



Arboricultural Report

**New Garage
Lyndhurst
Wynnstay Lane
Marford
Wrexham**

Commissioned by:
Stuart Woolrich
Owner

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

Survey date:
3rd February 2021

Report date:
6th January 2021

50 Chestnut Road, Loggerheads, Market Drayton, Shropshire, TF9 4BL

Tel: 01630 673216

Mob: 07813 808174

Web: www.oldoaktreecare.co.uk

email: oldoaktree@talktalk.net



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1.0 Summary

- 1.1 *It is proposed to build a new garage on a parking area at Lyndhurst.*
- 1.2 *There are three category C trees on or next to the site.*
- 1.3 *One category C tree near the end of its life will be removed. Two new quality trees will be planted to produce a net gain in trees and add to the character and appearance of the area.*
- 1.4 *A small encroachment into the RPA of another offsite tree is unlikely to cause harm as the area has been excavated in the past and is currently used as a parking space.*
- 1.5 *Trees can be effectively protected during the building process by using protective fencing.*
- 1.6 *The proposal is arboriculturally sound.*

2.0 Instructions

- 2.1 I am instructed by owner, Stuart Woolrich to carry out a tree survey at Lyndhurst in Marford.
- 2.2 The proposal is to build a new garage at the property.
- 2.3 There are several trees on-site or on the boundary varying in age and quality. Some of them are in proximity to the proposed development. Consideration is to be made

to justify any tree removal or work to them and ensure retained specimens are not significantly damaged by the proposal.

- 2.4 I am to produce a tree report to support the planning application.
- 2.5 The report is to be compliant with BS5837:2012 Trees in relation to design, demolition and construction: Recommendations (BS5837:2012 hereafter).

3.0 Preliminary Matters

- 3.1 The survey and report cover only arboricultural matters relating to trees that will be affected by the proposal.
- 3.2 The report deals with identifying the benefits and constraints trees will impose on the development site, if trees will need to be removed to allow construction, how remaining specimens can be protected and how retained trees will affect the site.
- 3.3 Statutory protection of trees, either tree preservation orders, conservation area status or historical planning conditions have not been investigated.
- 3.4 Plans supplied to myself:
 - i) Site plan and proposal supplied by Stuart Woolrich.

Plans I have produced to accompany this report:

- i) Tree Constraints Plan PC20/456/TCP
 - ii) Tree Protection Plan PC20/456/TPP
- 3.5 Where buildings are constructed close to trees, reference should be made to the National House-Builders Council Standards Plus 2020 chapter 4.2. www.nhbc.co.uk 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.
 - 3.6 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.

4.0 Method of Survey

- 4.1 The survey was undertaken on 3rd February 2021.
- 4.2 Trees were surveyed to measure height, trunk diameter, crown spread and height, health, structural condition, estimated remaining life and overall quality.
- 4.3 Information was gathered to comply with section 4.4.2 of BS5837.
- 4.4 Stem diameters were measured using a surveyor's tape. Crown spreads and heights were estimated using a laser rangefinder. Heights were estimated using the height function of the laser rangefinder.
- 4.5 Where trees could not be reached when off-site, dimensions were estimated.

5.0 Site Details

- 5.1 The site is a parking area next to a detached property in a residential area.
- 5.2 To the north, is a residential property and house at a higher level. In an easterly direction is the house, Wynnstay. To the south and west is Mareilian Avenue and Wynnstay Lane respectively.
- 5.3 There are several garden trees, on, or along the boundary of the site which adds to the character and appearance of the area.
- 5.4 There is a significant drop from the garden to the north of the site into it. It appears that excavations have taken place some time ago to level the parking area. Severed roots of the cherry Ch1 are found around the edge of the excavations.
- 5.5 Viewing the Cranfield Soil and Agrifood Institute's Soilscales map www.landis.org.uk it appears that the soil is a freely draining, slightly acidic sandy soil. Soil of this kind provides a good medium for tree growth. The modified plasticity index of the soil is not known.

6.0 Extract Tree Schedule

- 6.1 All tree data is supplied in Appendix E. Table 1 and 2, below, gives a summary of information.
- 6.2 Table 1 gives a brief description and breakdown of tree categories for single trees, groups and hedges.

