

Architecture & Landscape

The Old Warehouse
Nailsworth
Gloucestershire
GL6 0DU
Tel: 01453 836393
info@austindw.co.uk

LAND ADJACENT TO STEBBING

Dunmow
Essex
CM6 3SH/CM6 3RA

Tree Quality Survey,
Implications Assessment &
Arboricultural Method
Statement to BS5837:2012

Report Number: **2206LAS**
Date of Survey: June 2022
Rev: Date:
Author: Rachael Austin BA (Hons) Dip LA, CMLI,
TechArborA
On behalf of: Montare

Contents

Section1: Introduction	2
Section 2: Findings of the Tree Survey.....	5
Section 3: Recommendations and Development Implications.....	7
Section 4: Tree Protection & Method Statement.....	8
Section 5: Statutory Regulations.....	14

Appendices

Appendix 1: Tree Survey Explanatory Notes	
Appendix 2: Method Statement for Sequencing Works	
Appendix 3: BS5837:2012 Table 1	
Appendix 4: Tree Survey Schedule	
Appendix 5: Keep Out Sign	
Appendix 6: Site Inspection Record	
Appendix 7: Guide for the installation of protective geo-mesh	
Appendix 8: Caveat	

Plans

Plan 1: Findings of Tree Quality Survey (TR01.1 & TR1.20)	
Plan 2: Tree Constraints Plan & Root Protection Areas (TR02.1 Rev A and TR02.2 Rev A)	
Plan 3: Tree Protection Plan (TR03.1 Rev A and TR03.2 Rev A)	

Section 1: Introduction

- 1.1. Austin Design Works (ADW) was commissioned to undertake a Tree Quality Survey, Implications Assessment and provide an Arboricultural Method Statement in relation to proposed development at Land Adjacent to Stebbing, Dunmow, Essex, CM63SH/CM6 3RA (hereafter referred to as the 'Site').
- 1.2. This report forms part of the planning application for the proposed new housing development. The Site comprises of two fields, the North Field (Proposed Plots A&B) sits between The Downs road and the Stebbing Brook, the South Field (Proposed Plots C&D) sits between The Downs road and Stebbing Park, which contains a Grade 2* listed building. The site is not in the Conservation Area and there is one Tree Preservation Order on the avenue trees along the approach drive to Stebbing Park.
- 1.2. The first stage of ADW's work has involved collecting data relating to the existing trees on the Site and the second stage of the work sets out the influence that trees on and adjacent to the Site will have on any proposed development layout by virtue of below ground constraints, represented by the Root Protection Areas (RPA's).

Tree Survey

- 1.3. The tree survey was carried out on the 27th June. The weather was good.
- 1.4. No invasive investigations or climbing inspections were necessary to confirm visual or audible signs of defect or debility and no tissue or soil samples were taken. Where identified, signs of substantial defects or debility significant to the pre-development context have been recorded.

Survey Methodology

- 1.5. The pre-development survey and assessment was undertaken in accordance with British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations' (hereafter BS5837:2012).
- 1.6. In accordance with the above recommendations, the tree survey included all trees within the proposed development area of the Site that were over 7cm diameter at 1.5m. Topographical survey data was available for most of the mature tree stock; however, canopy size has been measured on site where necessary and some areas of planting have been placed within groups that form cohesive arboricultural features either aerodynamically, visually, culturally or in biodiversity terms or labelled as a hedge where necessary.
- 1.7. The tree survey involved collecting the following data:
 - Tree Number / Group Reference;
 - Species;
 - Height;
 - Branch Spread (in metres taken at the four cardinal points);
 - Age Class;
 - Physiological Condition;
 - Structural Condition;
 - Estimated Remaining Contribution (in years);
 - Management Recommendations; and Notes.

- 1.8. For further clarification, please refer to the tree survey explanatory notes in **Table 1 Appendix 1**.

