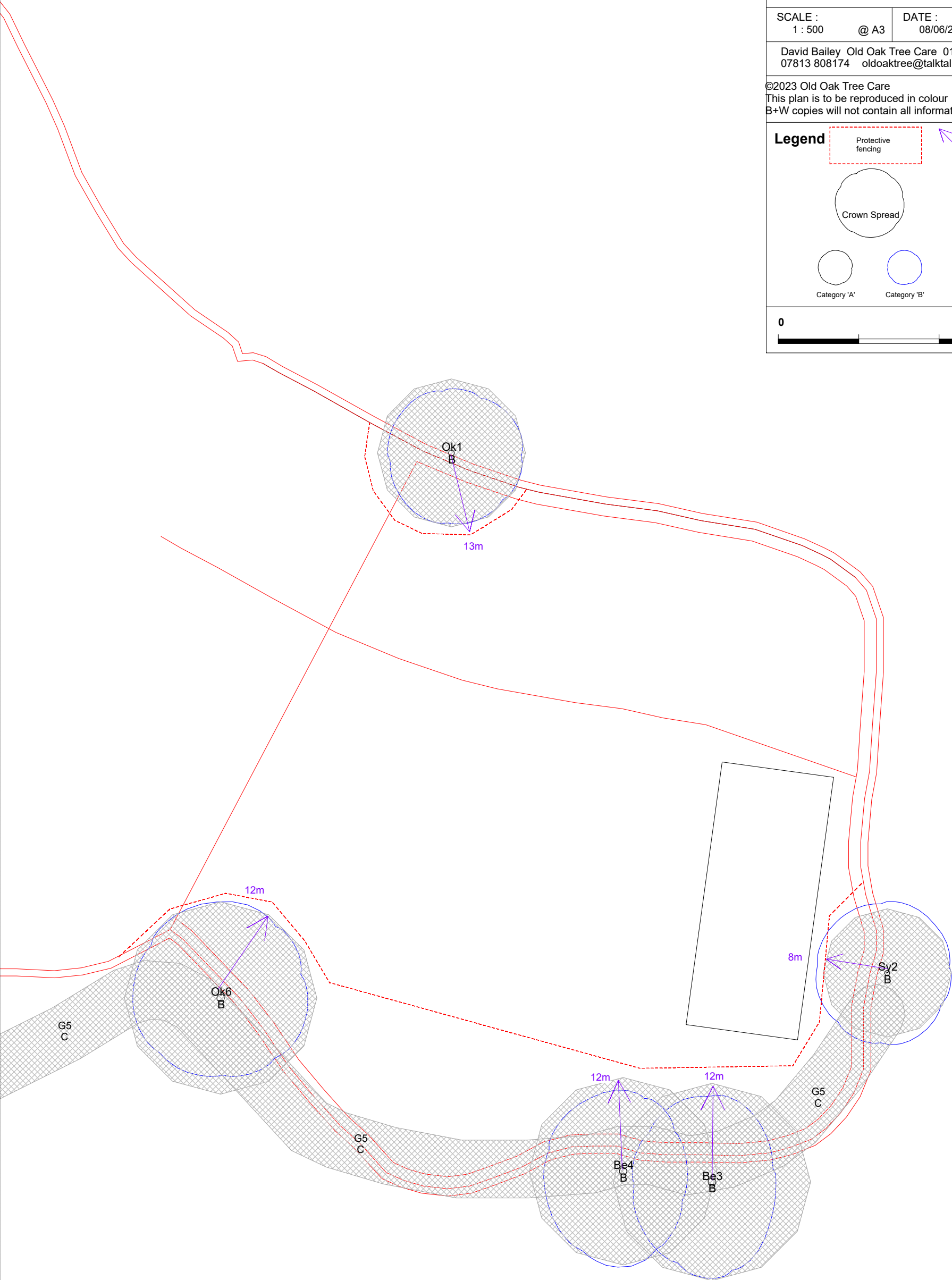
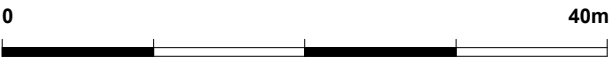