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 increases its value from C to B or a particularly effective screen.	0
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.	3
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.

6.3 A brief description of trees and features are given in table 2. A key to the table is found below it.

No.	Species	Height	Stem Dia.	Cat.	Comment
Ch1	Cherry	7	625	C	squat tree reduced many times
Cy2	Cypress	12	475	C	0
Cy3	Cypress	9	450	C	0

Table 2: Extract Tree Schedule (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 5.2 and 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 The garage will sit in a previously excavated area next to the house. It should be noted that the plans show the roof dimensions and the walls will be approximately 400mm within the structure from the roof line.
- 7.2 The large cherry tree Ch1 is situated next door and is a twin stemmed garden tree of considerable trunk diameter. It has been cut back many times to retain a small crown space. Although the trunk diameter would suggest the shown root protection area (RPA), it is likely to be considerably smaller than indicated.
- 7.3 Further to this, the RPA is likely to have been significantly altered by the excavations within the site, carried out some time ago to flatten the car parking area. There are signs of cherry roots that have been cut in the walls of the excavations. It is unlikely that the area underneath the proposed garage will be a good rooting area for the tree.
- 7.4 The garage will require excavations within 6m² of the trees shown circular RPA. This represents less than 3% of the trees total RPA and given the area has been significantly disturbed, it is unlikely that any significant roots will be damaged or the tree will unduly suffer.
- 7.5 It is recognised that both Ch1 and the cypress Cy2 are old trees reaching the end of their useful lives. Although these trees provide some amenity to the area, this is not substantial or likely to be long lasting. Although not necessary for the development, it is proposed to remove Cy2 where there is the best opportunity for a large tree and plant an upright form which will not significantly spread to cause maintenance issues for the home owner. An upright form of native oak such as the cypress oak *Quercus robur* 'fastigiata' or the hybrid oak *Quercus bimondorum* 'Crimschmidt' which has a striking autumnal colour.
- 7.6 A smaller tree could be planted on the other side of the drive. Rooting potential here is limited therefore a hardy tree which can cope with such conditions is required. The Willow-leaved sea buckthorn *Hippophae salicifolia*, 'Streetwise' has a good upright form and is very hardy.
- 7.7 Both trees should be planted as standard to light standard size, 2 to 3 metres high.
- 7.8 The loss of the cypress will cause a slight loss of amenity provided by trees to the area. However the replacement trees will ensure an increase in this amenity once the trees have established themselves.

8.0 Tree Protection

- 8.1 Appendix A and B show the crown spread and root protection area (RPA) of each tree. The area covered by these items require careful consideration within the design and construction process as damage to the tree within these areas will be very harmful to it. These zones are primarily set aside for the tree.
- 8.2 RPAs do not show the total extent of the tree's roots. The RPA is likely to be just one-third of the tree's total root system. This design tool recommends an area of 12 times the diameter of the tree's trunk, or mathematical equivalent for multi-stemmed trees, to be set aside for the tree and protected. This will ensure that a core area of rooting can be protected from harm allowing the tree to be retained without significant damage or reduction in longevity.
- 8.3 It is recommended that RPAs are initially drawn as a circle around the tree. However, the presence of poor rooting areas such as under housing, roads, significant walls, watercourses, historical damage or buried obstructions will alter this. In this case, RPAs have been drawn as circles even though many barriers to rooting exist such as roads, paved areas and significant level changes. In this case, the RPA has been left as circles.
- 8.4 Protected RPAs are to be kept clear of refuse, materials, fuels and chemicals. These items should also be prevented from leaking into the RPAs.
- 8.5 Fencing should be in place before any deliveries, plant, site offices or skips arrive on site. No demolition or construction work should take place until the fencing is fully erected.
- 8.6 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.
- 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 A parking area, storage area and mixing area are shown in appendix B. This is to ensure that mixing of possibly noxious products will occur away from RPAs where spillages could cause harm to tree roots. The mixing area will have an impenetrable base with a 50mm bund around it to prevent any spillage or washing entering into the soil.
- 8.9 Underground services are not to enter 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 garage at Lyndhurst on a parking area.
- 9.2 There are three category C trees on or next to the site.
- 9.3 The trees close to the development are of low quality and are not likely to live for a considerably useful amount of time. Although the Cherry Ch1 can remain in place with just a small encroachment into its shown RPA, it is proposed to remove the cypress Cy2. Two replacement trees will be planted to significantly improve the amenity provided by trees to the area.
- 9.4 Although there is an encroachment onto 4% of Ch1's RPA former excavations here and its use as a parking area indicate that it is unlikely that this position is an important rooting area for the tree. Significant damage to the tree is not expected from the excavations to lay foundations for the garage.
- 9.5 Fencing will ensure retained trees can be suitably protected during the build.
- 9.6 The proposal is arboriculturally sound and complies with British Standard 5837:2012 Trees in relation to design, demolition and construction: Recommendations.



