Arboricultural Report

Boulders, Higer Penquite, St Breward, PL30 4NX

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Wildwood Trees
Trelavour
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[redacted]

Prepared for: Mrs S. Levers

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Arboricultural report

1.0 Instructions

1.1 I have been instructed by Mrs Levers to carry out a tree inspection, to BS 5837:2012, of all significant trees and shrubs at the above location, with reference to a proposed new development at the site.

1.2 This report:

a) Surveys the trees on site, according to BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations'
b) categorises trees in order of retention, (to BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations')
c) makes recommendations for the immediate and future management of the trees to be safely retained, based on my experience as an arboriculturalist
d) Provides specification for tree protection during the construction process.

1.3 I confirm I hold a BSc degree and hold the Technician's Certificate in Arboriculture (Arboricultural Association). I also have over twenty five years experience of working in the industry.

2.0 Report Limitations

2.1 The inspection and survey was carried out using Visual Tree Assessment (VTA) methodology (Mattheck&Breloer, 1994), from the ground, with the aid of a sounding mallet and binoculars. Should more detailed inspection of a tree be required this will be highlighted in the report.

2.2 Trees are living organisms whose health and condition can change rapidly. The health and condition of a tree should be checked on a regular basis, preferably at least once a year. The findings of this survey are only valid for one year from the date of the survey. This period of validity may reduce in the case of any change in conditions to or in proximity to the tree, or after any significant climatic event.

2.3 The survey is primarily concerned with the condition of the existing trees. Any discussion of soil characteristicsis only presented where this may have direct effect on tree or root growth. This report does not seek to address the specific area of subsidence risk.

2.4 The limit of Wildwood Trees indemnity over any matter arising out of this report extends only to the instructing client, namely Mrs Levers. Wildwood Trees cannot be held responsible for any third party claim that arises following or out of this report.

3.0 Introduction

3.1 I visited the site on 21st January 2020. The weather was wet and misty. Visibility was fair.

3.2 This site is a bungalow, with associated garden, mainly to the west and south. The land is very slightly sloping (or terraced to the west) and has an entrance drive and

off road parking area in the north of the plot. Extensive ornamental tree planting through the garden has given it a very enclosed feel. There are other residential properties adjacent to the bungalow, in all four directions. The village is relatively exposed, being located on the edge of Bodmin Moor.

3.3 No Tree Preservation Orders or Conservation Area status has been indicated on the land at the time of survey.

4.0 Soils

4.1 Note: Soils have not been excavated, nor have any samples been taken or analysed. The following comments are based on a desk study and basic observations on site.

The soils underlying the site are designated as freely draining, acid loamy soils over rock on the NSRI 'Soilscapes' soil dataset. Habitats include steep acid upland pastures, dry heath and moor; gorse, bracken and oak woodlands.Soil fertility is generally low and land cover is mainly grassland and rough grazing.

5.0 Tree Constraints Plan

5.1 The Tree Constriants Plan indicates the extensive ornamental tree planting that has taken place in this garden. Individually, most of the trees are still quite young, (with heights between 4 and 8m and stem diameters around 200mm) and most have been classed as 'C' category for this reason.

5.2 Elm (T11), on the western boundary of the plot, is a fair size, (11m height and 8m canopy spread) and is recommended for retention, although it will need monitoring for any signs of Dutch Elm Disease infection.

5.3 Unfortunately Oak (T1) is located close to the powerlines, so will continue to be periodically trimmed or topped by the utility company. Again this only attains a 'C' category.

5.4 Lime (T24) could be a significant tree, being of good upright form and condition. Yew (T23) is likely to be long lived.

5.5 Lawson's cypress (T22) and (T25) are signifciant trees for this site, since they are located in the neighbouring garden to the south. (T25), with a multi-stemmed diameter of 605mm, giving a Root Protection Area of 7.2m radius, shown on the Constraints Plan.

5.6 Group (G1) has some screening value for the site, but will again need to trimmed periodically by the utility company.

5.7 Please see attached is a Tree Constraints Plan, showing the location of the principle trees on the site, with retention category colour coding and Root Protection Areas (RPA) plotted as radiuses given in the schedule in the Appendix. Also attached is a Tree Protection Plan, showing the location of the protective fences to be erected, around the retained trees.