Tree Categorisation

- 1.9. The quality and value of each tree or group of trees has been recorded by allocating it to one of the four categories below in accordance with BS5837:2012. Categories A, B and C deal with trees that should be a material consideration in the development process and are divided into subcategories that reflect arboricultural, landscape and cultural values. Category U trees are those which would be removed in the short term for reasons connected with their physiological or structural condition. For this reason, they should not be considered in the planning process.
- **Category Grading A:** Trees of high quality and value, which are in such a condition as to be able to make a substantial contribution from an arboricultural, landscape or cultural perspective;
 - **Category Grading B:** Trees of moderate quality and value, which are in such a condition as to make a significant contribution from an arboricultural, landscape or cultural perspective;
 - **Category Grading C:** Trees of low quality and value, which are currently in adequate condition to remain until new planting could be established or young trees with a stem diameter below 150mm; and
 - **Category Grading U:** Trees which are in such a condition that any existing value would be lost within 10 years and which in the current context, should be removed for reasons of sound arboricultural management.
- 1.10. Findings for each of the individual trees and tree groups surveyed are illustrated on **Plan 1 - Findings of Tree Quality Plan (TR01)** contained at the rear of this report and listed individually within the Tree Survey Table at **Appendix 3**.

Preliminary Management Recommendations

- 1.11. Any recommendations made for management of the trees (e.g. tree works) prior to the proposed building works being carried out are not a detailed 'specification' for tree works and should not be considered as such.
- 1.12. These recommendations are proposed on the basis that they are advised and undertaken by a qualified arboricultural contractor working in accordance with best practice as, for instance, embodied in BS3998:2010 Recommendations for Tree Work, or in the European Tree Pruning Guide, published in 2001 by the Arboricultural Association and who must be listed in the Arboricultural Association's Approved Contractors Directory [REDACTED].

Limitations

- 1.13. The comments made are based on observable factors present at the time of inspection and are based on maximising the trees' safe life expectancy given their pre-development context. Although the health and stability of trees in the pre-development context is an integral part of their suitability for retention, it must be

stressed that this report is not a tree risk assessment and should not be construed as such. While every attempt has been made to provide a realistic and accurate assessment of the trees' condition at the time of inspection, it may have not been appropriate, or possible, to view all parts or all sides of every tree to fulfil the assessment criteria of a risk assessment.

- 1.14. No tree is entirely safe given the possibility that exceptionally strong winds could damage or uproot even a mechanically 'perfect' specimen. It is therefore usually accepted that hazards are only recognisable from distinct defects or from other failure-prone characteristics of the tree or the Site.
- 1.15. Assessment of the potential influence of trees upon buildings or other structures resulting from the effects of trees upon shrinkable load-bearing soils or the effects of incremental root or branch growth, are specifically excluded from this report.
- 1.16. All measurements are metric and approximate.

Un-assessable Risks

- 1.17. Due to the changing nature of trees and other Site circumstances this report and any recommendations made are limited in validity to a period of 12 months. Any alteration to the application Site or development proposals could change the current circumstances and may invalidate this report and any recommendations made.
- 1.18. The Wildlife and Countryside Act (WCA) 1981 (as amended) makes it an offence to disturb nesting birds or recklessly endanger a bat or its roost. Bats are also a European protected species and are additionally protected under the Conservation (Habitats & c) Regulations 2010.
- 1.22. A lack of recommended work does not imply that a tree does not pose an unacceptable level of risk and, likewise, it should not be implied that a tree will present an acceptable level of risk following the completion of any recommended work.

Section 2: Findings of the Tree Survey

Site Context

- 2.1. The trees surveyed define the setting for the site of the proposed new buildings and the landscape context for the development.
- 2.2. To the north of the site, there are open views over the rolling countryside, with three specimen trees framing this view. To the west is the pub garden, which is set to lawn and to the south the gravelled car park, divided by more recent hedging and specimen trees, access to the car park is off an unnamed lane that connects through the village. The hedgerow H18 forms the boundary to the development area of the site to the south.

To the east of the project site is a row of mature trees, mainly Sycamore, lining the bridle way, some of these are within the ownership boundary, others not, and some trees straddle remains of an old wall, these trees are likely the over-grown remains of a former hedgerow, some look to have been managed in the distant past and they provide the main setting from the Inn side for the proposal and will require careful management and protection prior and during the construction period. Part of the boundary consists of a row of over-grown Cupressus leylandii hedging H21, planted more recently to fill a gap, these have now grown leggy and are of no habitat value and of little landscape value.

Species Composition

- 2.3. The tree species are principally deciduous native with some ornamental.
- 2.4. Principal species recorded included:
 - Sycamore (*Acer pseudoplatanus*)
 - Ash (*Fraxinus excelsior*)
 - Willow (*Salix*)
 - Lime (*Tilia cordata*)

Health, Physiological and Structural Condition

- 2.5. The survey involved ground level examination of the external features of the trees. Growing conditions were noted together with the presence of dead branch wood, small die-back and any fungal fruiting bodies.
- 2.6. Of the trees surveyed the majority were categorised as being in a moderate condition.
- 2.7. Many of the trees have been assessed as moderate condition relating to their good vitality and visual prominence. The overall condition of the tree stock is Moderate.
- 2.8. No major health problems were noted with the exception of the Poplar trees, which all had symptoms of bacterial canker, which then led to secondary infection and decline.

