

<p><b>B. J. UNWIN FORESTRY CONSULTANCY</b></p> <p>Jim Unwin BScFor, MICFor, FArborA, CEnv.  <b>Chartered Forester</b>  <b>Fellow of the Arboricultural Association</b>  <b>Chartered Environmentalist.</b></p>	<p>Parsonage Farm                  Longdon                  Tewkesbury                  Glos.                  GL20 6BD                  UK                  T: 01684 833538                  M: 07860 376527                  E:  <a href="mailto:Jim@bjunwin.co.uk">Jim@bjunwin.co.uk</a></p>
	

Ref: 14<sup>th</sup> Feb 2022 - BJU/mmi

**To:** Mr. C. Mellor.  
**c/o:** Adam Gatier, Principal Consultant  
**M:** 07793 134970 **E:** [adam@gatier.co.uk](mailto:adam@gatier.co.uk)  
**W:** [www.gatierplanningconsultants.co.uk](http://www.gatierplanningconsultants.co.uk)



Dear Mr Mellor,

Cyder Mill Barn, Cold Pool Lane, Badgeworth, GL51 4UP -  
**- BS5837 Tree Constraints, Tree Impacts & Tree Protection Method Statement for re-development.**

**Contents:**

<p><b>Fig 1: BS5837 Design &amp; construction process &amp; tree care.</b></p> <p><b>2. Inspection.</b></p> <p><b>4. The Trees.</b></p> <p>4.1 Trees on site:                  4.2 Off-site trees:-                  4.3 Amenity:                  4.4 Photos:                  4.5 Tree Descriptions &amp; Tree Constraints Table.</p> <p><b>6. Arboricultural Method Statement in sequential order for proposed development.</b></p> <p>6.1 Supervision                  6.2 Tree Management                  6.3 Tree Protection                  6.4 Construction Access.                  6.5 Demolition / Excavation within RPAs:-                  6.6 Foundations within RPAs:-                  6.7 Drainage.                  6.8 Service Trenches within RPAs.                  6.9 Minimal-dig construction for new access                  Drives, parking &amp; paths                  6.10 Tree work following construction.                  6.11 New Planting.</p>	<p><b>1. Instruction.</b></p> <p><b>3. The Site.</b></p> <p><b>5. Proposed Development &amp; Tree Impacts.</b></p> <p>5.1 The proposal.                  5.2 Tree Constraints and Impacts (considered below).                  5.3 Physical contact of above-ground parts of trees.                  5.4 Below-ground root spread.                  5.5 Light Interception &amp; Shading.                  5.6 Over-bearing and Falling material.                  5.7 Subsidence/heave &amp; root growth.                  5.8 Amenity impact.</p> <p><b>7. Conclusions.</b></p> <p><b>Appendices 1 to VIII:-</b></p> <p>I Location &amp; Google Earth aerial.                  II Vertical Tree Protection Fencing, from BS5837                  III Horizontal Ground Protection x 2 examples                  IV Shallow trays for strengthening gravelled or grassed areas. Slightly deeper (50mm or 80mm trays for strengthening gravelled or grassed areas. Deeper Cellweb 3-D grid for strengthening tracks. Example of Air-spade.                  V B J UNWIN FORESTRY CONSULTANCY CV.                  VI Constraints plans:- Tree Crowns Root, Protection Areas, Theoretical Shading.                  VII Tree retention and Tree Protection Plan.</p>
---	---

**Notes: Copyright:** This report is copyright of BJUFC, and licensed only to the client, site and purpose(s) named above. It may not be assigned without the author's permission.

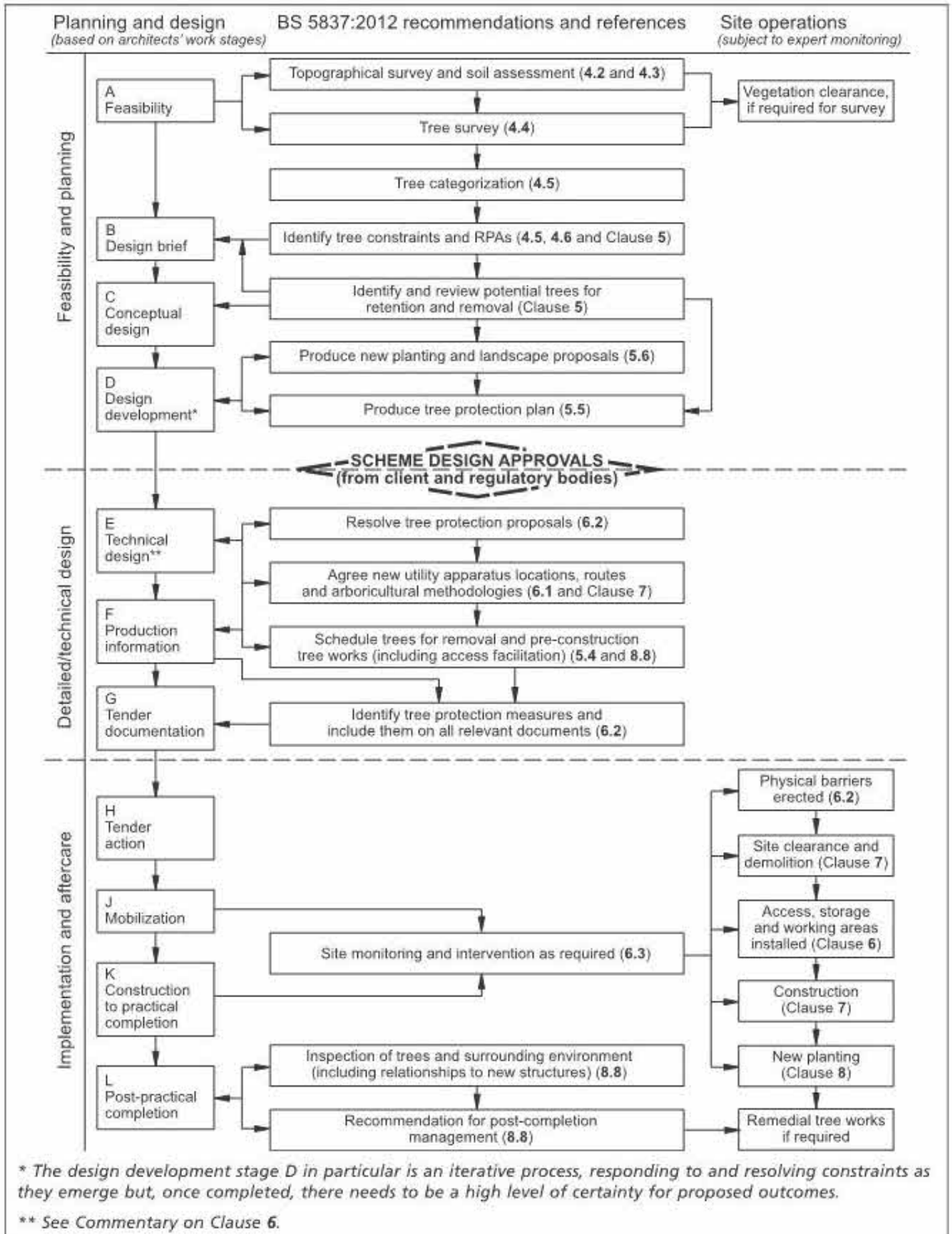
**Limitation of Report:-**The statements made in this Report do not take account of the effects of extremes of climate, vandalism or accident, whether physical, chemical or fire. BJUFC cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this Report ceases at any stated time limit within it, or if none stated after two years from the date of the survey or when any site conditions change, or pruning or other works unspecified in the Report are carried out to, or affecting, the Subject Tree(s), whichever is the sooner.

**Tree and Woodland Consultancy**  
**Woodland Valuation and Timber Sales**  
**Landscape Management**

Visit our website: [www.bjunwin.co.uk](http://www.bjunwin.co.uk) for more information



Figure 1 The design and construction process and tree care



## **1. Instruction.**

- 1.1 Adam Gatier is coordinating development at Cyder Mill Barn. Therefore, he has asked B J Unwin Forestry Consultancy to advise on trees for planning application purposes, subject to quote.
- 1.2 The local authority (Tewkesbury Borough Council) may require a tree impact assessment and tree protection method statement for any proposal. The local authority may require mitigation by new planting for any trees lost as part of any development.
- 1.3 We have used topo plan by **A D Horner 06/1831-01 of 2006**. We have updated trees (buildings have not changed). **Blue Square Drafting 00905A-03 Rev A of 14/1/22, and the garage 00905A-04**, extracts in section 5, shows the proposal, and guides our tree impact and tree protection sections 5 & 6 of this report.
- 1.4 Therefore methodology of the report below follows *BS5837:2012 Trees in Relation to Design, Demolition & Construction*.
- 1.5 BS5837 flowchart previous page. Appendices follow signature page.

## **2. Inspection.**

- 2.1 Jim Unwin visited the property on 23<sup>rd</sup> March 2020, and made an un-accompanied inspection in good light conditions.
- 2.2 The survey was from ground level, involving visual observation (Visual Tree Assessment: Mattheck and Breloer, 1994 and Lonsdale, 1999). We measured dbh, (estimated for off-site and inaccessible trees) and measured or estimated crown spread and height.
- 2.3 The survey and report for this project are by Jim Unwin, who has >40 years' experience working with trees (professional-CV attached).

## **3. The Site.**

- 3.1 The site inspected is a small grassy compound containing a large barn. To its south east is the plot of Cyder Mill Cottage. Including Cyder Mill Cottage the site is rectangular about 50m x 32m in size. The site is flat and level at about 45m aod. It is not exposed to wind.
- 3.2 Geology, from BGS website:-  
Superficial deposits: No superficial deposits recorded  
Bedrock geology: Charmouth Mudstone Formation - Mudstone. Sedimentary bedrock formed between 199.3 and 182.7 million years ago during the Jurassic period.  
We assume subsoil and geology are fine-textured with 'medium' volume-change potential.
- 3.2 The site is edged by a public footpath to north east, then a domestic plot. To the north west is an well-tree's overgrown garden end. To the south west is a domestic garden.

## **4. The Trees.**

- 4.1 Trees on site:-  
The site was planted with Norway spruce next to the barn and on the western boundary, presumable as screening, decades ago.  
The spruce T12-T14 by the barn are now much too dominant. T14 has partially windthrown and leans alarmingly. All have short lives.  
The trees around the western corner also dominate and shade the site.

They could be carefully trimmed to restore some hedging / screening function, but ideally they should be replaced.

Two pollarded willows T6 and T11 are both in poor condition.

Poplar T4 was presumably planted: but is a poor choice so close to a barn. It has been topped, but has little future.

Several self-sown ash are decent trees, but T5 has been pushed north by poplar T4, and shades and dominates The Elms' house only 9m to its north. It has a limited future.

Ash T10 is one of the better trees on site.

Ash T19 is large, and much too dominant to the barn.

#### 4.2 Off-site trees:-

Willow T9 on the northern corner is severely overgrown, and collapsing. It needs re-pollarding.

To the north west the garden contains many trees including plum T17 overhanging the boundary, and large ash trees further away.

#### 4.3 Amenity: This could describe an attractive tree, a screening function, habitat potential, or historic/veteran tree.

This is a small site dominated by overgrown trees. None is prominent to a road.

We have not checked for presence of TPOs.