Also attached is the schedule, which presents the following information:

- Tree number as shown on plan
- T= tree, G= Group, H= Hedge, W= Woodland
- Tree species (common name in brackets)
- Height in metres
- Crown spreads, N, E, S, W (in metres)
- Stem diameter at 1.5m height (in millimetres)
- Height to lowest branch (Crown clearance) in metres
- Age class (see key)
- Root Protection Area, given as radius of circle (in metres) (as calculated in section 4.6 of BS5837:2012)
- Physiological condition (see key)
- Structural condition
- Preliminary management recommendations, including further investigation
- Estimated remaining contribution in years (see key)
- Retention category grading (see key)

6.0 Tree Protection; Method Statement

6.1 BS5837: 2012 'Trees in relation to design, demolition and construction – Recommendations' requires that all retained trees should be protected by the establishment of protection zones marked by the erection of protective fencing and or ground protection at given distances: within which no development or construction activity should take place. All tree work should be completed and protection fences erected before any construction or ground work operations take place. The fences should remain in places until which time all development is completed.

6.2 The specification for fences, suggested in BS5837:2012, is a scaffold framework of vertical and horizontal tubes, well braced to resist impacts, with the vertical tubes spaced at a maximum interval of 3m. Onto this, weld mesh panels should be securely fixed with wire or scaffold clamps. All weather notices should be fixed to the barrier saying 'Construction exclusion zone – keep out'. (For diagram of fence see Figure 1).

The area within these barriers should remain sacrosanct at all times. No development should take place, no materials stored, fires lit, soil levels altered or any other activity that may compromise the health of the retained trees and their root systems, carried out.

6.3 Protective fencing should be erected to enclose all the RPAs of the retained trees, as indicated on the Tree Protection Plan and at the distances marked in the survey.

6.4 No materials that are likely to have an adverse effect on the tree health, such as diesel, bitumen, cement or cement washings will be stored or discharged within 10 metres of the trunk of a tree that is to be retained. Storage of all materials, cement, diesel etc should occur to the south of the site, away from any retained trees. Allowance should also be made for the slope of the ground, so that damaging materials such as cement washings or diesel oil cannot run towards trees or into the adjacent stream.

6.5 No fires are to be lit within 20 metres of the trunk of any tree that is to be retained. Also notice boards, services, cables etc should not be attached/nailed to any part of a tree

6.6 Any excavations allowed within the root protection area should be carried out carefully by hand, avoiding damage to protective bark on larger roots. Exposed roots should either be protected or pruned back, as detailed in BS5837: 2012 and with reference to NJUG: volume 4.

7.0 Arboricultural Impact Assessment

7.1 The proposals are for four residential units within the site, with associated access road, parking areas and surrounding gardens. The central section of the site will need to be cleared of the existing tree and shrub stock. It is proposed to retain most of the tree cover along the eastern and western boundaries, to keep the wind-brake, screening, wildlife and amenity value of this arboricultural resource. (See; Fig 7: Tree Removal Plan, below).

7.2 If possible, some of the younger, smaller specimen trees could be moved to the boudaries of the plots, to provide additional screening for the developement. Note; This can only really be carried out during the tree's dormant period (Novemeber to February), to ensure a chance of re-establishment before the summer.

7.3 To accomodate Unit 4 and to aviod too much disruption to Lawson's cypress (T25), it is proposed to use pile foundations in the area shown on the tree protection plan – Fig 6. The smallest size piles available, to adaquately support the structure will be used and any drilling rig will operate either outside the Root Protection Area of (T25) or suitable ground protection measures will need to be deployed. A full Method Statement for the piling operations will be provided by a suitably qualified Structural engineer or architect.

7.4 In addition, the necessary location of the parking spaces for unit 4, in the south-east corner of the site, will need an area of 'no-dig' specification hard-standing, to avoid compaction and damage to the rooting area of the young, Lawson's cypress (T26) and a small area of (T25) rooting area.

7.5 Additional, native tree, hedge and shrub planting is also planned for the gardens of thevarious units, to enhance the arboricultural resource of the site and the surronding area.

Work details

6.7 Recommendations for tree work should be carried out exactly as described in the schedule.

6.8 All tree works should be carried out to BS3998; 2010 'Recommendations for tree work'.

This survey is for the sole use of the above-named client and refers only to those trees identified within; use by any other person(s) in attempting to apply its contents for any other purpose renders the report invalid for that purpose.

Oliver Russell BSc Tech ArborA
Wildwood Trees

Fig 1: Garden to the west of the bungalow, with ornamental tree planting.