Age Class

- 2.9. The majority of the tree stock surveyed is dominated by the mature age classes.

Category Grading

- 2.10. The arboricultural values recorded during the survey are listed below:
- Category A (High Quality & Value) – 5%;
 - Category B (Moderate Quality & Value) – 55 %;
 - Category C (Low Quality & Value) – 20%; and
 - Category U (Remove) – 20%
- 2.11. It can be seen that predominantly the trees are Category B this reflects the overall moderate arboricultural quality of the trees, providing a landscape setting for the existing house and proposed new dwelling development.
- 2.12 The category grades are linked to mainly landscape sub-criteria, with none of the trees representing cultural value for their rarity.
- 2.13 The most significant individual trees in the survey area are trees T26, T27, T39, T52, T55 & T56 within the survey area, mainly in terms of landscape or habitat value as they currently add to the setting. The avenue of lime trees is the most significant landscape feature within the site and is protected by TPO. In terms of habitat, the entire southern end of Plot 1B is host to an area of scrub and wet woodland regeneration, bounded by mature oak field boundary trees and should be protected from development as this is extremely high value biodiversity within the site.

Section 3: Recommendations and Development Implications

- 3.1. Given the consideration of the existing site condition, this report provides some general management recommendations for improvement of the tree stock. The report also sets out constraints in relation to the development of the Site.

Management Requirements

- 3.2. All trees retained are to be protected during construction on site using protective fencing.
- 3.3. All the trees listed with the exception of those to be removed require general monitoring.
- 3.4. Trees that should be removed due to poor arboricultural vitality or because they are in the way of construction include:
- Roadside ash trees as listed in the schedule that are displaying symptoms of ash die back.
 - G57 a row of dying and dead poplar and
 - G1 a plantation of White willow as this is effectively creating a monoculture that provides no asset to wildlife or the landscape setting.
- 3.5. Any new landscape tree and shrub planting should be undertaken between October and March, but avoid days when the ground is frozen. Container-grown trees can be planted at any time of year, if planting is done in late spring or summer it should be watered during dry spells throughout the first growing season.
- 3.6. Any deadwood removal or management must be subject to wildlife considerations. Work should be timed to avoid the bird nesting season (1st March to 31st August). If not, each tree will need to be searched for nesting birds prior to clearance. If a nest is found the tree and its immediate surroundings will need to be left undisturbed until nesting is complete.

Development Implications (Tree Loss)

- 3.7. The proposed development will result in direct tree loss as a result of the proposed construction see dwg. No TR02.1 and TR02.2. The significant trees within the construction area will be protected during the construction process, as set out in Section 4 of this report.

Section 4: Tree Protection & Method Statement

Tree Protection Plan

- 4.1. As indicated in Section 3, the retained trees will be protected from unnecessary damage during the construction process. Tree protection on development sites is of paramount importance if they are to be retained successfully. The inevitable stress caused by development near existing trees can, if provision for adequate protection is not made, be a strain that can severely damage the trees or even result in their death.
- 4.2. Tree protection measures are illustrated on **Tree Protection Plan (dwg. no TR03.1 & TR03.2)** and outlined further below.

Purpose of a Method Statement

- 4.3. The purpose of an Arboricultural Method Statement (AMS) is to safeguard the retained trees on Site during the construction process. The following information sets out the methodology and approach for all proposed works that could affect such trees.
- 4.4. It is important to ensure everyone involved in the planning and design of the proposed development is aware of this report and the accompanying drawings; TR01.1 & TR01.2, Tree Survey Plan, TR02.1 & TR01.2 Tree Constraints Plan and TR03.1 and TR03.2 Tree Protection Plans and has access to a copy as soon as it is released. Compliance with this AMS will be a requirement of all relevant contractors associated with the development.
- 4.5. Copies of this report will be available for inspection on Site and all personnel shall be made aware of the key implications of the AMS.