#### 4.4 Photos below:



#### 4.4.1 View north to Inkerman Cottage, Cyder Mill Cottage, and off-site hawthorns G1 and pollarded willow T2.



**4.4.2 View west across The Elms' drive to Cyder Mill Cottage garage centre. Spruce T12 centre. Ash T5 centre right.**



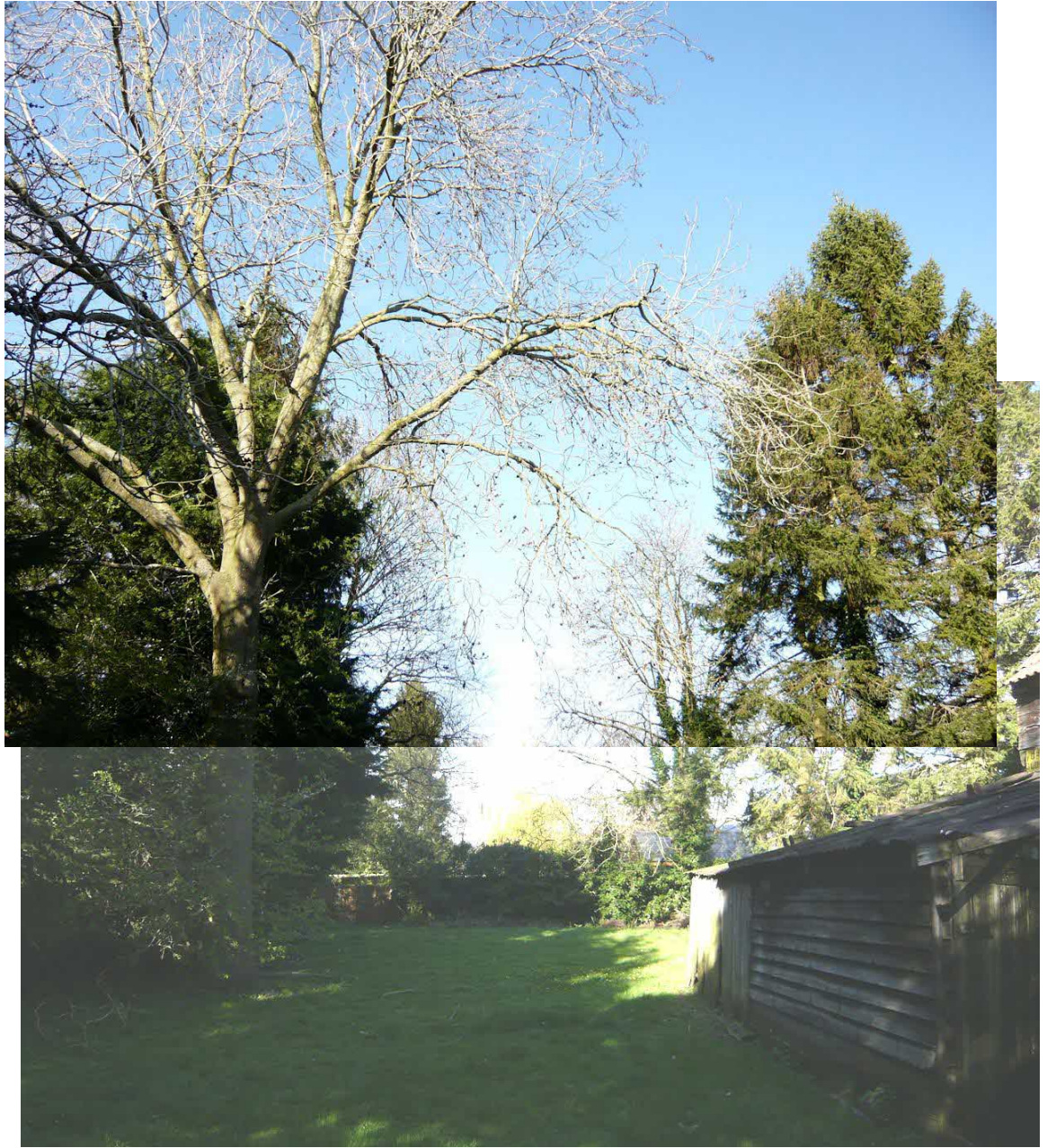
**4.4.3 View south east to horse chestnut T7, poor willow T6, ash T5 leaning towards The Elms, and topped poplar T4.**



**4.4.4 View south to poor willow T11, spruces T12-T14, and screening spruces T26 etc rear right.**



**4.4.5 View into northern corner. Ash T10 centre in front of off-site willow T9. Spruces T15 & T16 left.**



**4.4.6 View north east past barn, to ash T19, and Leyland cypress T18 on left. Spruces T13 & T14 right. Horse chestnut T7 at rear.**

## 4.5 Detailed Tree Descriptions

4.5.1 Trees on, or potentially influencing the site, are individually described in the table below, and shown on the plans in Appendices.

# - Denotes estimated DBH.

Age class is described as:-

- Sap: Very young tree, or sapling, one-five years old.  
Y: Young tree less than fifteen years old and <1/3 fully grown.  
Sm: Semi-mature tree having attained 1/3 to 2/3 full stature and 1/3 to 1/2 estimated lifespan.  
Em: Early mature: tree at 2/3 to virtually full size, and halfway through its safe life.  
M: Mature: fully-grown tree with useful life expectancy.  
Lm: Late-mature: fully grown, of declining vigour, but still healthy.  
Om: Overmature tree: fully grown and starting to decline in health (but may still have years of safe life).  
Vet: Veteran: usually very old; of significant historic, habitat or cultural value.

Health & Structural condition:- Self-explanatory:- **Good, Fair, Poor or Dead.**

### Remaining Safe Useful Life

Prediction of safe life in its location, estimated as:-  
<5 years, <10 years, 10-20 years, 20-40 years, >40 years.

Retention categories, based on BS 5837 Section 4.5, are:-

Retain:

- A =** High quality or value >40yrs safe life: Light Green\*  
**B =** Moderate quality or value >20yrs safe life: Mid Blue\*  
**C =** Low quality or value >10yrs safe life  
or young trees <150mm stem diameter: Grey\*

Remove:

- U =** <10yrs safe life or should be removed for  
sound arboricultural reasons: Dark Red\*

(\*Colour marking on relevant Tree plan)

Sub-category for retention:-

- 1 = Arboricultural Value  
2 = Landscape Value  
3 = Cultural and/or Habitat Conservation Value

### BS 5837:2012 Root Protection Area:

The estimated volume of soil 1m deep required to sustain the tree, usually expressed as a disc 1m deep, centred on the tree's trunk.

**THE RPA CAN BE A VARIED SHAPE ENCLOSING THE CORRECT ROOTABLE AREA:  
but SHOWN AS A CIRCLE FOR CONVENIENCE.**

**Calculated as:-**

**Single-stem** tree, radial distance = 12 x stem diameter at 1.5m ht.

**Multi-stem** trees 1-5 stems = Square root of (sum of individual stem diameters squared).  
> 5 stems = Square root of (average dbh squared x number of stems).



4.5.2 **Cyder Mill Barn - BS5837 Inspection - BJUFC – 23<sup>rd</sup> March 2020**

No. T=tree S=shrub H=hedge G=group	Species	Dbh (stem diam @ 1.5m ht) mm.	Total height. Ht to base of crown. Est Ht in 10 yrs. m.			Crown radii m.				Age class	Health	Structural Condition	SULE	Comment (All are in average to good health and condition, unless stated otherwise.)	Retention category A (best) to C; U = (remove) Sub-category 1, 2 or 3	BS 5837 Root Protection Area Radius. m.	Recommended WORK excluding development.
						NNE	ENE	SSE	WSW								
G1	Hawthorn x 3	150	5	2.5	5	2	1	0	1	M	P	P	20+	Off-site. Old hedge plants. Overgrown with ivy.	C2	1.8	Remove ring of ivy from ground level up to head height.
T2	Crack willow	350, 380	7	2	10	3	2	1.5	1.5	Lm / Sap	F	P	10	Off-site pollarded willow, last cut 2017.	C2	6.2	
T3	Tree cotoneaster	200	7	2	7	2.5	2.5	2.5	2.5	M	F	F	10-20	Big semi-evergreen shrub/small tree. Off-site.	C1	2.4	
T4	Hybrid poplar	430	10	3	12	2	4	4	1	Sm / Em	F	P	<10	Too close to ash and buildings. Topped 2018. Ugly.	C2/U	5.2	Consider removal.

T5	Ash	370	16	6	17	5	4	3	4	4	Sm / Em	F	P / F	10-20	Shading The Elms to the north.	C1	4.4	Monitor for ash dieback.
T6	Crack willow	380	9	2.5	6	3	4	3	2	2	M / Y	F	P	10	Pollard. Very decayed stem.	C2	4.6	Re-pollard 2020/21 winter.
T7	Horse chestnut	430	12	3	14	5	4	5	4	4	Sm	F	F	20-40	Good tree. Starting to shade The Elms.	B1	5.2	
H8	Hawthorn and ivy	150	2.5-4	1.5	2.5-4	1.5 ext	1 ext	1.5 ext	1 ext	1 ext	Em / M	F	F	10	Two hawthorns, ivy on panel fence. One dwarf golden cypress.	C2	1.8	
T9	Crack willow	300, 350	12	3	4	7	8	6	2	2	M	F / P	P	<5	One stem off-site. One stem on boundary. Overgrown, pollarded long ago.	C2	5.5	Re-pollard at 2m height.
T10	Ash	390	18	7	20	4	4	4	3	3	Sm / Em	F	F	20-40	Self-sown from big ash off-site to west.	C1	4.7	Monitor for ash dieback.
T11	Crack willow	390	9	3	5	3	3	3	3	3	M / Y	P / F	P	10-20	Pollard willow. Too close to sheds.	C2/U	4.7	Re-pollard or better fell.
T12	Norway spruce	340	13	3	14	1.5	2	2	1	1	Em	F	P	10-20	Too close to sheds.	C1	4.1	

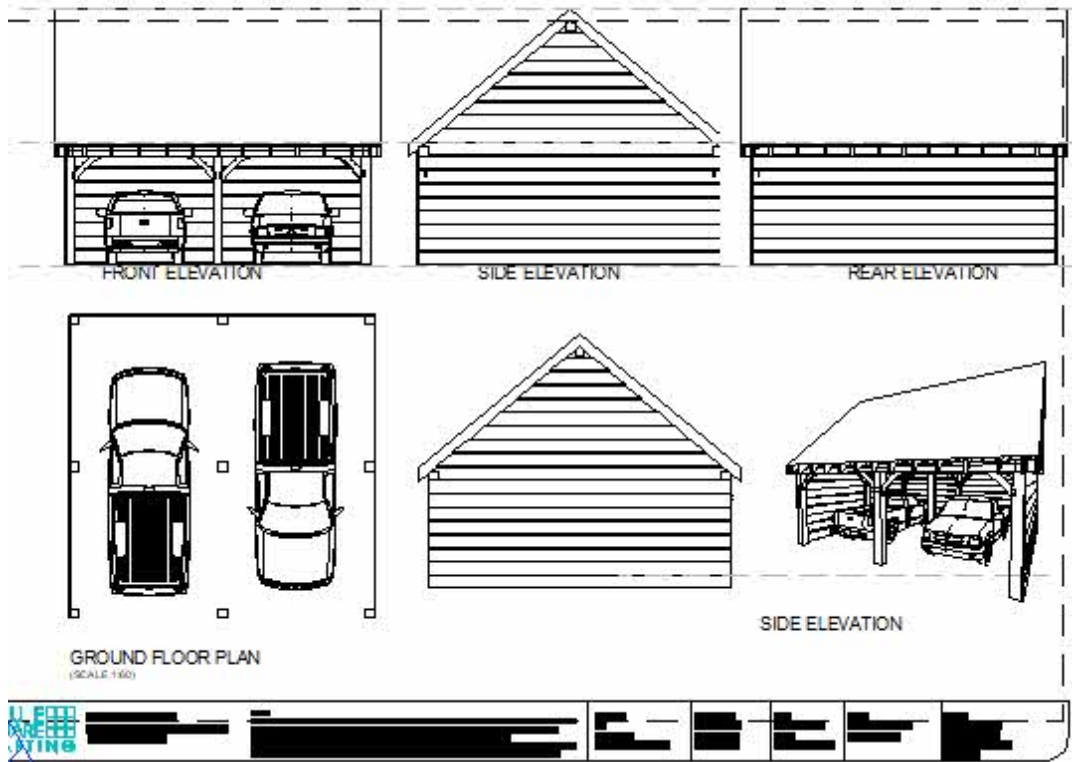
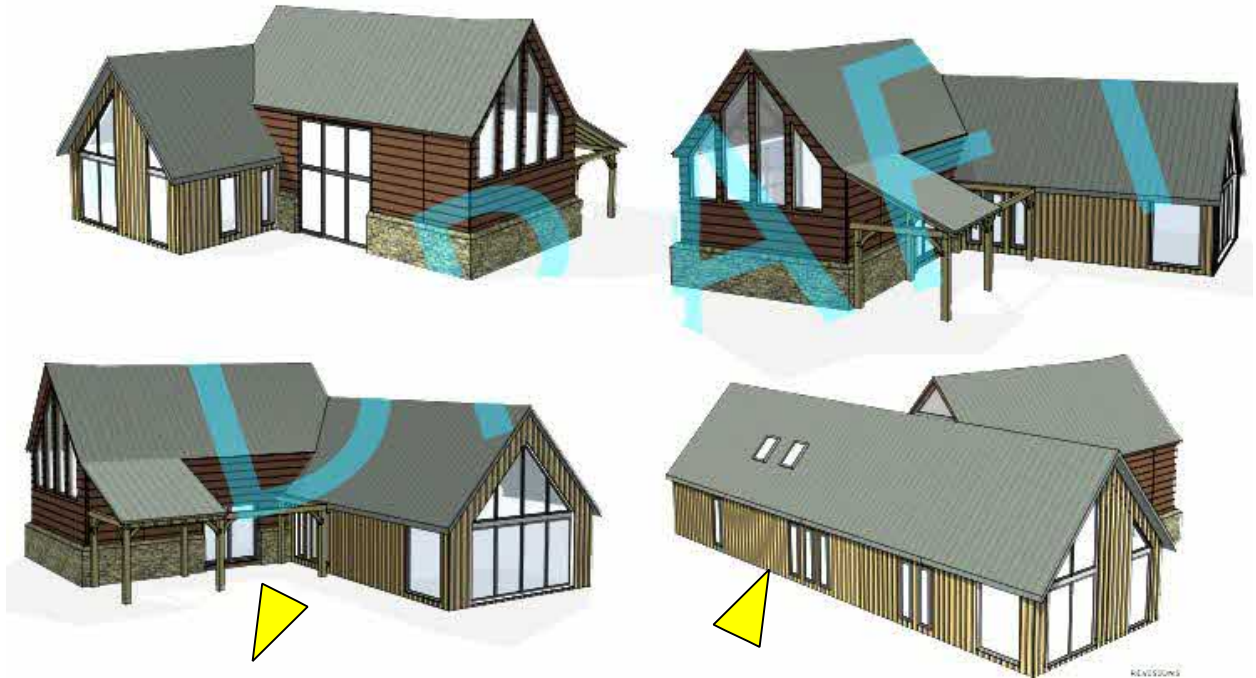
T13	Norway spruce	210	11	3.5	12	1.5	1	2.5	2.5	Em	F	P	10-20	Too close to sheds.	C1	2.5	
T14	Norway spruce	280	11	4	0	5	4	0	1	Em	F	P	<5	Partially windblown. Poor.	C2/U	3.4	Recommend fell.
T15, T16	Norway spruce	280	15	4	15	1.5	1.5	1.5	1.5 ext.	Em	F	F	10-20	Slender.	C2	3.4	
T17	Wild plum	200, 260	9	2.5	9	4	4	4	4	Lm	F	F	10-20	Off-site.	C1	3.9	
T18	Leyland cypress	310	11	1	14	3	3	3	3	Sm / Em	F	F	20-40		B2	3.7	
T19	Ash	620	20	6	21	6	7	7	8	Em / M	F	F	10-20		C1	7.4	Monitor for ash dieback.