Appendix A

Lyndhurst, Wynnstay Lane,
Marford, Wrexham

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

SCALE :
1 : 200

@ A3

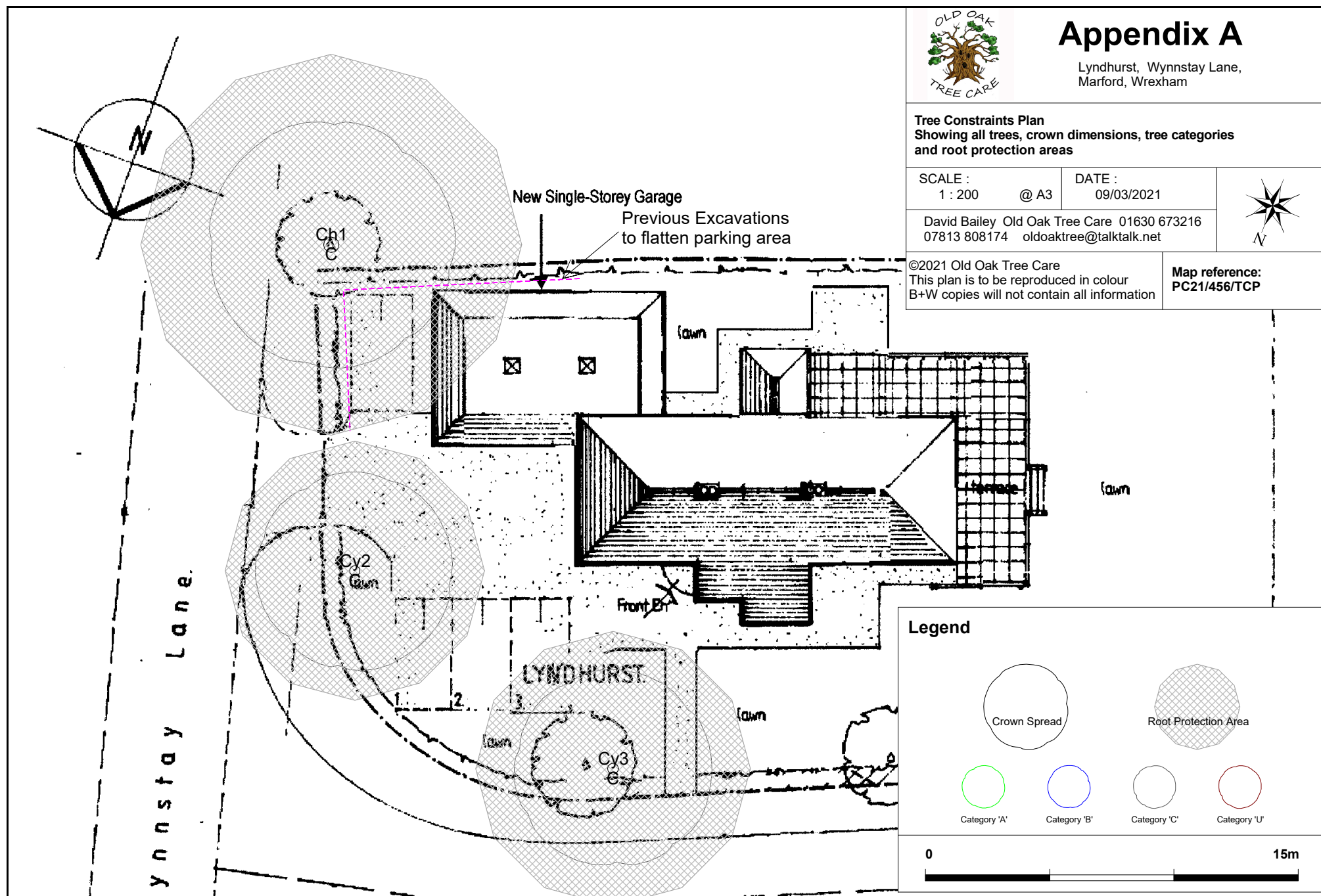
DATE :
09/03/2021

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



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Map reference:
PC21/456/TCP





Appendix B

Lyndhurst, Wynnstay Lane,
Marford, Wrexham

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

SCALE :
1 : 200

@ A3

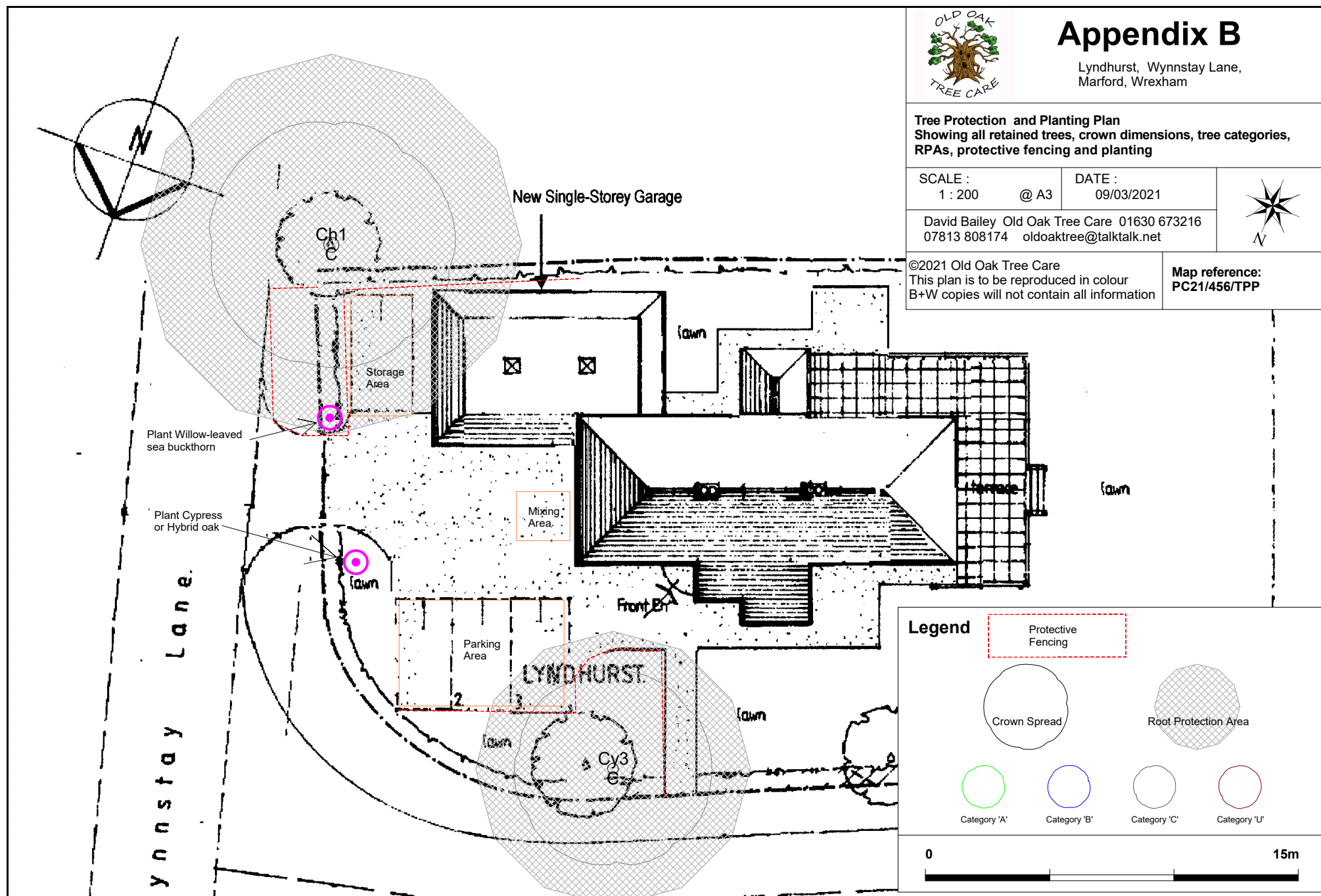
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09/03/2021