Responsibilities

- 4.5.1 Successful implementation of tree protection measures and long -term tree retention depends on co-ordination between the client and key personnel involved in the development.
- 4.5.2 The client and agent shall ensure that:
 - the site manager and all other personnel are provided with this document;
 - all planning conditions relating to underground works, services, trees and landscaping are cleared before development commences;
 - all requirements of this Tree Protection Scheme are adhered to;
 - the site manager is updated of any approved changes or variations to this document.
- 4.5.3 The client and site manager shall ensure that:
 - a copy of this document with the most recent versions of plans TR01.1, TR01.2, TR02.1, TR02.2 TR03.1 and TR03.2 is easily accessible for site personnel to refer to before and during the time construction activity is taking place;

- all personnel working on the site are made aware of the tree protection plan and arboricultural method statements covering any activities they will undertake. This duty includes delegating the task of briefing personnel in the absence of the site manager.
- The tree protection measures are left in place until the construction phase of development is completed, except with the written consent of the LPA.
- site personnel are updated of any approved changes or variations to the approved tree protection measures.

4.5.4 All personnel must work in accordance with this document at all times, or in accordance with any approved variation.

Procedures for Incidents

4.5.5 If any breach of the approved tree protection measures occurs:

- The Local Planning Authority Tree officer or other Planning Officer shall be notified.
- The site manager must be informed immediately.
- Swift action must be taken to halt the breach and prevent any further breach.
- Damage mitigation measures appropriate to the scale of the incident will be deployed where required.

Site Preparation

4.6. Firstly, any necessary remedial works should be carried out by a qualified registered arboriculturalist in accordance with the 'advance works' provisions set out above and in line with BS 3998 (2010).

4.6.1 See Figure 1 for the Arboricultural Method Statement for the order in which works are to proceed.

4.7. Care should be taken during the removal of vegetation to minimise damage to any retained trees and disturbance to Root Protection Areas (RPA's) and must be undertaken by a qualified arborist in accordance with BS3998:2010.

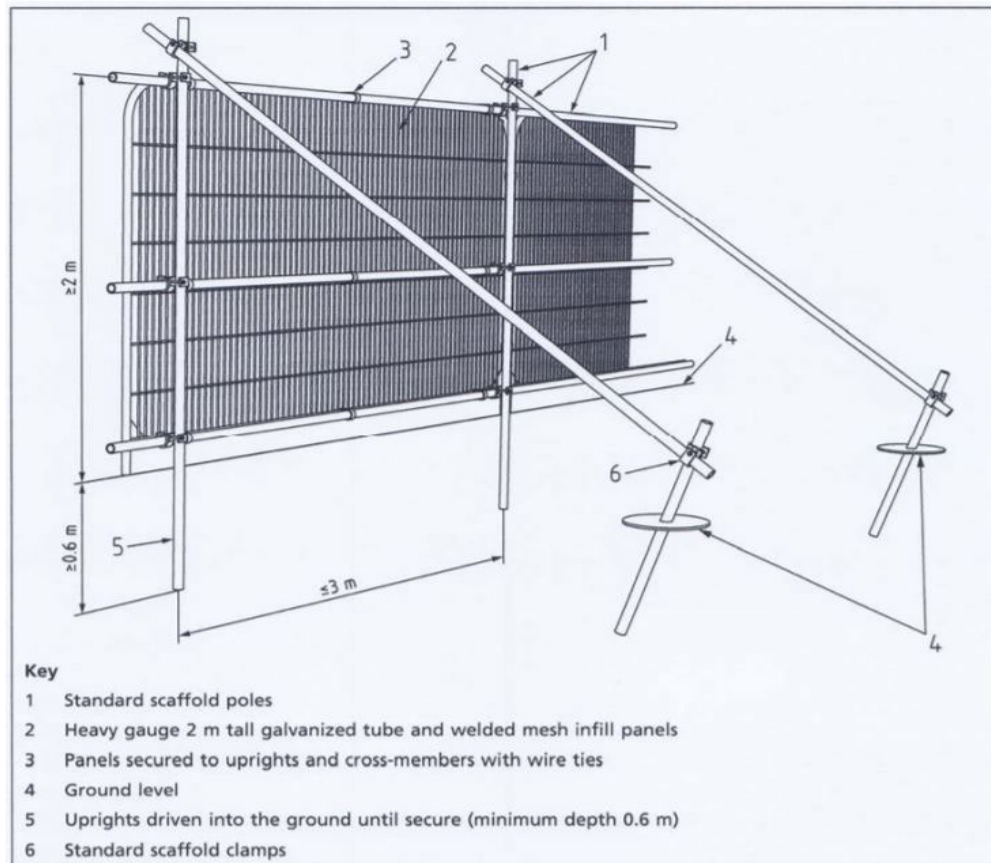
General Site Precautions

4.8. The following points must be observed during both advanced works and the construction process:

- No fires will be lit on Site;
- No access will be permitted inside tree protection / non-intervention areas (unless authorised);
- No materials, equipment or debris will be stored within the tree protection fencing;
- Notice boards, telephone wires or other services must not be attached to any part of retained trees; and
- Materials which will contaminate the soil (e.g. concrete, diesel oil and vehicle washings) must not be permitted to enter the RPA of retained trees.