T20 - T26	Norway spruce	Avg. 250	8-11	2	8-12 or 0	2-2.5m into site.	1m out of site.	Ditto	Ditto	Sm	F	P	<5	Planted as screen, now bare-stemmed trees. Topped several times, and outer sides trimmed off.	C2/U	3.0	Recommend fell and plant new hedge.
T27	Ash	160	12	3	0	2	2	2	2	Y/Sm	F	P	<5	Self-sown. Topped several times at fence height.	C2/U	1.9	Remove.
T28	Gleditsia	250	7	4.5	9	2.5	3	3	2	Sm	F	P/F	20+	Off-site. Crown reduced.	C1	3.0	
T29	Purple plum	150	5	2	6	1	2	1.5	0.5	Y/Sm	F	F	20+	Off-site ornamental.	C1	1.8	
T30	Birch	100	7	2.5	9	1	1.5	1.25	0.3	Y	F	F	20+	Off-site. Topped.	C1	1.2	
T31	Ash	70	4.5	1	0	0.5	0.5	0.5	0.5	Sap	F	P	0	Self-sown on building edge.	U		Remove – poison or dig out stump.

End of table.

## 5. Proposed Development & Tree Impacts.

- 5.1.1 Blue Square Drafting 00905A-03 Rev A of 14/1/22, and the garage 00905A-04, extracts below, show the proposals.
- 5.1.2 The barn is converted to a house with as new cross-wing. A new carport is located north of the barn.
- 5.1.3 Existing access past Cyder Mill Cottage remains.



## **5.2 Tree Constraints and Impacts (considered below).**

- 5.2.1 There are six potential arboricultural constraints to the development of the site:  
**physical contact of above-ground** parts of the tree,  
**below-ground** parts,  
**shading,**  
**over-bearing, and falling material,**  
**subsidence/heave, and root growth,**  
**impact on amenity value.**
- 5.2.2 Trees are listed in table, and coloured on the Tree Plans, to indicate their retention categories A,B,C,U: with the colours explained in the keys of the table & plan (**A = best** to **U = remove**). This allows the site designer to plan around important trees, and ignore lesser trees.

## **5.3 Physical contact of above-ground parts of trees.**

- 5.3.1 General:-  
Tree Plans in Appendices shows tree locations and crown spreads. Crown dimensions: spread in four directions, base of crown and tree height, are given in Table 4.5.2.
- 5.3.2 Specific above-ground impacts:-  
Poplar T4 and willow T11 are replaced by new drive.  
Spruce trees T20-T26 need crown lifting above the new building for clearance.  
Spruces T25 & T26 are very close. We would recommend removing these.

## **5.4 Below-ground root spread.**

- 5.4.1 General:-  
BS5837 defines a tree's Root Protection Area as a disc of soil 1m deep required to maintain long-term health a full-canopied tree, of a given stem size, usually 12 x stem diameter. We show it as an idealised circle. Rooting areas are never symmetrical, but ideally there should be no ground disturbance within the RPA zone. At the discretion of an arboriculturalist, the RPA can be offset if work is proposed on one side only, and the tree can root in the opposite direction. It is not appropriate to rely on the reduced RPA where potential disturbance extends halfway or more around the tree. Typically the structural rootplate of a tree to resist windthrow is much smaller than the RPA. Therefore tree stability should not be affected by some disturbance within the RPA.
- 5.4.2 Specific Rootzone Impacts:-  
Ash T10, and horse chestnut T7 have RPA's impinged by the carport. See 6.6 below for foundation construction.  
Horse chestnut T7 has a drive across its rootzone. See 6.3.3 for temporary ground protection and 6.9 for min-dig drive, below.  
Many areas around the house and garage need temporary ground protection for construction access: see 6.3.3 below.

## **5.5 Light Interception & Shading.**

### **5.5.1 General:-**

The sun rises to 60° at mid-day in mid-Summer when trees are in leaf (ratio of 16m vertical height to 10m horizontal distance).

The sun only rises to 12° in mid-Winter. However, in winter deciduous trees are leafless, so shading is reduced.

Theoretical shadows of arcs equal to estimated tree height in ten-years' time is recommended in BS5837. *This is the shadow pattern for a period from May to September inclusive, from 10.00hrs to 18.00hrs daily.*

### **5.5.2 Specific Shading Impacts:-**

Norway spruce barrier T15 etc to T26 and Leyland cypress T18 will cast afternoon shade. Pruning or removal recommended but not essential to achieve the development.

#### **Big ash T19 will block light in summer.**

Spruces T12, T13 & T14 will block much light from the area around them: remove now.

## **5.6 Over-bearing and Falling material.**

### **5.6.1 General:-**

All trees drop flower parts, leaves, twigs and fruits throughout the year. These can create a mulch layer on roads. Bird droppings and honeydew can spoil car paintwork. Big trees make adjacent dwellers nervous.

### **5.6.2 Specific Impacts:-**

As above, spruces T12, T13 & T14 are much too dominant: remove.

Norway spruce barrier T15 etc to T26 and Leyland cypress T18 dominate the western side of the site. Pruning or removal needed.

If the spruce trees were removed and replaced by a new golden Leylandii hedge, screening would be achieved within two-three years.

Big ash T19 is dominant and over-bearing. Removal would be ideal, but may be a step too far in terms of tree removal, unless it exhibits dieback disease? I recommend re-inspection in mid-summer 2022.

## **5.7 Subsidence/heave & root growth.**

5.7.1 To be assessed by an engineer referring to NHBC 4.2:2020.

Geology has volume-change potential.

5.7.2 Buildings will need foundations designed to tolerate or resist subsidence caused by trees, or heave if trees are removed.

## **5.8 Amenity impact.**

5.8.1 Amenity can be *visual landscape, habitat or heritage/historic.*

The proposal requires some tree removal.

However, there are too many trees retained on site or in the garden to the west.

Amenity impact of the proposal will be modest.

## **6. Arboricultural Method Statement in sequential order for proposed development at Cyder Mill Barn.**

### **6.1 Supervision**

6.1.1 We would recommend the following arb supervision:-

A **pre-start site meeting** between architect, building / groundwork contractor, Council Tree/Landscape Officer, and retained arboriculturist to agree feasibility of tree retention, tree protection and working methods.

To ensure all site and management staff have copies of tree protection method statement and TRP Plan.

**Installation of protection fencing.**

**Installation of temporary ground protection.**

**Toolbox talk with operatives installing new drive past T6 & T7 and garage foundations.**

6.1.2 All inspections to be followed within three working days with emailed supervision log with action points and photos, copied to client and tree/landscape officer.

### **6.2 Tree Management**

6.2.1 Tree Work prior to ground work:-

Table overleaf.....

6.2.2 Treework informatives, included for general information:-

#### **6.2.2.1 Disturbance to wildlife.**

It is essential to check for nesting birds, bat roosts, badgers and hibernating animals such as hedgehogs under trees, before pruning or removing trees, as negligent disturbance is an offence under the EC Habitats Directive 92/43/EEC, Countryside and Rights of Way Act 2000, Protection of Badgers Act 1992. The Conservation (Natural Habitats, & C) (Amendment) Regulations 2007 make **any** damage or destruction of a breeding site or resting place of a European Protected species (mainly bats in a tree context) an offence.

In general, autumn tree work: **September, October and November** is least disruptive to bats and birds. Work on very ivy-clad trees may need a formal pre-start bat assessment by a trained bat worker.

#### **6.2.2.2 Permission**

Trees may be protected by a TPO, or could lie within a Conservation Area.

Trees may be owned by third-parties.

Trees may be protected by planning conditions.

Therefore, a contractor must satisfy himself that all necessary permissions from the local planning authority or tree owners are in place before touching trees.

A Felling Licence may be needed to clear non-domestic areas.

#### **6.2.2.3 Quality of Tree Work**

All off-ground tree work should be done by insured tree surgeon with certificates in aerial chainsaw use (new designations:- NPTC 020-04, 0020-05, 0020-07, 0021-01, 0021-07; LANTRA 600/5703/8, 600/5717/8, 600/5715/5, 600/5704/X, 600/5714/2), and working to BS3998:2010 and working to BS3998:2010, and "*Treework at Height*", the Arboricultural Association's ICoP.

(Stumps can be left to shoot again, ground out, or grubbed out, or poisoned, depending on location.)



6.2.3 Treework for Cyder Mill Barn development:-

No	Species	RPA radius m.	Work for landscape / tree health.	<u>ADDITIONAL WORK FOR DEVELOPMENT</u>	
				<u>Specification.</u>	<u>Reason for additional work for development.</u>
G1	Hawthorn x 3	1.8	Remove ring of ivy from ground level up to head height.		
T2	Crack willow	6.2			
T3	Tree cotoneaster	2.4			
T4	Hybrid poplar	5.2	Consider removal.	<u>Remove.</u>	<u>For drive.</u>
T5	Ash	4.4	Monitor for ash dieback.	<u>Remove.</u>	<u>For drive.</u>
T6	Crack willow	4.6	Re-pollard 2020/21 winter.	<u>Re-pollard 2020/21 winter.</u>	<u>To allow for local disturbance.</u>
T7	Horse chestnut	5.2			
H8	Hawthorn and ivy	1.8			
T9	Crack willow	5.5	Re-pollard at 2m height.	<u>Re-pollard at 2m height.</u>	<u>To allow carport.</u>
T10	Ash	4.7	Monitor for ash dieback.		
T11	Crack willow	4.7	Re-pollard or better fell.	<u>Remove.</u>	<u>For drive.</u>
T12	Norway spruce	4.1		<u>Remove.</u>	<u>Too dominant.</u>
T13	Norway spruce	2.5		<u>Remove.</u>	<u>Too dominant.</u>
T14	Norway spruce	3.4	Recommend fell.	<u>Remove.</u>	<u>Too dominant.</u>
T15, T16	Norway spruce	3.4			

T17	Wild plum	3.9			
T18	Leyland cypress	3.7		<u>Reduce height by 3m. Reduce radii by 1m.</u>	<u>To reduce shading and dominance.</u>
T19	Ash	7.4	Monitor for ash dieback.		
T20 - T26	Norway spruce	3.0	Recommend fell and plant new hedge.	<u>Fell T25 &amp; T26</u> <u>T20-T24</u> <u>Either: Fell and replant new golden Leylandii hedge.</u> <u>Or: Reduce height by 2-3m. trim back for , remove all ugly dead pruning stubs.</u>	<u>To reduce shading and dominance.</u>
T27	Ash	1.9	Remove.	<u>Remove.</u>	<u>No space.</u>
T28	Gleditsia	3.0			
T29	Purple plum	1.8			
T30	Birch	1.2			
T31	Ash		Remove – poison or dig out stump.		

End of table.

(Treework following development see 6.10 below.)

## **6.3 Tree Protection**

### **6.3.1 Requirement**

The most important tree-protection measure is effective protective fencing, erected as close as possible to the Root Protection Area (RPA) boundary before any other work starts on site including demolition in the vicinity of trees. It must be maintained until all work is completed, except final soft landscaping. Here tree protection is proposed for retained trees, and for areas of possible new planting where this is feasible: called **landscape protection zones**.