Table 1 Cascade chart for tree quality assessment

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

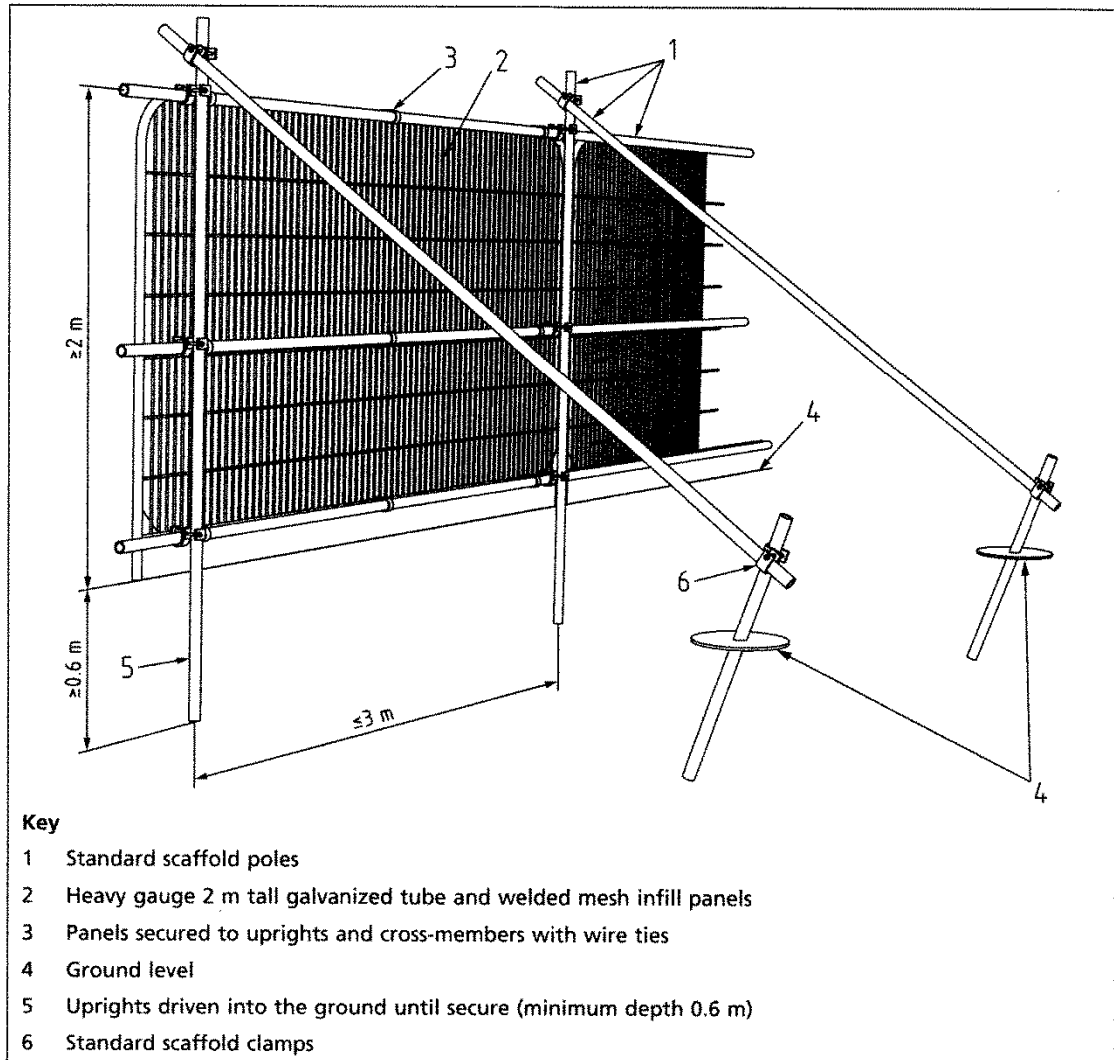
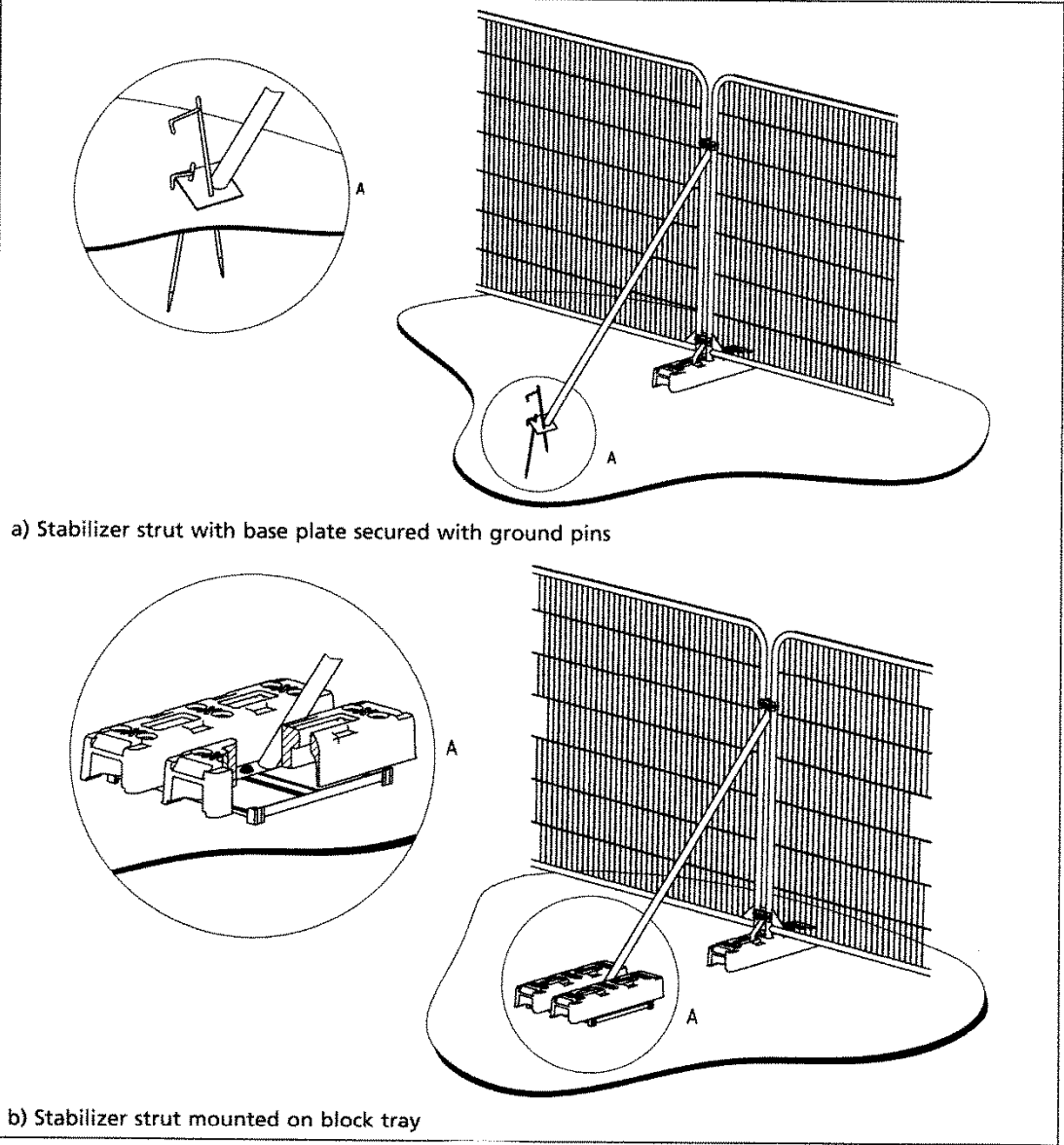


Figure 3 Examples of above-ground stabilizing systems



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
Ok1	Oak	18	750	8	9	9	8	6	4	4	4	mature	fair	fiar	10 to 20	B	9.0	254	0
Sy2	Sycamore	20	650	9	8	9	9	3	10	6	6	mature	good	good	20 to 40	B	7.8	191	0
Be3	Beech	23	1000	11	8	12	10	3	3	3	3	mature	good	good	>40	B	12	452	Branch has failed at top but otherwise OK
Be4	Beech	23	950	10	8	12	10	5	5	5	5	mature	good	good	>40	B	11.4	408	Some damage where tree overhangs site
G5	Group	15	300	5	5	5	5	3	3	3	3	early-mature	good	good	20 to 40	C	3.6	41	Group of cherry, hawthorn, hazel and ash
Ok6	Oak	21	975	12	11	10	11	8	8	8	8	mature	good	good	>40	B	11.7	430	0