Protection Barriers

- 4.9. **Protective fencing** should be erected in line with BS 5837 (2012) as illustrated on **Tree Protection Plan (dwg. nos. TR03.1 & TR03.2)**. The fencing consists of a scaffold framework, well braced to resist impacts, with vertical tubes spaced at a maximum of 3m to add further stability. Onto this, weldmesh panels should be securely fixed with wire or scaffold clamps (see extract of BS 5837 – Figure 1 below).



Ground protection during construction

- 4.10. Where construction working space or temporary construction access is justified within the RPA it must be carried out in accordance with Section 6.2.3 of BS5837:2012 and Appendix 6 and 7.
- 4.11. All-weather notices should be attached to the barriers with words such as 'Construction Exclusion Zone – Keep Out'. See appendix 5.
- 4.12. If during construction, excessive levels of dust build-up on retained trees, it may be necessary to undertake remedial measures such as hosing down immediately with a clean water supply.
- 4.13. Where construction poses less of a risk (such as landscape works) full specification protective fencing is not required. It is deemed acceptable to implement secured plastic mesh fencing. This will still offer protection and a visual barrier to any construction works (see photographic example below).



- 4.14. All protective fencing will remain in position for the duration of the construction and landscaping activities.

Special Working Methods

- 4.15.1 Where minor works are required beyond the line of protective fencing at the fringe of plotted RPA's, all Initial surface excavations should be undertaken by hand or using an airspade, to avoid any damage to the protective bark covering any larger roots. If necessary, any roots encountered which are smaller than 25mm in diameter can be pruned back by a qualified arborist in accordance with BS3998:2010, using a proprietary cutting tool. Roots larger than 25mm diameter should not be severed unless there is an on-Site agreement with an arboricultural consultant, as they may be essential to the tree's health and stability.
- 4.15.2 Any roots encountered will be carefully worked around using hand tools and airspade. Damp hessian or another suitably way of protecting the roots from damage and drying out will be applied to the roots while they are exposed.
- 4.15.3 The exposure time of the roots being uncovered and wrapped will be limited as much as practically possible. The ground workers will ensure that the wrapping around the roots is prevented from drying out or freezing. The supervising arborist will advise accordingly.
- 4.15.4 Care will be taken when back filling excavations so as not to damage roots during this operation, when the wrapping material is removed. The same soil will be placed back as much as possible to retain and beneficial mycorrhiza or other microorganisms beneficial to the trees. If the supervising arborist considered a mixture of new backfill material is required to be included to aid in root development, this will be provided using good quality topsoil. The backfill will be loosely placed back ensuring it is not compacted down where it could hold water or create unfavourable conditions for root development.

Underground Services

- 4.17. For the purposes of this report, the provision of new services includes the provision of electricity cabling, gas supply and water pipes.
- 4.18 In the event that incursions into RPAs are unavoidable, any new installation will comply with the methods outlined in 4.15 and 4.16 and guidelines detailed in in the National Joint Utilities Group document NJUG 10, Guidelines for the Planning, Installation, and Maintenance of Utility Services in Proximity to Trees (April 1995).

Amendments

- 4.19 Issues sometimes arise on development Sites which require amendments to the previously agreed tree protection details. Any amendments to the AMS will be discussed with the Arboricultural Consultant and agreed in writing with the LPA prior to being implemented. Copies of paperwork relating to any amendments shall be attached to the Site AMS to provide a definitive record of what has been approved. Appendix 2, Method Statement for Sequence of Works in Root Protection Areas is for reference as necessary.

Section 5: Statutory Regulations

- 5.1. If any of the trees are protected by a tree preservation order (TPO), consent for works to protected trees should be obtained from the Local Planning Authority. Consent is not required for urgent work to dead, dying or dangerous trees, but the Local Planning Authority should be given at least five days' notice of the intended works. Replacement trees may be required for any protected trees which are felled. Enquiries have been made with Uttlesfield District Council regarding its' planning status and according to them is not in a conservation area, where six weeks' notice of works to all trees would need to be given.