### **6.3.2 Vertical Tree Protection**

- 6.3.2.1 Tree Protection fencing **locations** are shown on Tree Protection Plan in Appendices.
- 6.3.2.2 Two **specifications** for suitable protective fencing are given in Appendix II. **Lightweight** fencing should be sufficient here.
- 6.3.2.3 Within the fenced off **CEZ** Construction Exclusion Zone: there must be:-
  - no construction access,
  - no storage of materials, including soil,
  - no ground disturbance.
- 6.3.2.4 Fencing to remain until all demolition, construction and hard landscaping work is completed, and removed only for final soft landscaping.

### **6.3.3 Temporary Ground Protection (TGP) within RPAs:-**

- 6.3.3.1 IF work is required to be closer than the all-round protection zone, then the fenced off zone can be made smaller on that side, or entered temporarily, subject to permission from retained arboriculturalist.

Within such zones, temporary horizontal ground protection plus temporary fencing would be essential.

**TGP is needed here to protect rootzones of many trees.**
- 6.3.3.2 Obvious options for temporary ground protection would be:-

**Recommended: Butted scaffold boards or 22mm plyboard laid on bearers on 150mm depth woodchip or bark mulch (pedestrian access only).**

**Or: Temporary ground protection plates such as aluminium "Eve Trakway" or plastic interlocking-plate ground protection, both on 150mm depth of woodchip or bark, shown in Appendix III.**

Or: A layer of woven geo-textile under minimum 250mm depth of graded aggregate which is lifted after work.

## **6.4 Construction Access.**

### **6.4.1 General points:-**

We assume access will use existing drive past Cyder Mill Cottage.  
All retained trees and hedges need protection.  
No pedestrian, vehicle, plant or machinery to enter RPAs without temporary ground protection as detailed in para 6.3.3 above.

- 6.4.2 Site huts could be placed within RPA of trees and hedges; provided they stand elevated on stilt feet, no excavation is required for temporary services, and pedestrian and vehicle access is ground protected as detailed in 6.3.3 above.

**6.5 Demolition / Excavation within RPAs:-**

**6.5.1 General specification FOR minor ground changes anywhere near trees:-**

Parallel tracking with slewing outside the RPA:-.

1.5-tonne rubber-tracked mini-digger with toothless grading bucket.

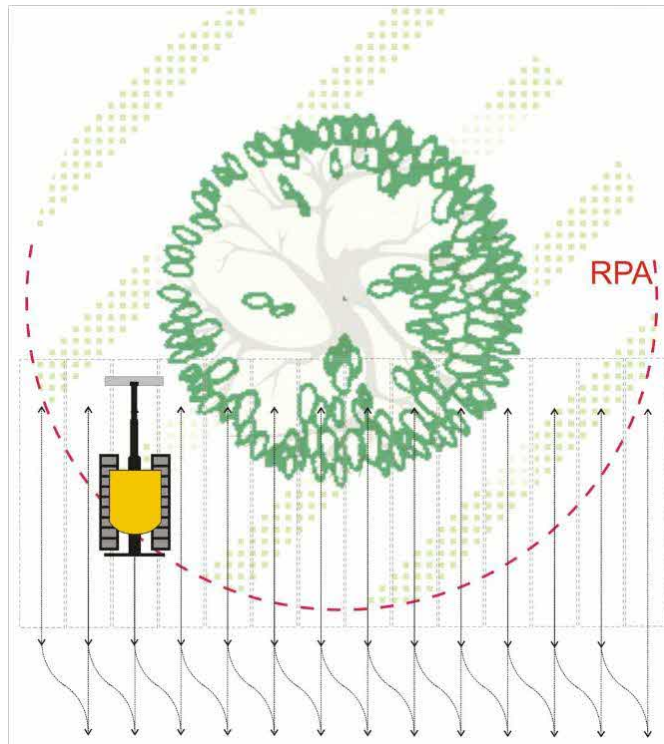
Scrape off only turf or top layer to 100mm depth.

OR REMOVE LOOSE MATERIAL DOWN TO ORIGINAL BASE OF CONCRETE GARAGE SLAB.

Slew outside RPA.

Heap spoil outside RPA, for dumper to collect and run outside RPA.

Sketch plan below .....



**6.6 Foundations within RPAs:-** see blue lines:

**6.6.1 Carport:-**

Hand dig a trench to 300mm depth around edges.

Sever roots by loppers.

Cover trench immediately to reduce root desiccation.

Dig out floor by mini-digger once roots cut.

Post-holes: HAND DIG.

Line holes with plastic bags to prevent contamination, and concrete in posts.

Floor can be geotextile and type-1 aggregate, topped with gravel or concrete.

**6.6.2 Barn extension:-**

No special measures.

## **6.7 Drainage.**

- 6.7.1 Storm-water drainage: Any soak-away system must be designed to avoid significant increase and no decrease of ground water in trees' rooting zones. **Roofwater off carport could be directed to perforated pipes under its floor.**
- 6.7.2 Foul Drainage: Use existing if possible. Locate outside RPAs.
- 6.7.3 Sustainable Urban Drainage System: Any SUDS scheme, to reduce the load on local mains drainage, must not significantly add to, or reduce, the soil water in trees' root zones. Store for greywater re-use, or allow percolation into drive.

## **6.8 Service Trenches within RPAs.**

- 6.8.1 Service trenches (electric lights, utilities, telecoms, drains etc) must be **designed** to run as far from trees as possible. **Use existing runs.**
- 6.8.2 Trenches **within RPAs must be avoided.**
- 6.8.3 Otherwise use this onerous, generalised, work method:-  
Hand digging\* or trench-less systems must be used.  
\*Use an air-spade to reveal roots (Appendix V).  
Retain roots >15mm diameter within service trenches. Thread service pipe underneath.  
No roots >25mm diameter must be exposed or severed without express written permission of local authority tree officer or retained arboriculturalist.  
Any excavation within the RPA of a tree must be covered immediately after digging with damp hessian, topped by tarpaulin & plyboard, to prevent root desiccation.  
Hole must be backfilled within five days of opening.  
Wrap exposed roots >20mm with hessian, and surround by 50mm depth sand, as part of backfill medium.  
Tamp backfill material by hand thumper or whacker plate only.

## **6.9 Minimal-dig construction for new access drives, parking & paths**

- 6.9.1 If roads, footpaths, cycle-ways, yards or parking are required near trees, they can be constructed in two ways:-

Conventional construction:- If outside a tree's RPA.

Minimal-dig construction:- If within a tree's RPA.

- 6.9.2 New Drive: See brown area by T6 & T7:-

Remove turf only, see 6.5.1 above.

Install timber edging, secured by rebar rod or treated timber pins.

Lay 300g/m<sup>2</sup> geotextile separation layer.

Lay thin levelling layer of 20-10 angular clean stone.

Lay 100mm depth Cellweb.

Fill and surcharge with 20-10 angular stone.

**Make the rest of the drive outside RPAs with similar stone, but 150mm depth of type-1 can be used under gravel, instead of cellweb.**

- 6.9.3 Appendix IV examples materials for minimal-dig, porous, build-up.

**6.10 Tree work following construction.**

- 6.10.1 Trees should be re-inspected. This inspection would reveal the need for remedial tree work for the following reasons:-
  - to rectify damage occurring during construction (regrettable but possible),
  - to allow additional clearance.
  - or complete tree removal if trees were considered too close for safe retention.
- 6.10.2 All additional work subject to further local authority agreement if trees are protected by TPO or planning conditions, or stand within a Conservation Area.

**6.11 New Planting.**

- 6.11.1 The proposal requires tree removal. New planting is not required as a planning condition because the site is small and surrounded by trees to west and north. But landscaping is desirable to create a new garden.
- 6.11.2 Any planting and maintenance to comply with: **BS 8545 “Trees: from nursery to independence in the landscape – Recommendations”**. BSI 2014.
- 6.11.3 Any planting must be provides with adequate long-term soil-moisture availability: graph below from James Urban shows rootable area related to tree size (Up by Roots, ISA, 2008), to remind designers:

eg, a tree of 30cm stem diameter needs 20m<sup>3</sup> rootzone = 3.6m x 3.6m x 1.5m deep.

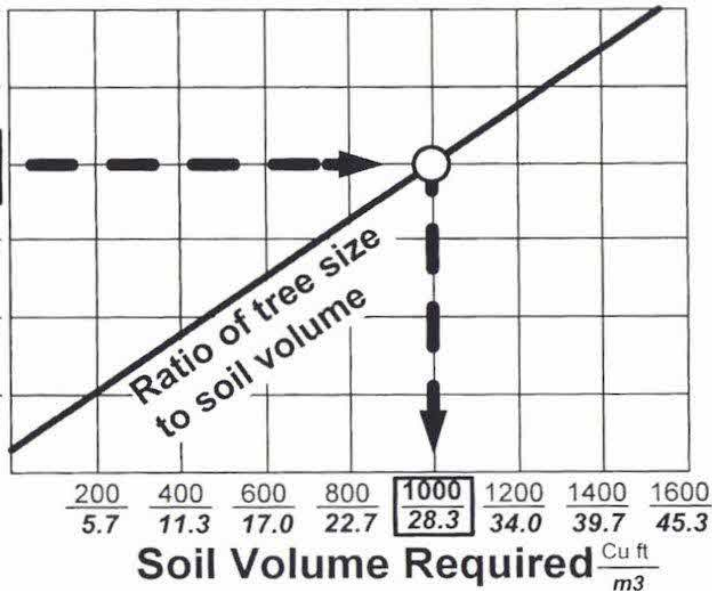
Overleaf .....

**Table 2.4.1. Tree size to soil volume relationships (Urban 1992).**

**Ultimate tree size**

Crown Spread	DBH-Trunk Diameter
Sq Ft	Inch
<i>m<sup>2</sup></i>	<i>mm</i>
1200	24
<b>111</b>	<b>610</b>
1000	20
<b>92</b>	<b>508</b>
<b>800</b>	<b>16</b>
<b>74</b>	<b>406</b>
550	12
<b>51</b>	<b>305</b>
350	8
<b>32</b>	<b>203</b>
150	4
<b>14</b>	<b>102</b>

Example: A 16 inch/406 mm diameter tree requires 1000 cu ft/28.3 m<sup>3</sup> of soil.

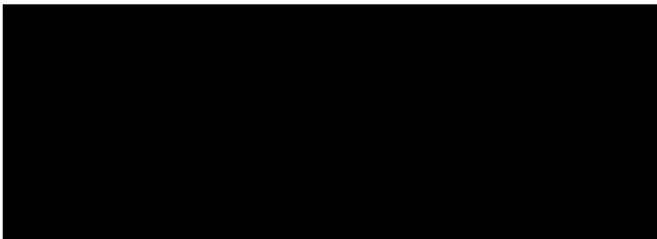


## **7.0 Conclusions**

- 7.1 The proposed re-development at Cyder Mill Barn requires some tree removal.  
But none of the trees to be removed is of high quality, and most are poor quality.  
Some retained trees, eg ash T10 & T19 might succumb to dieback disease.**
- 7.2 Retained trees can be protected as detailed in section 6 above.**
- 7.3 New planting is not required as part of this proposal.**

Please contact us for further information.

Yours sincerely,



**For: B J Unwin Forestry Consultancy.**

### **References:**

- "The Body Language of Trees"*. Claus Mattheck and Helge Breloer. HMSO 1994.  
*"Principles of Tree Hazard Assessment and Management"*. David Lonsdale. HMSO 1999.  
BS 3998: 2010 *"British Standard Recommendations for Treework"*.  
BS 5837: 2012 *"Trees in Relation to Design, Demolition & Construction"*.  
BS 8545 *"Trees: from nursery to independence in the landscape – Recommendations"*. BSI 2014.  
NJUG Volume 4 2007 *"Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees"*. NJUG, 30 Millbank, London, SW1P 4RD.  
*"Trees and Development"*. Nelda Matheny and James R Clark. ISA. 1998.  
BS 8206:1992 *"Lighting for buildings"*.  
BRE guide 209 (2002) *"Site Layout planning for daylight and sunlight"*.  
NHBC Chapter 4.2, *Building Near Trees*. National House Building Council, 2013.  
*"Tree Roots in the Built Environment"*. J Roberts, N Jackson & M Smith. R.A.T.8, TSO (The Stationary Office), London, 2006.  
*"Treework at Height"* Industry Code of Practice. Arboricultural Association. 2021.

Appendix I

Location







Google Earth aerial.  
Taken April 2021.