Fig 2: Ash (T18) to the left, Beech (T17) middle, and maple (T19) to the right

Fig 3: Lawson's cypress (T22) and (T25), and Yew (T23), on southern boarder and off-site

Fig 4: Lime (T24)

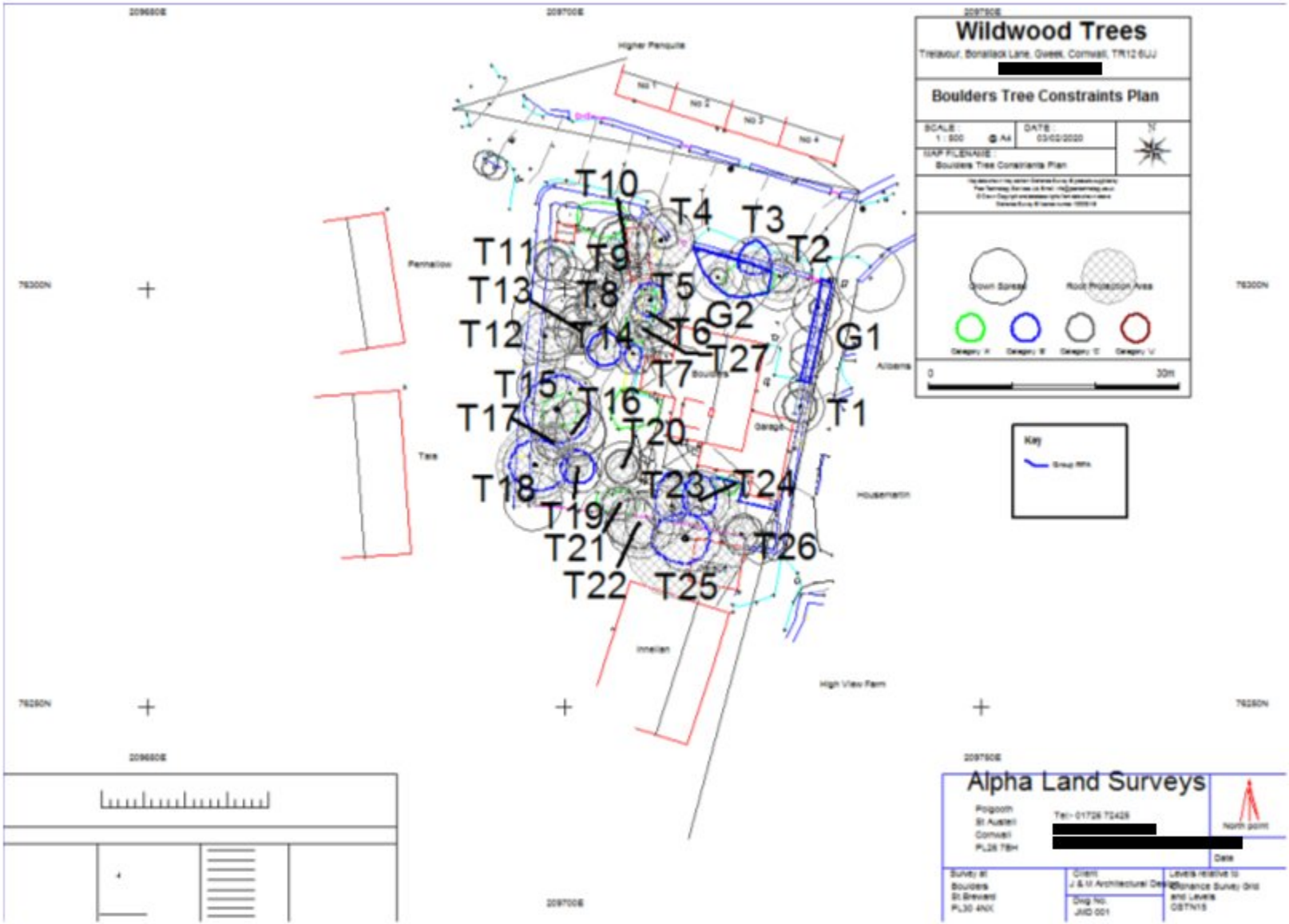


Fig 5: Tree Constraints Plan