- 5.2 There may be a number of hollows in the trunks and larger branches of the trees, the ivy, shrubs and hedges which could be used by birds or bats for shelter and breeding, notably T55 & T56 refer to the Ecology Report for further information. It is an offence under the Wildlife and Countryside Act and Countryside and Rights of Way Act to disturb a nesting bird or roosting/breeding bat. Work to trees with the potential for roosting bats is best carried out from mid-September to late October. This assumes that young bats are weaned and independent, and is before hibernation. Mid-March to the end of April is also a suitable time, after hibernation and before young are born, although due account should be taken of nesting birds, which also (with few exceptions) enjoy statutory protection. Further advice, particularly if bats are discovered during tree work, may be obtained from English Nature.

Appendix 1: Tree Survey Explanatory Notes

Tree Numbers

'T' prefixes have been used to identify individual trees and commence with 'T1'.

'G' prefixes have been used to identify groups of trees.

'H' prefixes have been used to identify hedges.

'G' and 'H' numbers run in sequence with the 'T' numbers e.g. 'T3', 'G4', 'T5', 'H6'.

Species

Species are listed by their common name, both in the schedule and in the report text.

Height

Tree heights are measured in metres (m).

Stem Diameter

The stem diameter of single stemmed trees is measured at 1.5m above ground level and given in millimetres (cm). The diameter measurement of multi-stemmed trees is taken in accordance with BS5837:2012 Fig C.1

Crown Spread

Radial crown spread is measured in metres and is listed for each of the four cardinal points. The canopy shape for individually surveyed trees depicted on the accompanying plans accurately represents the canopy spread as measured on-site.

Height of Crown Clearance

This is the height above ground in metres of the attachment point of the first significant branch, or the height to which the lowest (living) branch reaches; whichever is the lower.

Age Class

The age of each tree is defined as follows:

Y Young - within the first third of life expectancy;

YM Young Mature - within the second third of life expectancy;

M Mature - within the last third of life expectancy;

OM Over mature - Tree in decline; and

V Veteran – tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species' concerned. For the purpose of this report the term 'ancient tree' and 'veteran tree' are interchangeable.

Physiological and Structural Condition

The physiological or structural condition of each tree is defined as either; **High, Moderate, Low or Dead**. For each tree, where appropriate, notes on the structural integrity are provided on form, taper, forking habit, storm damage, decay, fungi, pests, etc.

Estimated Remaining Contribution (ERC) in Years




The Estimated Remaining Contribution (ERC) for each tree is based on species and existing and apparent physiological and structural condition of the tree. The ERC may affect the proposed development layout, since the longer the tree is likely to live the greater the contribution it will make and the greater the need for retention.

Appendix 2: Method Statement for Sequencing Works

METHOD STATEMENT FOR SEQUENCE OF WORKS IN ROOT PROTECTION AREAS

- 1) Meeting with Main Contractor to explain the importance of the Root Protection Areas and go through the Method Statement.
- 2) Agree with arboriculturalist the minimum pruning works required to lift the canopy to enable development and the installation of protective fencing to the west side.
- 3) Mark out the no dig area on site using line marker or string under the supervision of a qualified arborist.
- 4) Kill off the existing ground vegetation using an approved herbicide and allowing for at least two applications over the course of 2-3 weeks until completely dead.
- 5) Rake off by hand all dead ground vegetation material.
- 6) Dips or hollows will be filled with clean gravel with no fines or horticultural sand.
- 7) Place a non-woven Geotextile such as Terram 1000 or similar will be laid over the no-dig area to suppress weed growth.
- 8) Cellweb or similar approved no-dig mesh product will be placed over the geotextile and pegged in place in accordance with manufacturer's recommendations.
- 9) The Cellweb will be stapled together.
- 10) Fill the Cellweb with 20-40mm diameter clean gravel with no fines such as DOT Type 1.
- 11) Add the wearing course of gravel to the landscape architect's specification.
- 12) No machinery is to be tracked within the RPA unless on the Cellweb.
- 13) Where the ground slopes away from the Cellweb towards the tree stems, carefully work this using hand tools to build up to the edge with topsoil.
- 14) Erect the protective fencing and no entry sign.
- 15) Only remove protective fencing under the supervision of a qualified arboriculturalist after all building works are complete.