Appendix II

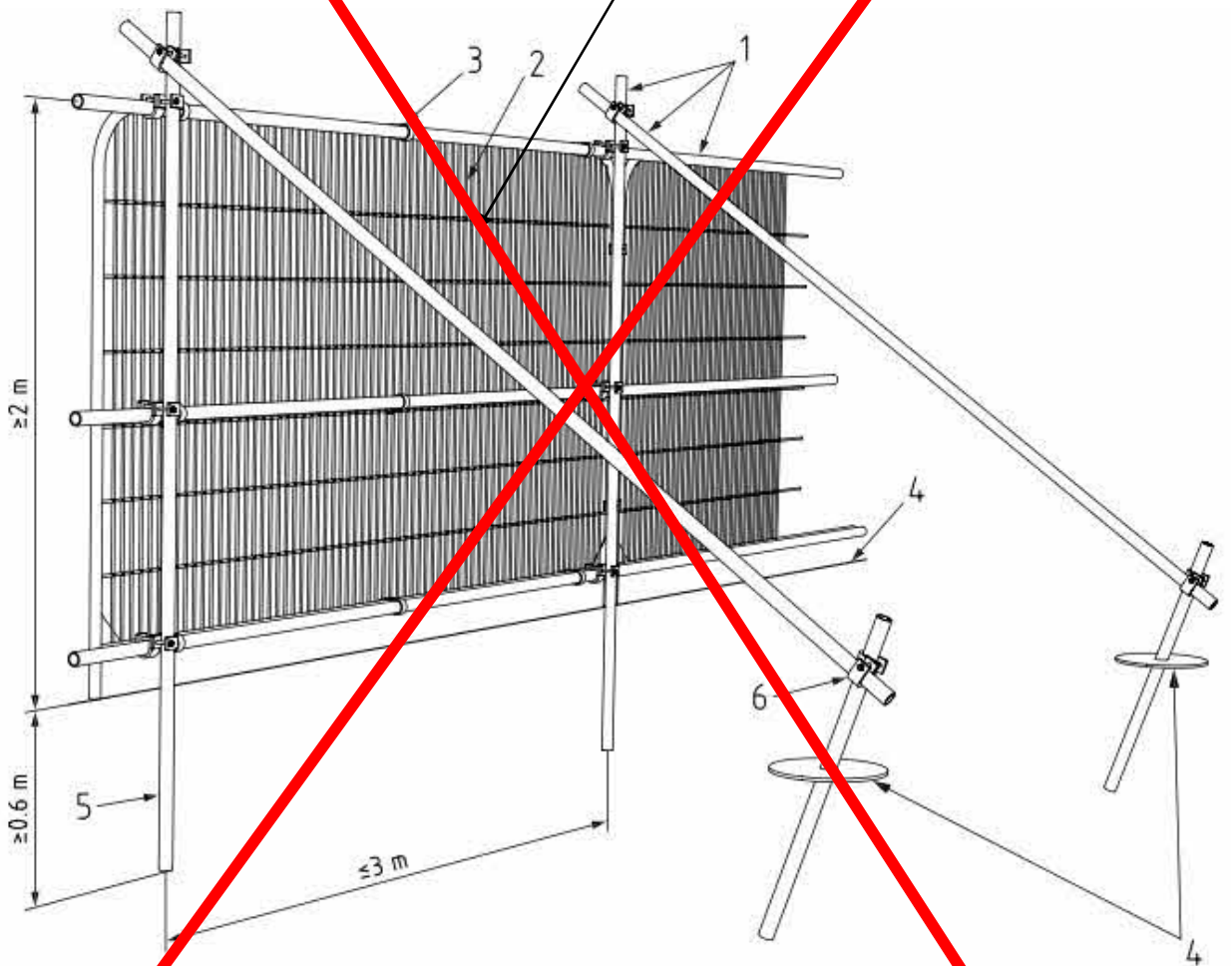
**Vertical Tree Protection Fencing, from BS5837.  
Heras panels on driven poles with pegged braces.**

*Vertical protective fence: location on plan:*

**Default in situ > 6 months:-**

Apply signs at MAX 10m spacing:

**TREE PROTECTION -  
Construction Exclusion  
Zone.  
NO ACCESS**



**Key**

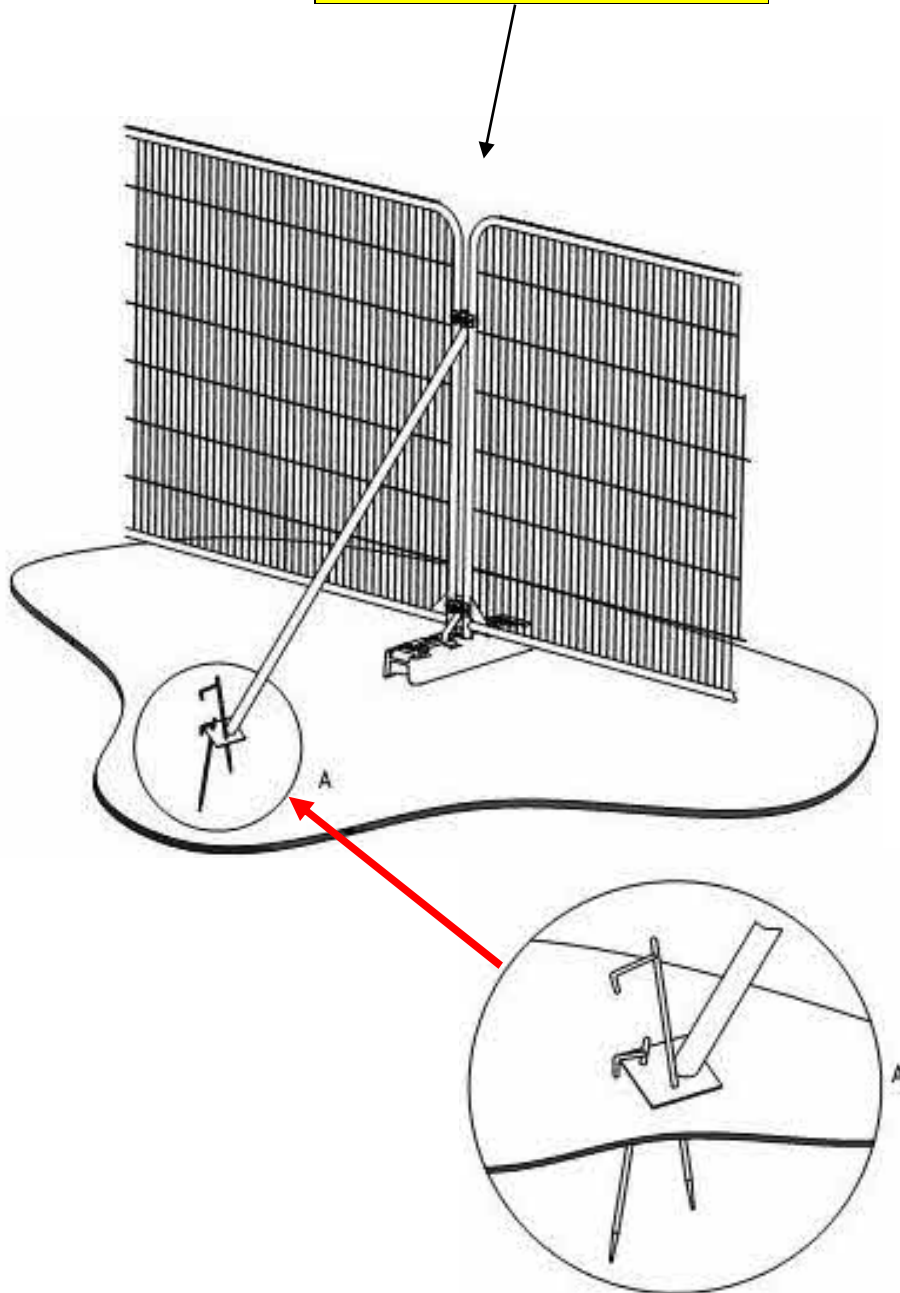
- 1 Standard scaffold poles
- 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps

**Lightweight: in situ for < 6 months-**

**Heras panels on rubber feet, pinned braces.**

Apply signs at maxm 20m spacing:

**TREE PROTECTION -  
Construction Exclusion  
Zone.  
NO ACCESS**



**Appendix III**

**Horizontal Ground Protection x 2 examples**

**Example of aluminium temporary ground protection.**

**EVE TRAKWAY**



**Roadways - Medium Duty Trakpanel**

The Medium Duty Trakpanel, or 'Box' panel, is ideal for where both pedestrian and vehicle access is required. This versatile panel can be laid with either a smooth or corrugated surface uppermost. The smoother surface finish provides excellent support underfoot, whilst the construction of the panel maintains a high load bearing capacity. Due to the way these panels fit together, a smooth joint is created therefore reducing trip hazards.

The Benefits :-

Pedestrian friendly upper surface

Suitable for heavy vehicles Ideal for where both pedestrians and vehicles require safe passage.

Technical Specifications	
Dimensions	2.5 x 3m (when installed 2.44m x 3m due to overlap)
Weight	274.7 kg
Carrying Capacity	A more pedestrian friendly roadway, this system is capable of taking any road going loads.

The following Roadways are available.

Please select an item to view more information:

**Other Roadways products:-**

[Heavy Duty Trakpanel-](#)

[LD20-](#)

[Roadway Ramps -](#)

[Multi-Directional Trakpanel](#)

## Example of plastic temporary ground protection.

### Ground-Guards Tree Root Protection

#### Tree root protection for construction projects

Planning Departments may often need to stipulate that site access roads will not involve any excavation because of the proximity of tree roots on the site. Furthermore, that they will also provide additional ground cushioning when passing over the immediate areas where there are tree roots beneath. This is very important to prevent compaction of the ground, and long-term damage to the soil structure, the tree roots, and ultimately, to the health of the trees themselves.

An effective means of protecting tree roots is to use a double layer of Ground-Guards. Panels with 150mm of wood chips sandwiched in-between which creates a suitably cushioned roadway for this purpose.

The Ground-Guards system is so durable and versatile that whatever your need, the team will be delighted to work with you to provide an effective solution. Please just call our team on 0113 267 6000 for friendly advice on any difficult site conditions that you need assistance with.



## Appendix IV

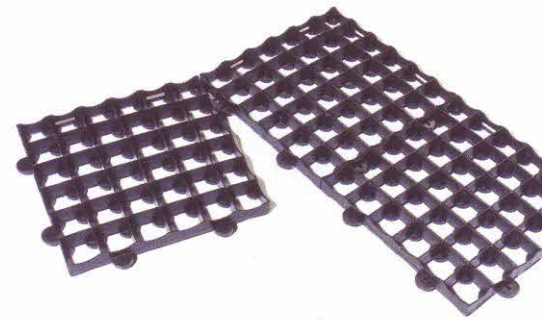
### Trays for strengthening gravelled or grassed areas. (50mm or 80mm trays for strengthening gravelled or grassed areas.

# DuoBlock

Grass Protection System



Using grass or gravel infill, DuoBlock 750 and 500 give architects, consulting engineers, landscape contractors and developers the ultimate in load-bearing performance combined with aesthetic appearance.



Porous paving systems have been available since the early 1990's and provide a durable yet aesthetically pleasing alternative to traditional surfacing solutions. Increased awareness of the need to manage storm water runoff in new developments and the advent of Sustainable Urban Drainage Systems (SUDS) has led to an increase in popularity.

DuoBlock is a permanent grass protection / gravel retention porous paving system. It is extremely versatile and may be used in a wide range of applications including:

#### Applications:

- Overspill car parking
- Emergency access and service roads
- Caravan hardstanding
- Verge hardening
- Service Roads
- Pedestrian walkways and towpaths
- Bridle ways
- Helipads
- Golf course pathways / Tee reinforcement