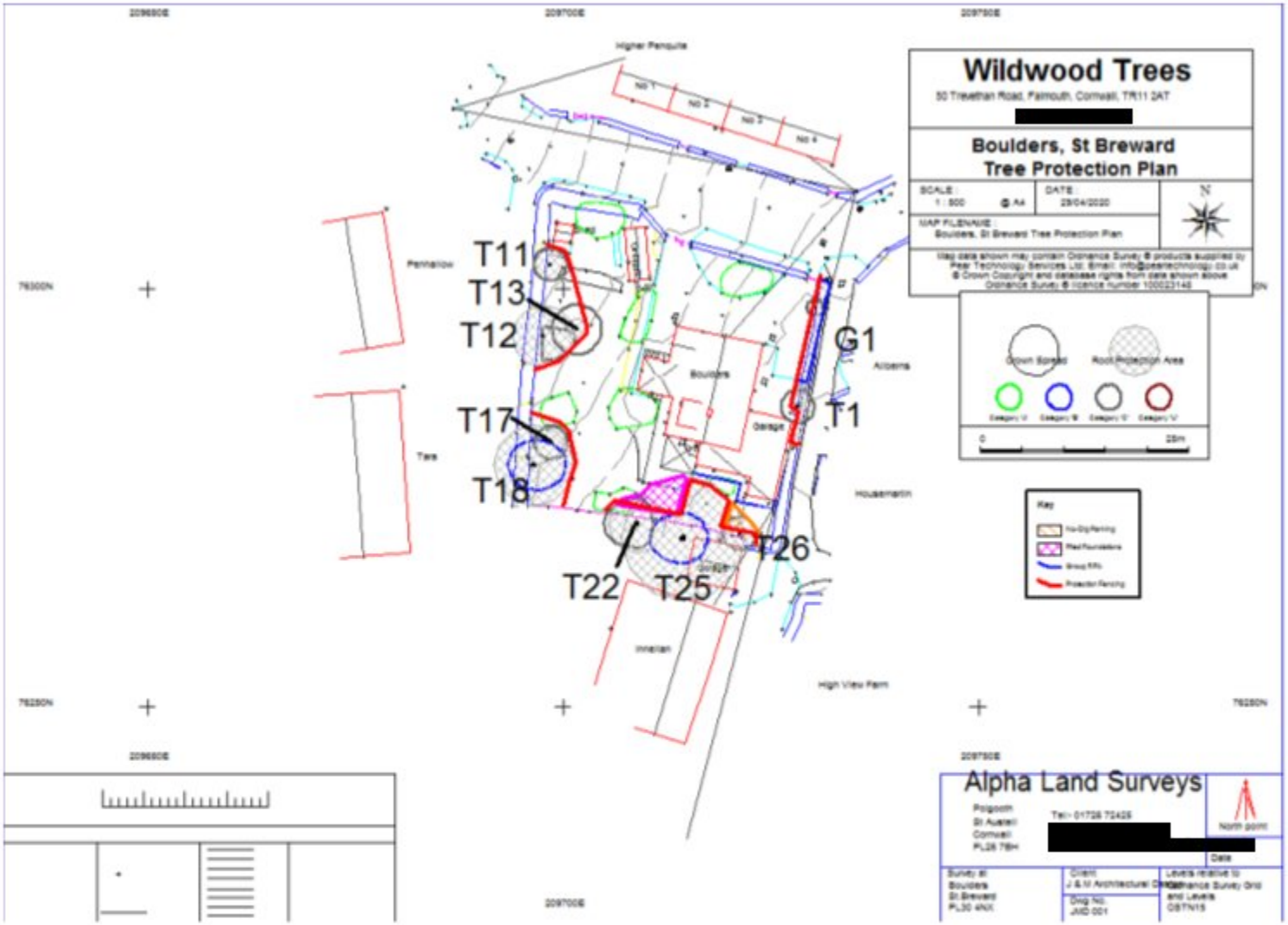


Fig 6: Tree Protection Plan

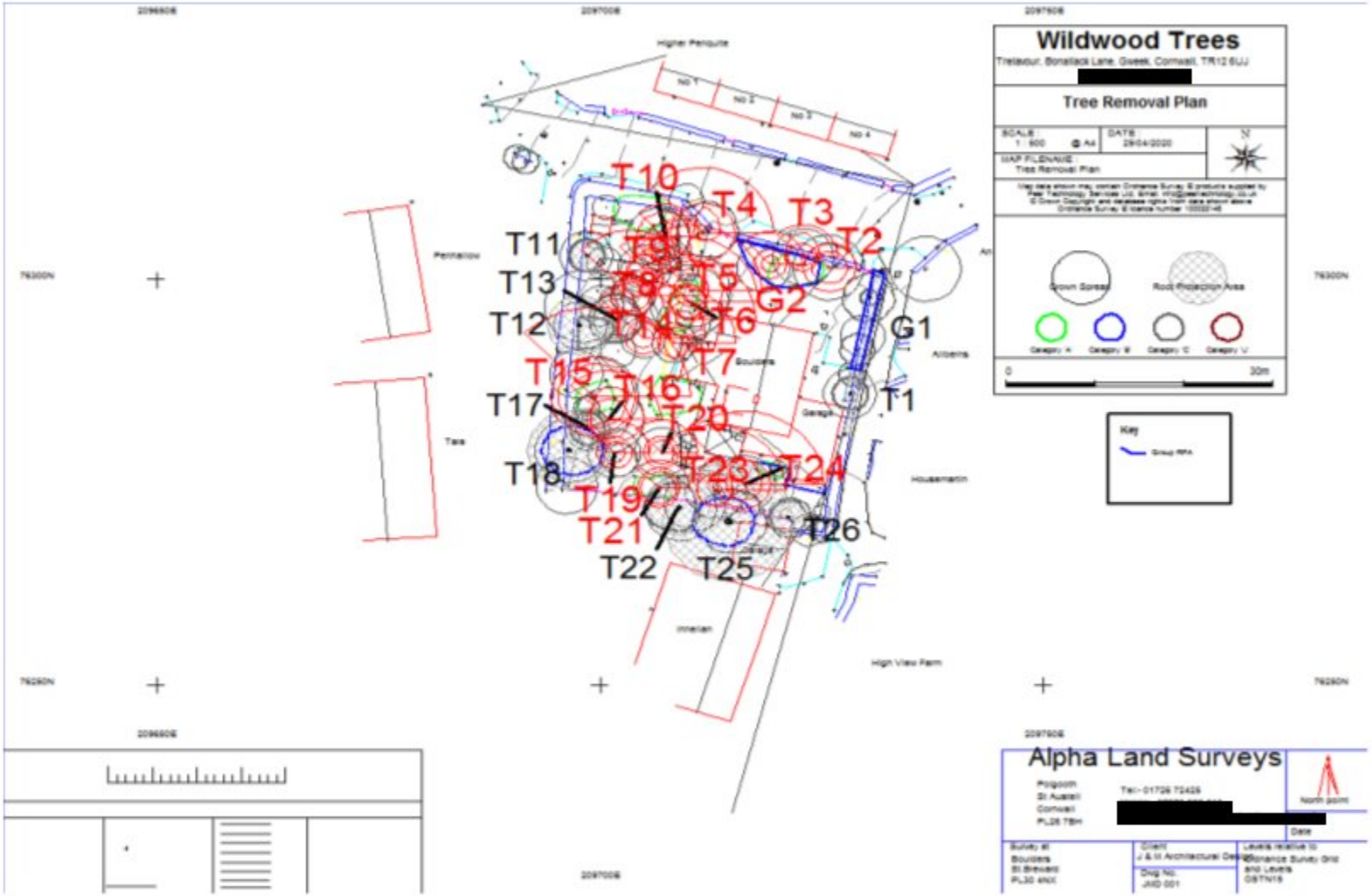


Fig 7: Proposed, possible tree reomval plan.