BS5837:2012 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	<ul style="list-style-type: none"> 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 <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see [BS5837:2012] 4.5.7.</i></p>	
Trees to be considered for retention		
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	1 Mainly arboricultural qualities 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)	3 Mainly cultural values, including conservation Trees, groups or woodlands of significant or other value (e.g. veteran trees or wood-pasture)
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	2 Mainly landscape qualities Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features conservation, historical, commemorative	
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	2 Mainly landscape qualities 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	

FLAC Note

The original contents of the column *Identification on plan* have been replaced by FLAC in the version above; spot colours to RGB codes given in BS5837:2012 Table 2

Appendix 4 Tree Survey Schedule

Prepared by Rachael Austin Tech/Arborist/CMLJ Landscape Architect

Stebbing Tree Survey Data Sheets

Tree No	Species	Age Class	Height in m	Canopy spread (m)				Diameter @ 1.5m Diameter @ base	Physiological Condition	B55537 Category	Remaining Years	Structural Condition	Preliminary Management Recommendations	Priority
				N	S	E	W							
G1	White willow (<i>Salix alba</i>)	Y	av. 6-8	as shown on plan				plantation	High	B2	40	Good	Trees indicated in red on drawing no TROZ.1 are to be removed and replaced with more species diverse wet woodland, in accordance with the landscape specification.	1
T2	<i>Crataegus monogyna</i> Hawthorn on stream bank	M	6	as shown on plan				unable to access	Moderate	C2	16	Poor, main stem to the north is fallen across the brook and die back in canopy	Monitor and protect during construction	3
T3	<i>Crataegus monogyna</i> Hawthorn on stream bank	M	6	as shown on plan				unable to access	Moderate	C2	10	Average, good habitat tree	Monitor and protect during construction	3
T4	<i>Crataegus monogyna</i> Hawthorn on stream bank	M	9	3.0	4.0	2.0	4.0	unable to measure	High	B	20	Good vigor heavily pruned to south over field boundary	Monitor and protect during construction	3
T5	<i>Crataegus monogyna</i> Hawthorn on stream bank	M	9	as shown on plan				unable to measure	Moderate	C2	10	Ivy clad with no growth to north; good habitat tree	Monitor and protect during construction	3
T6	<i>Crataegus monogyna</i> Hawthorn on stream bank	M	6	as shown on plan				unable to measure	Low	C2	10	Ivy clad with no growth to north; good habitat tree	Monitor and protect during construction	3
H7	Old hedgerow along stream bank, very gappy with ivy and brambles includes T2, T3, T4, T5 & T6			as shown on plan				unable to access	Low	C2	10	This is a single species hedgerow, which has been left unmanaged and is now very gappy, provides a habitat which can be improved upon by gapping up with additional species and replanting	Monitor and protect during construction	3
H8	Hedgerow including Hawthorn; some elder and an ash tree	M	Av. 8	as shown on plan				unable to access	Low/ Dead and dying	C2		This section of hedgerow is in average vigor to the west, becoming poorer to the east, including dead and dying Ash and Elder	Monitor and protect during construction	3
T9	Hawthorn (<i>Crataegus monogyna</i>)	M	Av. 8	1.0	4.0	3.0	2.0	unable to access	Moderate	C2	10	Some die back in crown, ivy clad, good habitat tree	Monitor and protect during construction	3
T10	Hawthorn (<i>Crataegus monogyna</i>)	M	Av. 8	as shown on plan				unable to measure	Moderate	C2	10	Average condition, some die back in crown	Monitor and protect during construction	3