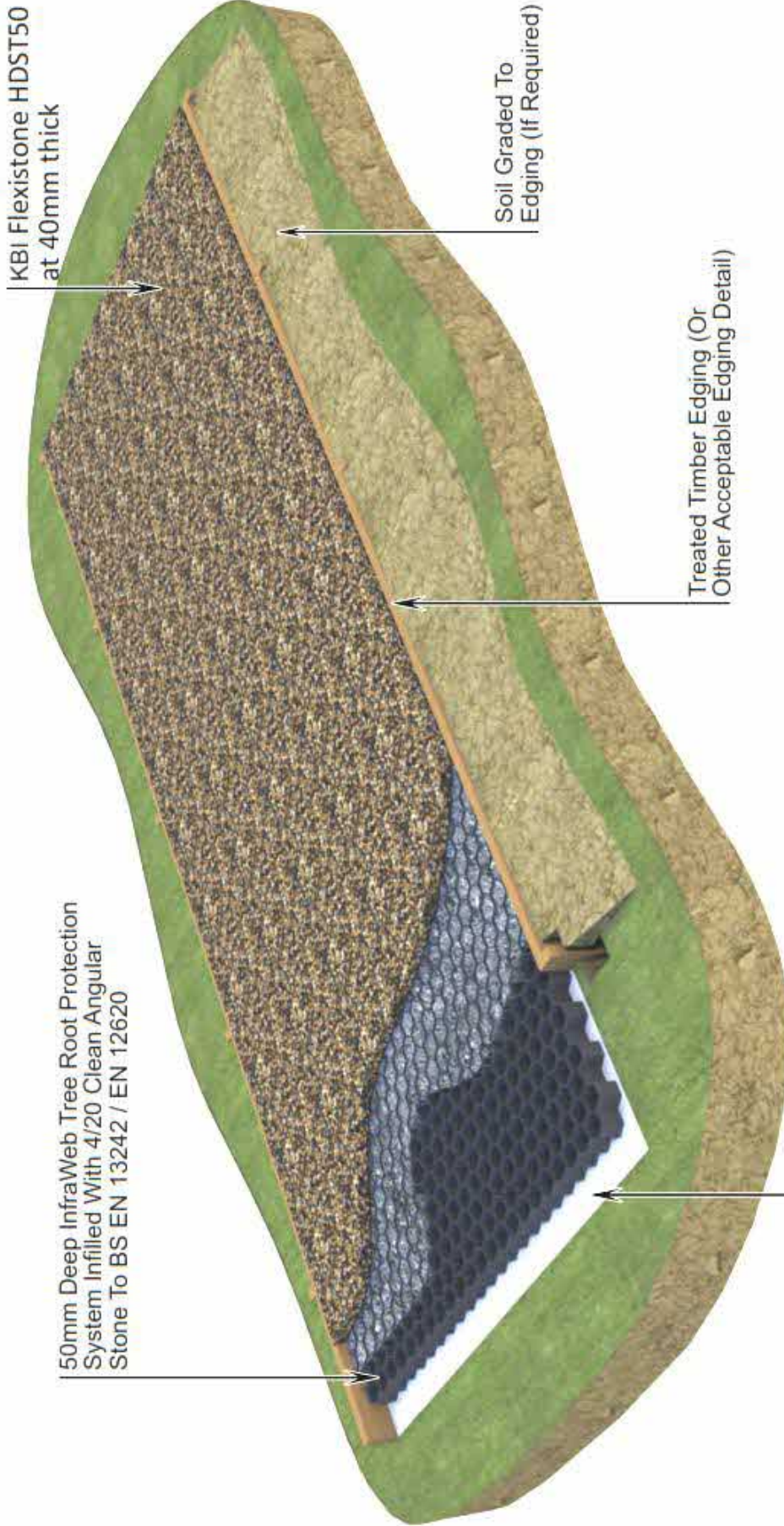
DuoBlock systems are uniquely designed to ensure the ultimate in load bearing performance and aesthetic appearance and have numerous benefits over traditional and first generation plastic systems such as:

#### Benefits:

- 90% surface area available for infill
- Reduces surface water runoff
- Increases water Filtration
- Interconnecting cell walls
- High Load Performance
- Unique surface design for greater aesthetic appeal
- Positive interlock System

NEXT DAY  
DELIVERY  
from stock

**InfraWeb TRP 50 Section - Tree Root Protection c/w Flexistone HDST50 at 40mm thick for pedestrian and cycleway use only**



 <p><b>Sustainable Porous Paving Solutions</b></p>	<p>KBI Longfields Court Middlewoods Way Wharmcliffe Business Park Barnsley South Yorkshire S71 3GN +44 (0) 1422 242880 <a href="http://www.kbiuk.co.uk">http://www.kbiuk.co.uk</a></p>	<p><b>InfraWeb TRP 50 Section - Tree Root Protection c/w Flexistone HDST50 at 40mm thick for pedestrian and cycleway use only</b></p>	<p>Date: 29/12/2016</p>
<p>Drawn By: NLG Design</p>		<p>Revision: A</p>	<p>Drawing Number: TRP50HDST50</p>

## Deeper Cellweb 3-D grid for strengthening tracks.

Cellweb® TRP is a 3D cellular confinement tree root protection system. The system provides a 'no dig' solution for the construction of new hard surfaces within root protection areas (RPAs). Cellweb® TRP has been designed and independently tested to comply with recommendations made in Arboricultural Practice Note 12 and BS 5837 2012 – Trees in relation to design, demolition and construction.



### Cellweb® TRP Key Functions

Cellweb® is a 'no dig' solution which is constructed directly on the existing ground surface. This eliminates the requirement for excavation, preventing root severance.

Cellweb® is a completely porous system allowing continued water permeation and gas exchange between the rooting environment and atmosphere.

Cellweb® spreads point loads, minimising increases in soil compaction within the rooting environment. This maintains an open graded soil structure allowing continued root growth, water, gas and nutrient migration.

### The Cellweb® TRP system comprises the following three components

**Treetex™ Geotextile.** Following minimal ground preparation the Treetex™ is laid onto the existing ground and top soil. This acts as a separation layer, separating the system above from the soil and rooting environment below. Treetex™ performs as a hydrocarbon pollution control measure in accordance with BS5837, holding 1.7lt of oil per square meter.

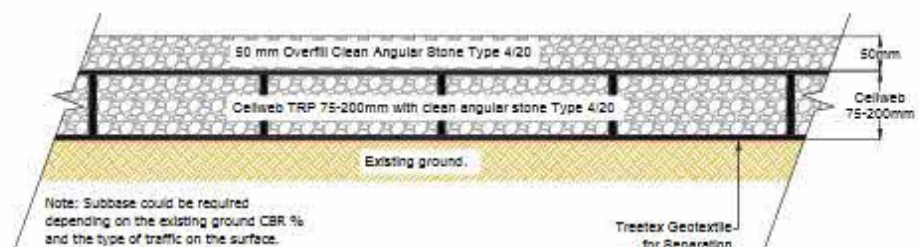
**Cellweb® 3D Cellular Confinement.** The Cellweb® is installed on top of the Treetex™ layer. This is fixed to the ground using ten steel J pins per panel. The panels can be cut to the required shape and adjoining panels can be connected using heavy duty staples or cell ties.

**4-20mm Clean Angular Stone.** The expanded Cellweb® is infilled with a 4-20mm clean angular stone. The confined angular stone locks together to produce a rigid stone mattress, while maintaining air pockets for continued water permeation and gas exchange. The low fines content of the stone prevents the Treetex™ layer from becoming blocked over time.

### Which depth of Cellweb® TRP?

The Cellweb® System is provided in four different depths; 200mm, 150mm, 100mm and 75mm. The depth required is determined by the proposed traffic loadings and the site ground conditions. Geosynthetics in house engineering department can provide a free site specific technical recommendation. For free technical and engineering support please contact Geosynthetics Ltd 01455 617139 or the full installation guide can be found on our website [www.geosyn.co.uk](http://www.geosyn.co.uk).

### Indicative Cellweb with overfill



Web: [www.geosyn.co.uk](http://www.geosyn.co.uk) | Tel: 01455 617139  
Fax: 01455 617140 | Email: [Sales@geosyn.co.uk](mailto:Sales@geosyn.co.uk)



**Geosynthetics**  
Engineered Solutions



## Appendix V

### Example of Air-spade.

#### HANDLE VIBRATION TEST

*Product type* – MBW Soil Pick SP125

*Manufacturer of testing apparatus* – Castle

Accelerometer was affixed to the rear of the handle on the Soil Pick and all three axes were tested.

*Accelerometer position:*

X axis = 0.0M/S<sup>2</sup>

Y axis = 0.0M/S<sup>2</sup>

Z axis = 0.0M/S<sup>2</sup>

*Hand/arm vibration* = 0.0M/S<sup>2</sup>

#### TREE CARE

MBW's Soil Pick provides a multi-functional air tool for a variety of applications in the tree care industry including:

##### *Radial Trenching*

Radial trenching is a process which involves aerating the soils around a tree root in a pattern resembling a wagon wheel. The Soil Pick provides a safe and damage free means of utilizing a high air pressure to loosen tightly compacted soils.

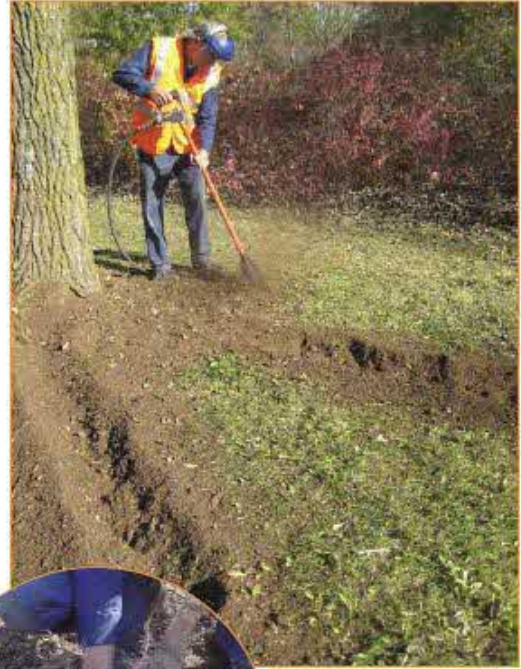
##### *Aeration & Excavation*

##### *Root Locating for Utility Line Installation or Pruning*

##### *Investigating Root Structure and Damage*

##### *Transplanting or Bare Rooting*

##### *Reducing Soil Compaction*



**Non-Conducting Barrel**  
Independently certified safe for 100,000 Volts/12" Barrel

**Large Deflector**  
protects operator from scatter of dirt and debris

**Non-Sparking Nozzle**  
allows safe use around leaking gas lines

**Polymer Trigger**  
reduces operator fatigue

**Unlike the Competition,**  
the Soil Pick maintains a cool temperature

**Pressure Gauges**  
ensure maximum performance

**MBW UK Ltd.**  
Units 2 & 3 Cochrane Street • Bolton BL3 6BN • England UK  
Ph: 44 (0) 1204 387784 • Fax: 44 (0) 1204 387797  
E-mail: mbwuk@btinternet.com • Website: www.mbw.com

**1-800-878-5287**

## Appendix VI

### - B J UNWIN FORESTRY CONSULTANCY Ltd. -

Head office: Parsonage Farm, Longdon, Tewkesbury, Gloucestershire. GL20 6BD.

Tel / Fax: 01684 833538. Home Tel: 01684 833795. Mob: 07860376527. E-mail: Jim@bjunwin.co.uk

Satellite Offices: - Haley Ridge, Highcliffe, Nr. Wadebridge, Cornwall, PL27 6TN.

-105 Charfield Court, 2 Shirland Road, London, W9 2JR.

Associate office: - 1 Market Place Mews, Henley-on-Thames, Oxfordshire, RG9 2AH.

Principal: Jim Unwin BScFor, MICFor, FArborA, CEnv.

Chartered Forester - ICF Registered Consultant - Fellow of the Arboricultural Association -  
Chartered Environmentalist.

<b>From:</b>	<b>Jim Unwin</b>	<b>To:</b>	<b>Prospective Client</b>
<b>Date:</b>	<b>Jan'22</b>	<b>No. of pages:</b>	<b>2</b>
<b>Subject:</b>	<b>Professional CV</b>		

Below are set out **B J Unwin Forestry Consultancy's** competences and experience.

#### **Insurance:-**

**£5m Public Liability & £2m Professional Indemnity (renewed June).**

#### **Personnel:-**

B J Unwin (born 1956) started his forestry career as a tree surgeon and landscape contractor in 1975. He studied forestry at Aberdeen University from 1977 to 1981, worked for Unilever as a Forestry Manager in the Solomon Islands from 1981 to 1983. Since then he has been based in Gloucestershire assisting clients to manage their woodland, trees and vegetation throughout Southern Britain, and occasionally in northern England, Scotland and Northern Ireland.

In the mid-1980s to mid-1990s for a period of about ten years he taught chainsaw, tree felling and tree surgery courses at Worcestershire Agricultural College on a part-time basis. He was assessed and passed as a LANTRA assessor in these skills, and held NPTC certificates of competence in chainsaw use on the ground and up trees.

He now works as a tree consultant / manager / contract manager to a range of clients listed below.

For tree decay testing we have a **PICUS II ULTRASOUND** tomograph with electronic callipers and **RESISTOGRAPH-R400** drill.

He works with two self-employed arboriculturalists of >30 years' combined experience:-

**Jasper Fulford-Dobson** Arboricultural Association Registered Consultant - Associate Member of the Institute of Chartered Foresters - Professional member of the International Society of Arboriculture - Technicians Certificate (ArborA) 2005, now regarded as NQF "level 4" - Professional Tree Inspection Certificate (LANTRA) 2013,

**Owen Hutchison** BSc(Hons) Agriculture & Estate Management, Level 4 Diploma Arboriculture, LANTRA Professional Tree Inspection & working with trees since 2007.

Plus a secretary/ plan technician; calling in extra help as required (eg ecologist or arboricultural assistant). On bigger projects he regularly works as a part of a multi-disciplinary team.

Current BJUFC qualifications are:-

BSc Forestry Hons 1<sup>st</sup> Class, Aberdeen 1981.

**Chartered Forester No. 0330064, 1986.**

**Fellow of the Arboricultural Association, 1995.**

Licensed Subsidence Risk Assessor, 1997-2001 (scheme closed in 2001).

Completed Training in September 2002 to Prepare Native Woodland Plans for CCW and FC in Wales.