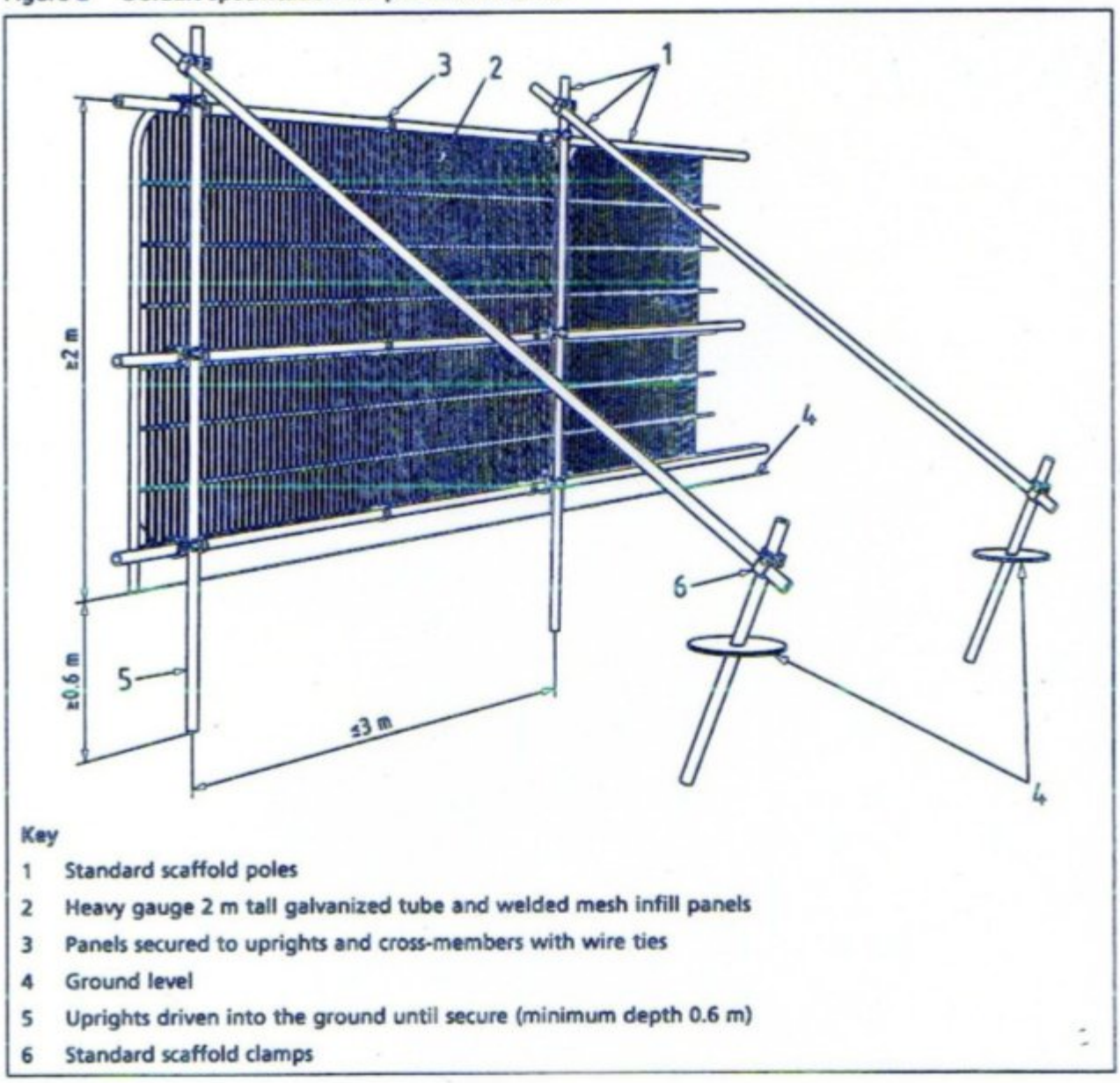
Boulders, St Breward, Tree Schedule

Tree ID	Common name Latin name MS=multi-stems	Ht (m)	RPA rad (mm)	Crown spread N:E:S:W	Ht Crown Clear (m)	Maturity	Physiological Condition	Structural Condition	Cat Grade	Estim Rem. Yrs
T1	Sessile Oak (Querous petraea)	4	200	2:2:2:2	2	Y	Good	Topped by utilities	C	40+
G1	Lawson's cypress, Hawthorn, Leyland cypress MS	3	200	1:1:1:1	1	SM	Good	In narrow boarder	C	40+
T2	NZ Holly MS (Olearia macrodonta)	3	100	2:2:2:2	1	M	Good	Good	C	20+
G2	Sumach, Lawson's, Elaeagnus, Olearia MS	4	150	1:1:1:1		M	Good	Good	C	20+
T3	Japanese maple (Acer japonica) MS	4	140	3:2:1:2	2	M	Good	Good	B	20+-
T4	Lawsons Cypress (Charnaecyparis lawsoniana) MS	8	300	3:2:1:1	2	SM	Good	Major limbs removed in the past. Unbalanced crown, poor form.	C	20+
T5	Oriental Plane? (Platinus sp)	8	300	2:2:2:2	3	SM	Good	Good	B	40+
T6	Flowering cherry (Prunus sp) MS	8	180	2:2:2:2	2	SM	Good	Good	C	20+
T27	Flowering cherry (Prunus sp) MS	8	175	1:1:1:1		Y	Good	Good	C	20+
T7	Atlas cedar Cedrus atlantica) MS	7	150	1:1:1:1	3	Y	Good	Good	B	40+
T8	Lawsons Cypress (Charnae (Charnaecyparis sp)	8	200	2:2:2:2	0	SM	Good	Thinning lower crown	C	40+
T9	Flowering cherry (Prunus sp) MS	4	140	2:2:2:2	1	SM	Good	Good	C	20+