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



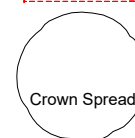
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Map reference:
PC21/456/TPP



Legend

Protective
Fencing



Crown Spread



Root Protection Area



Category 'A'



Category 'B'



Category 'C'



Category 'U'

0

15m



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
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 (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)	See Table 2
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 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	See Table 2
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	See Table 2

Figure 2 Default specification for protective barrier

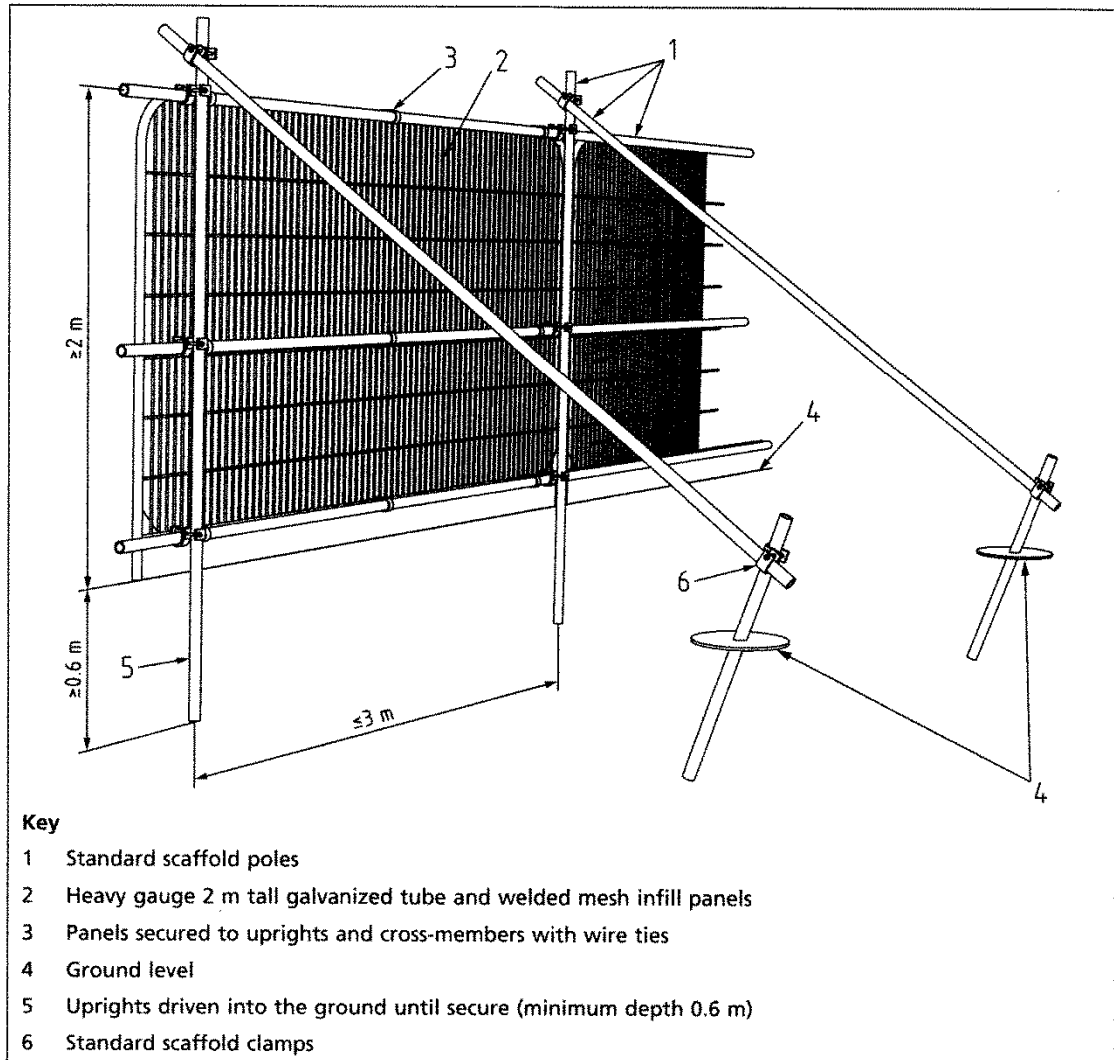
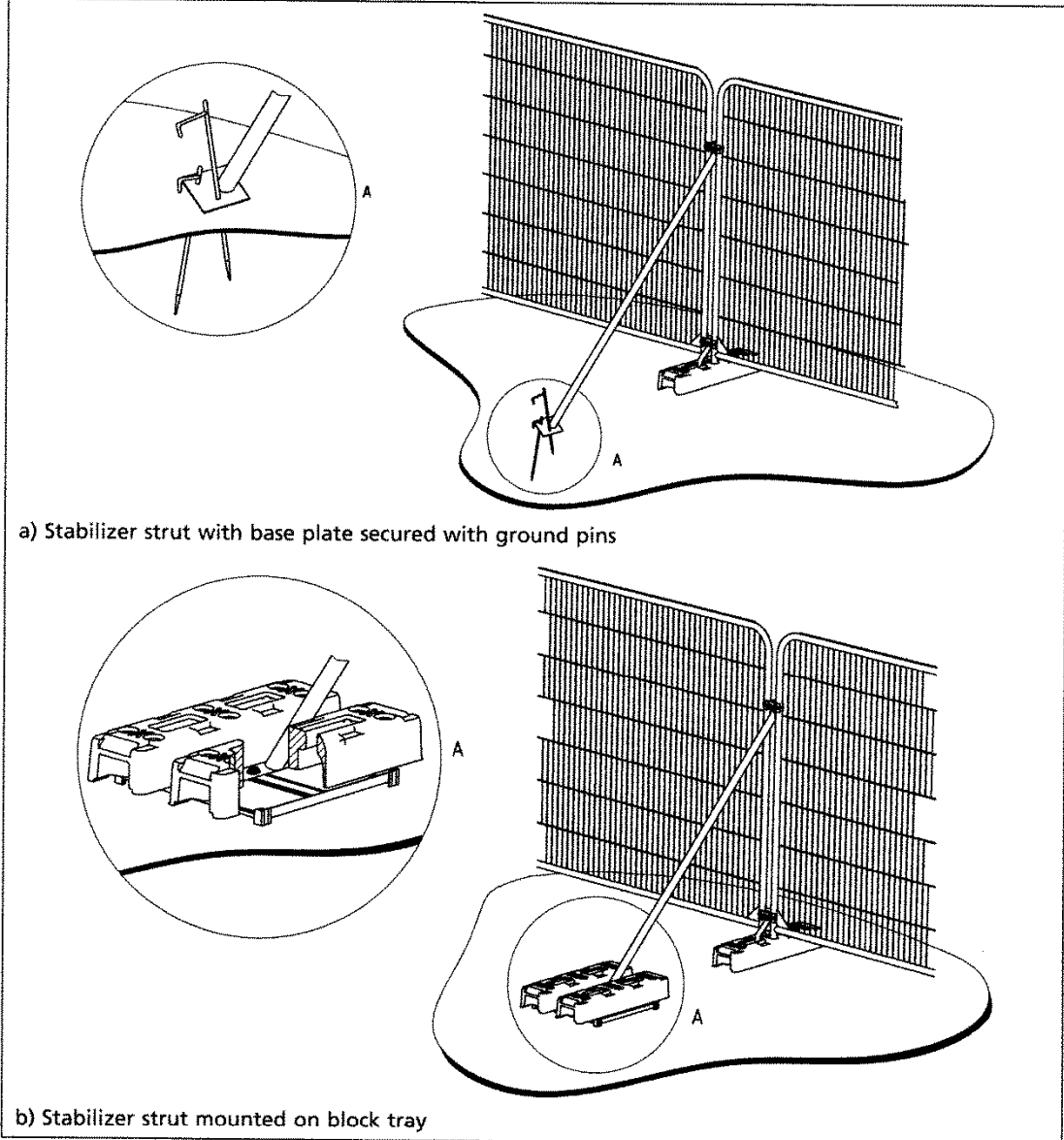


Figure 3 Examples of above-ground stabilizing systems



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.

[illegible]