**Arboricultural Association Registered Consultant No. 42, from 2004 to May 2021.**

LANTRA certificate for Arboriculture and Bats, BJU in 2005.

Examined and approved to submit Welsh WGS as Management Planner and PAWS Assessor, 2006.

Joined Utilities Vendor DataBase, Supplier No: 88101 in Feb 2006 (left 2010).

Training and Certification in basic CAD operation 2006.

**Chartered Environmentalist April 2008.**

Woodfuel Production and Supply : LANTRA Certificate of Training Dec 2008.

Training in CAVAT amenity tree asset valuation October 2010.

**Company Safety Policy:-** We were successfully assessed by Safety Management Advisory Services (SMAS) for many years as meeting CDM Regs 2015 Core Criteria Stage 1, as a **Worksafe Consultant No. 75950.** expired 09/2020. Not renewed.

CITB Health, Safety & Environment Test for Managers & Professionals passed 22/01/2015.

First-aid at work June 2013.

DBS Basic Certificate P0003GX9B7C dated 11 Dec 2021 Certificate 001048986050.

**Current clients and typical work include:-**

English Heritage	Tree safety inspection contract 2007-2013 for East Midlands, East Anglia, London and SE England. Tree safety inspection contract for West of England & Midlands 2013-2021.
Planning Inspectorate (PINS) & Dept for Communities and Local Government. 2000-2017.	<b>Arboricultural Inspecting Officer</b> in South-West England, South East England, West Midlands and East Midlands; advising the First Secretary of State on TPO appeals since 2000. Contract with DCLG expired April 2008 when transferred to PINS. Contract continued with PINS, as Non-Salaried <b>Arboricultural Inspector, determining TPO appeals and High Hedge appeals. All non-salaried inspectors released in 2017.</b>
Architects / Developers / Planning Appeals	Complete Tree Constraints, Impact Assessment & Tree Protection advice for planning, working with other professionals to input arboriculture into more complex development schemes. Recent assignments in Liverpool to Cornwall, Kent, Norfolk & London. All using BS5837:2012. FULL CAD CAPABILITY.
Amey Mouchel Ltd	Overseeing Amey Tree Officer on motorway and trunkroad tree inspections throughout Midlands and Marches to 2012. Amey Mouchel are agents for Highways Agency.
CRH Tarmac Ltd, + Midland Quarry Products + Quarryplan (in Northern Ireland).	Since 1990 working with Estates staff, quarry managers and Landscape / ecological consultancies organising and managing contracts for tree and woodland planting both pre- and post- quarrying. Also preparing landscape restoration schemes for straightforward sites plus landscape management on sites throughout southern England, East Anglia and south and south-west Wales. (Commendations for Land Restoration and Environmental improvements from Spelthorne Borough Council 2003.) Also in England & Northern Ireland ongoing tree consultancy for Quarryplan.
Land Agents	Assisting Bruton Knowles clients' with woodland management and other tree issues since 1984. We also assist clients of Fisher German and Savills on a regular basis.
Tarmac Central now CRH Tarmac Ltd.	1988-2018 woodland management of Hopwas Hays Wood, Tamworth.
Rural estates in Herefordshire, Worcestershire and Gloucestershire, plus private woodland owners in southern England and Wales.	Since 1983 woodland management, tree management, hedgerow management. Many are Ancient woodlands and SSSI's requiring detailed ecological management plans produced in consultation with ecologists. About forty Farm Woodland Premium Schemes and about twenty Native Woodland Plans prepared to date in England and Wales. On-going EWGS grant applications. Input into Tir Gofal (and its successor) and Stewardship schemes. Better Woods for Wales (BWW) applications.
British Waterways	Ten-year Tree and Vegetation Management Plans along canals and around reservoirs in London, Hertfordshire, Berkshire, Birmingham, Staffordshire, Worcestershire, Gloucestershire, Shropshire, Llangollen Canal, etc: plus help in dispute with riparian owners. This work ceased around 2011.
Stroud District Council	Management of 49Ha woodland since 1989 on FC schemes plus grassland on DEFRA Stewardship Schemes, including HLS. Retired Nov07.
One-off clients	Since 1983 assisting tree owners, developers, lawyers etc throughout southern or midland Britain, including Wales, on a wide range of tree-related issues including planning, planning appeals, subsidence, health & safety, disputes, vegetation control, expert witness, valuation of woodlands, standing and felled timber, Christmas trees etc, and tree and landscape planting schemes. Recently High Hedge issues and BS5837 are hot topics.
Malvern Hills District Council. South Oxfordshire District Council	BJU Stand-in part-time Consultant Tree Officer Summer 2003. JF-D stand in Consultant Tree Officer summer 2009 to spring 2010.
Golf course & leisure facilities	Assistance with development of Carden Park golf course in Cheshire. Management advice for trees on other golf courses: Eg Ross Golf Club, Swindon Golf Club .
Farm management	Management of own 95Ha farmland since 1985.

Please do not hesitate to ask for further information. B J Unwin END.

## Appendix VII

Constraints plans :-

### Tree Plan

Retention categories, based on BS 5837 Table 1:-

**A = High quality & Value (>40yrs life): Green.**

**B = Moderate quality & Value (>20yrs life): Blue.**

**\*\*C = Low quality & Value (>10yrs life): Grey.**

**U = Trees to be removed (<10yrs life): Red.**

**\*\*PLEASE NOTE. FOR CLARITY, C-CATEGORY TREES MAY NOT BE COLOURED.**

and

### Root Protection Areas Plan

RPA = circles.

See Tree Table for dimensions.

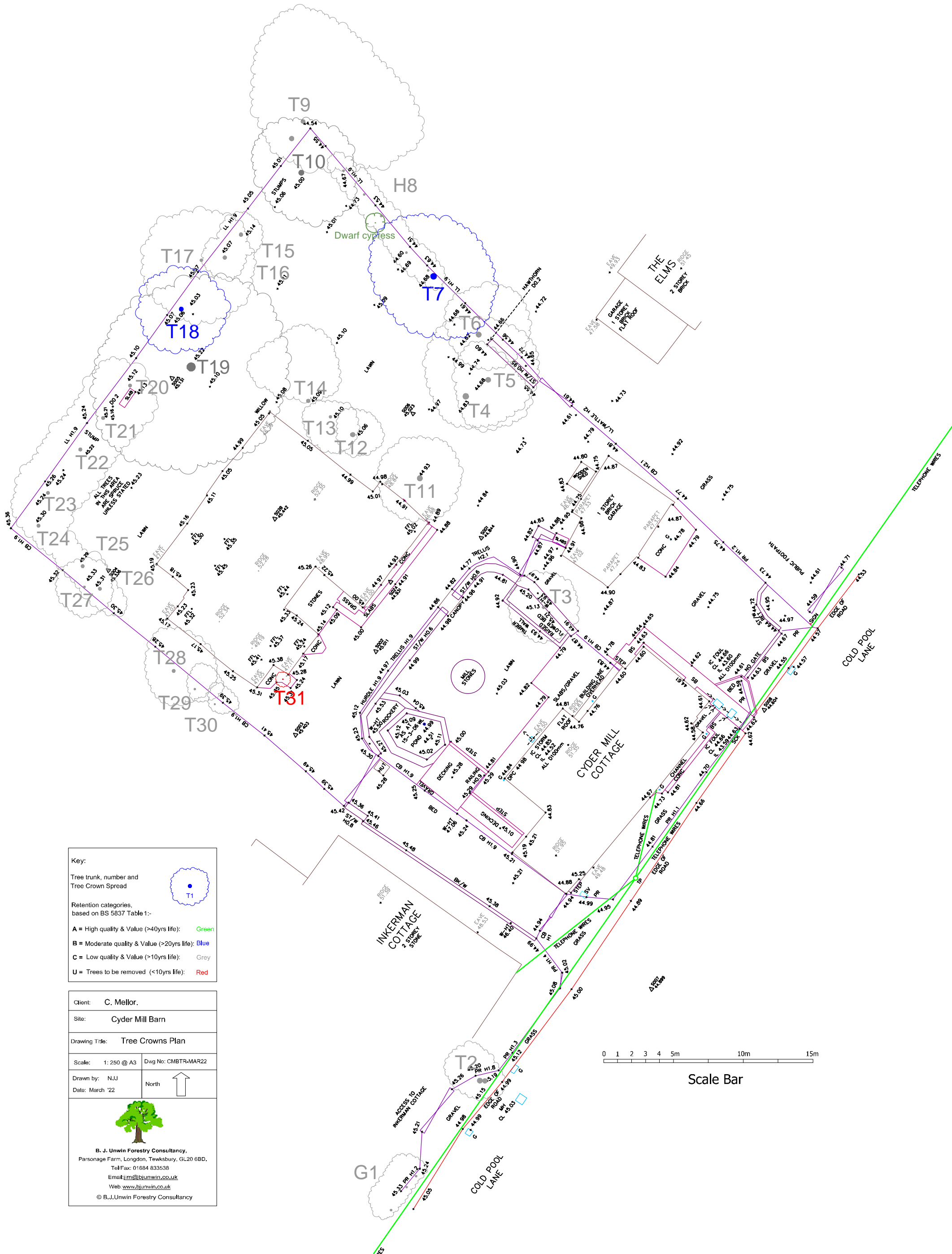
and

### Theoretical Shading Plan

= quadrant of tree height in ten years' time from north west (mid-morning) to due east (evening). This is a shadow pattern for 1 x tree height from 10.00-18.00hrs from May to September.

***Plans are not included in pdf format of report.***

***Insert plans here in paper copy of report:-***



**Key:**

Tree trunk, number and Tree Crown Spread

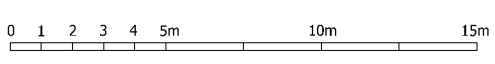
Retention categories, based on BS 5837 Table 1:-

- A = High quality & Value (>40yrs life): Green
- B = Moderate quality & Value (>20yrs life): Blue
- C = Low quality & Value (>10yrs life): Grey
- U = Trees to be removed (<10yrs life): Red

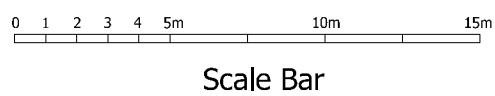
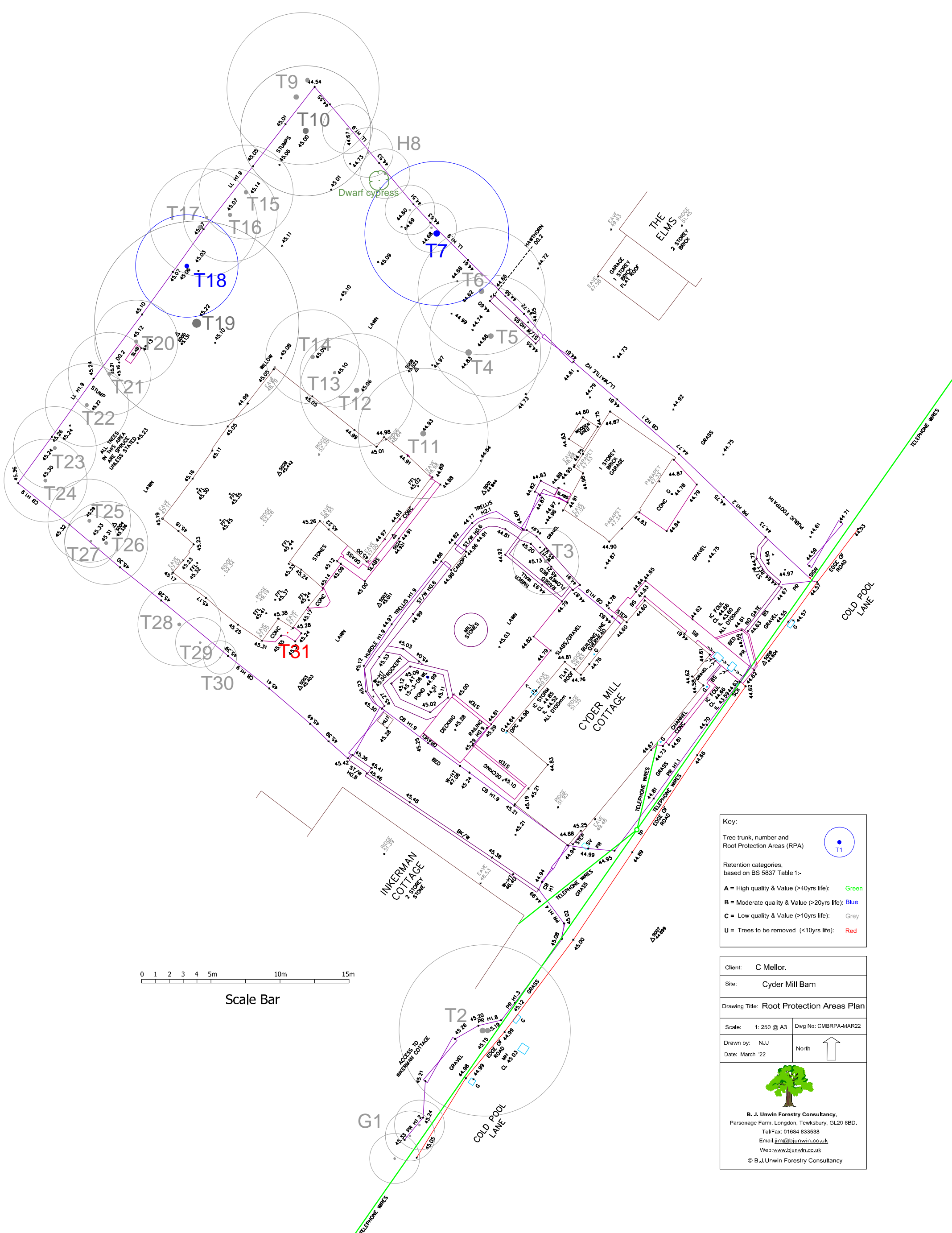
Client:	C. Mellor.
Site:	Cyder Mill Barn
Drawing Title:	Tree Crowns Plan
Scale:	1: 250 @ A3 Dwg No: CMBTR-MAR22
Drawn by:	NJJ
Date:	March '22