Tree ID	Common name Latin name MS=multi-stems	Ht (m)	RPA rad (mm)	Crown spread N:E:S:W	Ht Crown Clear (m)	Maturity	Physiological Condition	Structural Condition	Cat Grade	Estim Rem. Yrs
T10	Sumach	4	140	3:3:3:3	2	M	Good	Good	C	20+
	(Sumach sp) MS									
T11	Apple	4	150	2:2:2:2	1	SM	Good	Good	C	20+
	(Malus sp)									
T12	Holly (Ilex aquifolium)	8	300	1:4:3:0	4	SM	Good	Trimmed on west side	C	20+
	(Ilex aquifolium)									
T13	London Plane	4	100	3:3:3:3	1	Y	Good	Good	C	40+
	(Platanus sp)									
T14	Silver Birch	7	100	2:2:2:2	2	Y	Good	Good	B	40+
	(Betula pendula)									
T15	Elm	11	400	4:4:4:4	3	SM	Good	Good	B	10+
	(Ulmus sp)									
T16	Flowering cherry	6	200	4:4:3:2	2	SM	Good	Good	C	20+
	(Prunus sp)									
T17	Beech	7	150	2:2:2:2	4	Y	Good	Tall and drawn form	C	40+
	(Fagus sylvatica)									
T18	Common Ash MS	7	395	3:4:3:3	3	SM	Good	Low, spreading tree	B	20+
	(Fraxinus excelsior)									
T19	Japanese maple	4	100	2:2:2:2	1	SM	Good	Good	B	20+
	(Acer japonica)									
T20	Flowering cherry	4	125	2:2:2:2	1	SM	Good	Good	C	20+
	(Prunus sp)									
T21	Hiba	3.5	200	2:2:2:2	0	Y	Good		C	40+
	(Thujopsis sp)									
T22	Lawsons Cypress MS	7	280	3:2:3:4	2	SM	Good	Asymmetric crown	C	40+
	(Charnaecyparis sp)							(Off site)		
T23	Yew	8	175	4:2:2:2	4	SM	Good	Asymetric crown	B	40+
	(Taxus baccata)									

Tree ID	Common name Latin name MS=multi-stems	Ht (m)	RPA rad (mm)	Crown spread N:E:S:W	Ht Crown Clear (m)	Maturity	Physiological Condition	Structural Condition	Cat Grade	Estim Rem. Yrs
T24	Small Leaf Lime	9	250	3:2:2:2	5	Y	Good	Part suppressed by (T25)	B	40+
	(Tillia cordata)									
T25	Lawsons Cypress MS	12	605	3:3:3:4	4	M	Fair	(Off-site)	B	0+
	(Chamaecyparis sp)									
T26	Lawsons Cypress	7.5	160	2:2:2:2	2	Y	Good	Good	C	40+
	(Chamaecyparis sp)									

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

Figure1: Default specification for protective fencing

Appendix

Keys

Age Class

NP – Newly planted

Y – Young	- in its first third of life expectancy
SM – Semi-mature	- in its second third of life expectancy
M – Mature	- in its last third of life expectancy
OM – Over mature	- at the end of its life expectancy (often showing signs of decline)
V –Veteran	- showing signs of veteranisation

Condition

Good	- Healthy and safe condition
Fair	- Fair shape and form. Healthy and safety may be partly compromised. May require remedial works
Poor	- Health and Safety compromised

Estimated remaining contribution

In years: < 10
10+
20+
40+

Retention category

A – Trees of high quality with an estimated remaining life expectancy of at least 40 years (marked on map in light green)

B – Trees of moderate quality with an estimated remaining life expectancy of at least 20 years (marked on map in mid blue)

C – Trees of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm (Marked on map in grey)

U – Trees in such a condition that they cannot be retained as living trees in the context of the current land use for longer than 10 years, or young trees with a stem diameter below 150mm (Marked on map in dark red)

1 – Mainly arboricultural qualities

2 – Mainly landscape qualities

3 -- Mainly cultural values, including conservation, habitat and wildlife value