North ↑

B. J. Unwin Forestry Consultancy,  
Parsonage Farm, Longdon, Tewksbury, GL20 6BD.  
Tel/Fax: 01684 833538  
Email: [bjun@bjunwin.co.uk](mailto:bjun@bjunwin.co.uk)  
Web: [www.bjunwin.co.uk](http://www.bjunwin.co.uk)  
© B.J. Unwin Forestry Consultancy



Scale Bar

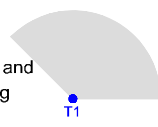


Key:

Tree trunk, number and Root Protection Areas (RPA)	
Retention categories, based on BS 5837 Table 1:-	
A = High quality & Value (>40yrs life):	Green
B = Moderate quality & Value (>20yrs life):	Blue
C = Low quality & Value (>10yrs life):	Grey
U = Trees to be removed (<10yrs life):	Red

Client:	C Mellor.
Site:	Cyder Mill Barn
Drawing Title:	Root Protection Areas Plan
Scale:	1: 250 @ A3
Dwg No:	CMBRPA-MAR22
Drawn by:	NJJ
Date:	March '22
North	
<p><b>B. J. Unwin Forestry Consultancy.</b>          Parsonage Farm, London, Tewksbury, GL20 6BD.          Tel/Fax: 01684 833538          Email: <a href="mailto:jm@bjunwin.co.uk">jm@bjunwin.co.uk</a>          Web: <a href="http://www.bjunwin.co.uk">www.bjunwin.co.uk</a>          © B.J. Unwin Forestry Consultancy</p>	

Key:



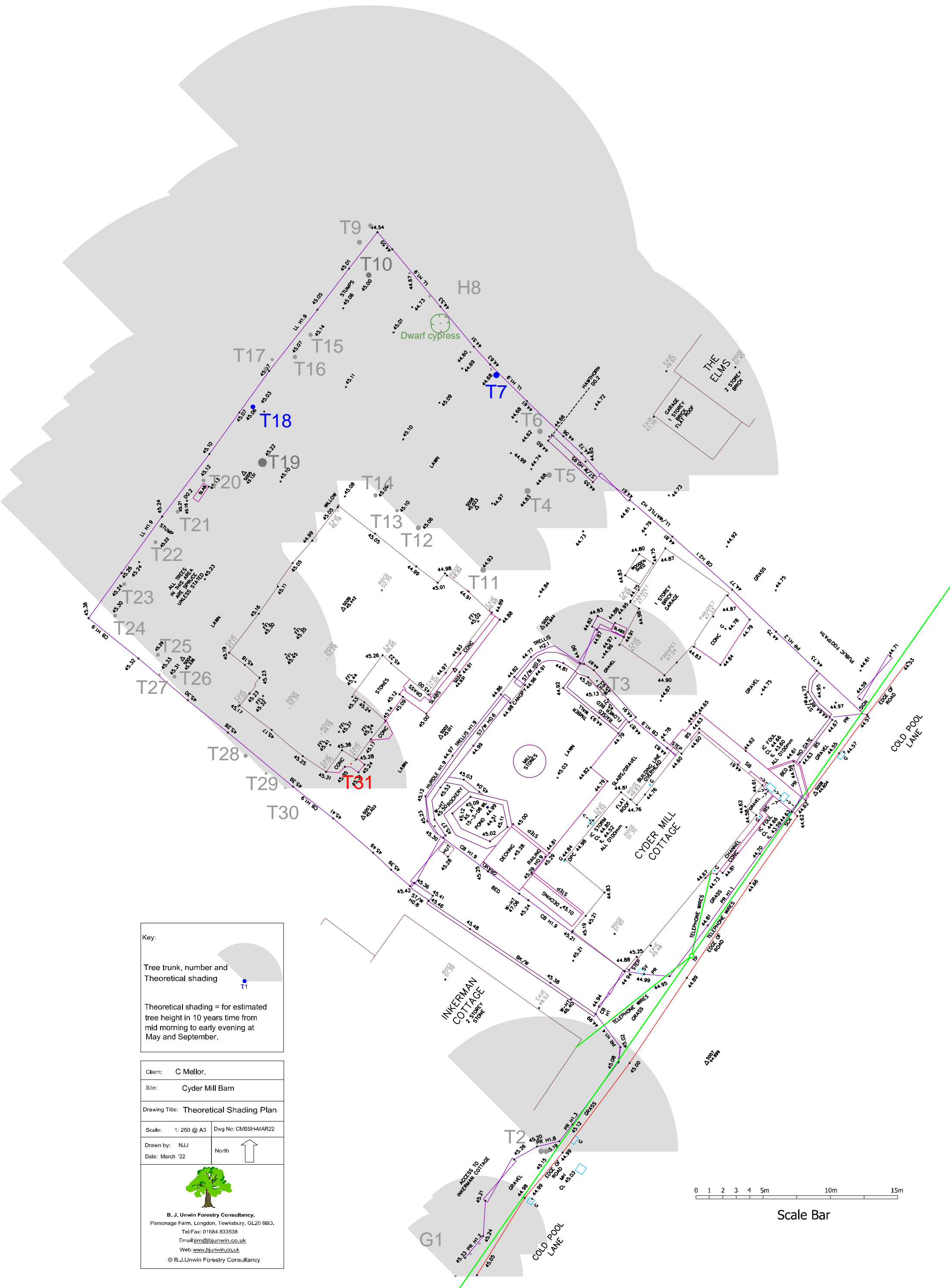
Tree trunk, number and Theoretical shading

Theoretical shading = for estimated tree height in 10 years time from mid morning to early evening at May and September.

Client: C Mellor.	
Site: Cyder Mill Barn	
Drawing Title: Theoretical Shading Plan	
Scale: 1: 250 @ A3	Dwg No: CMBSH-MAR22
Drawn by: NJJ	North ↑
Date: March '22	



**B. J. Unwin Forestry Consultancy,**  
 Parsonage Farm, Longdon, Tewksbury, GL20 6BD.  
 Tel/Fax: 01684 833538  
 Email: [bj@bjunwin.co.uk](mailto:bj@bjunwin.co.uk)  
 Web: [www.bjunwin.co.uk](http://www.bjunwin.co.uk)  
 © B.J.Unwin Forestry Consultancy



## Appendix VIII

### Tree Retention and Tree Protection Plan

*Plans are not included in pdf format of report.*

*Insert plans here in paper copy of report:-*

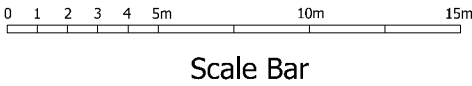
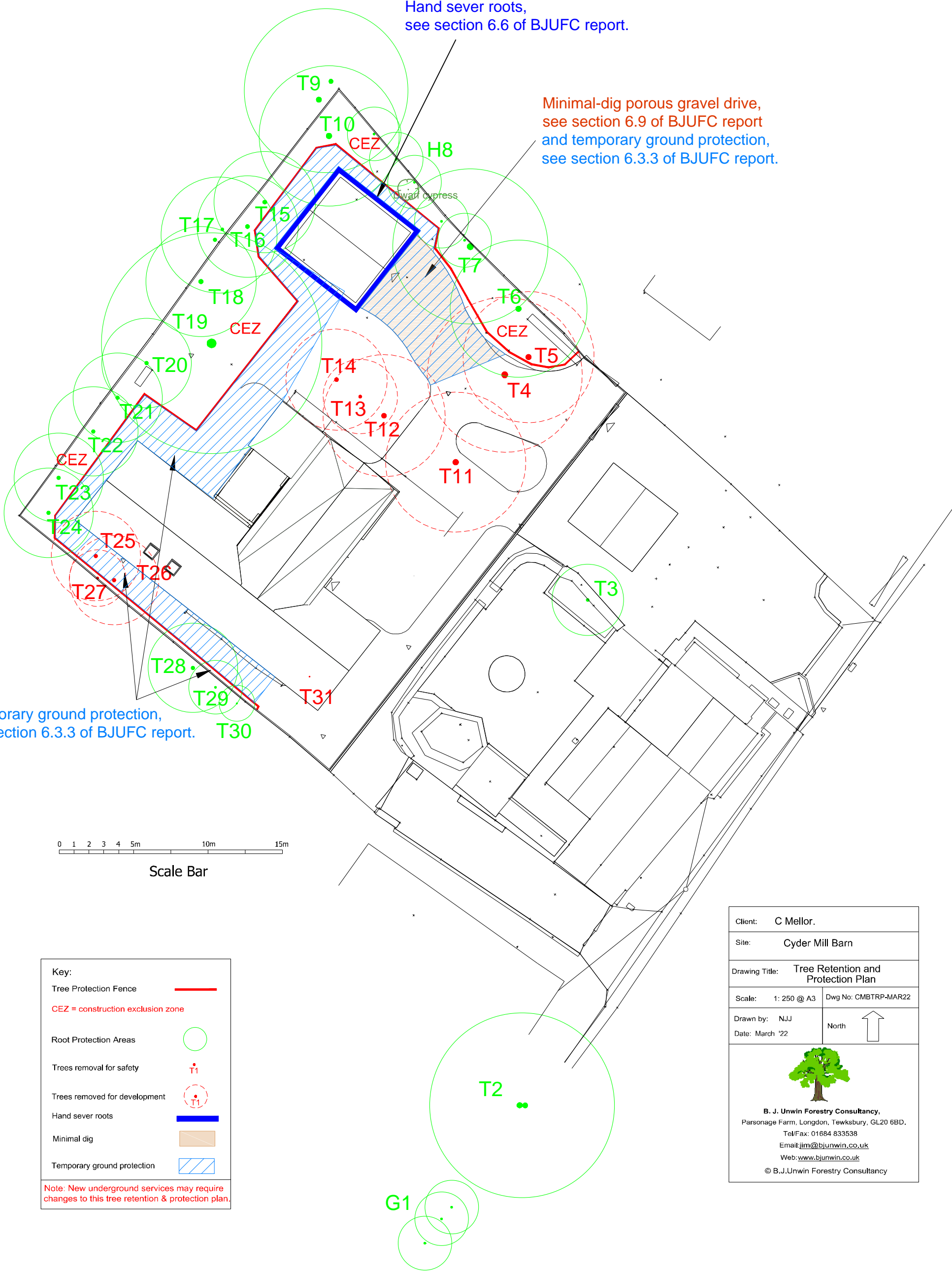
END.




Hand sever roots,  
see section 6.6 of BJUFC report.

Minimal-dig porous gravel drive,  
see section 6.9 of BJUFC report  
and temporary ground protection,  
see section 6.3.3 of BJUFC report.

Temporary ground protection,  
see section 6.3.3 of BJUFC report.



<b>Key:</b>	
Tree Protection Fence	
CEZ = construction exclusion zone	
Root Protection Areas	
Trees removal for safety	
Trees removed for development	
Hand sever roots	
Minimal dig	
Temporary ground protection	
<b>Note:</b> New underground services may require changes to this tree retention & protection plan.	

Client:	C Mellor.		
Site:	Cyder Mill Barn		
Drawing Title:	Tree Retention and Protection Plan		
Scale:	1: 250 @ A3	Dwg No:	CMBTRP-MAR22
Drawn by:	NJJ	North	
Date:	March '22		
 <b>B. J. Unwin Forestry Consultancy,</b> Parsonage Farm, Longdon, Tewksbury, GL20 6BD. Tel/Fax: 01684 833538 Email: <a href="mailto:jjm@bjunwin.co.uk">jjm@bjunwin.co.uk</a> Web: <a href="http://www.bjunwin.co.uk">www.bjunwin.co.uk</a> © B.J.Unwin Forestry Consultancy			