Tree No	Species	Age Class	Height in m	Canopy spread (m)				Diameter @ 1.5m Diameter @ base	Physiological Condition	BSS837 Category	Remaining Years	Structural Condition	Preliminary Management Recommendations	Priority
				N	S	E	W							
G11	<i>(Crataegus monogyna)</i> Hawthorn on stream bank	M	Av. 9	as shown on plan				unable to measure	Low	C2	10	Average for the age of trees, some dieback in crown, good habitat tree	Monitor and protect during construction	3
G12	<i>(Crataegus monogyna)</i> Hawthorn on stream bank	M	Av. 9	as shown on plan				unable to measure	Low	C2	10	Average for the age of trees, some dieback in crown, good habitat tree	Monitor and protect during construction	3
T13	<i>(Fraxinus excelsior)</i> Ash Multi-stem	M	21	7.0	10.0	10.0	10.0	Low	U	10	Dying, significant signs of ash dieback	Remove	1	
G14	<i>(Crataegus monogyna)</i> Hawthorn	M	Av. 9-10	as shown on plan				unable to measure	Moderate	B2	20	Average	Monitor and protect during construction	3
G15	<i>(Crataegus monogyna)</i> Hawthorn	OM						unable to measure	Low	C1	10	Dying	Face-up to make safe; suggest re-planting within field boundary	2
T16	<i>Elm (Ulmus Glabra)</i>	D		as shown on plan				unable to measure	Low	U		Dead wood	Reduce height make safe with coronette cut to encourage biodiversity	1
G17	Vegetation on neighbouring property including - Hawthorn, spruce, holly, lilac, domestic apple, plum, laburnum, buddleia, walnut and dead elm with elm regrowth	M		as shown on plan				unable to measure	Moderate	C2	10	Significantly gappy and of low landscape value.	Protect large Hawthorn T18	1
T18	<i>(Crataegus monogyna)</i> Hawthorn multi-stem	M		4.0	4.5	4.5	4.5	Moderate	B2	10	Good shape, overhangs the site	Monitor and protect during construction	1	
T19	Horse Chestnut (<i>Aesculus hippocastanum</i>)	V		4.5	6.0	4.5	4.5	Moderate	B2	20	Old boundary tree, main stem heavily pollarded & height of approx. 2.5m in last 20 years or so. The re-growth has also been pollarded.	This is a valuable landscape tree and also provides habitat diversity to this side of the site. Protect during construction.	1	
				RPA 11.1m										

Tree No	Tree Species	Age Class	Height in m	Canopy spread (m)				Diameter @ 1.5m Diameter @ base	Physiological Condition	BS5837 Category	Remaining Years	Structural Condition	Preliminary Management Recommendations	Priority
				N	S	E	W							
H20	<i>Crataegus monogyna</i> with <i>Ulmus Glabra</i>	M		as shown on plan				as shown on plan	High	B2	20	This is a well maintained single species boundary hedge, as shown on plan. The first section to the north is lower and more bramble infested for approx. 5m, section of elm re-growth from T22 to the boundary with the falcons.	Carefully remove sections for access points and protect the remainder during construction.	1
T21	Hornbeam	M		2.5	4.0	3.5	5.0	300 RPA 3.6m	Moderate	B2	20	Good vigor	Protect during construction	1
T22	False acacia (<i>Robinia pseudoacacia</i>)	M	app. 1.6	8.0	8.0	5.0	8.0	Approx. 550 @ 1.5m RPA 6.6m	Low	C1	10	Dying	Remove	2
H23	Mixed mature and ornamental on neighbouring property	Y	av. 1.3	as shown on plan				as shown on plan	High	B2	40	Good, well maintained on the neighbours side, significant bramble growth on the field side - north	Protect during construction	2
H24	Mixed mature and ornamental on neighbouring property	Y	av. 1.5	as shown on plan				as shown on plan	High	C2	40	Good, well maintained on the neighbours side, significant bramble growth on the field side - north	Protect during construction	2
H25	Mixed ornamental hedge including 1ro Golden False acacia	M	av. 1.5/2	as shown on plan				as shown on plan	High	B2	8	Good, well maintained on the neighbours side, significant bramble growth on the field side - north	Protect during construction	2
T26	Small leaved lime (<i>Tilia Cordata</i>) avenue tree	OM	25	6.0	11.5	5.0	10.0	1110 RPA 13.3m	High	A1	40	Good vigor, dense canopy and crown; small amount of dieback and vigorous re-growth in main stem, and at base, well managed. Canopy lifted to the south, allowing access along the drive. Canopy to the north approximately 2m above ground level.	Monitor after storm and protect during construction.	1

Tree No	Species	Age Class	Height in m	Canopy spread (m)				Diameter @ 1.5m Diameter @ base	Physiological Condition	BS5837 Category	Remaining Years	Structural Condition	Preliminary Management Recommendations	Priority
				N	S	E	W							
T27	Horse Chestnut (<i>Aesculus hippocastanum</i>) Low branch break	OM	25	7.0	13.0	8.0	8.5	950	Moderate	A2	40	Average with moderate vigor. Low branch break at 1.5m to the west with 3 main stems that then divide to form the main structure. There is possible lightning damage to one of these stems to the south-west, allowing light into the canopy and significant leaf blotching (<i>guignardia asesculi</i>)	Monitor after storm and protect during cond	1
T28	Hawthorn (<i>Crataegus monogyna</i>) multi-stem	M	approx. 3	0.0	4.0	4.5	4.0	210, 200, 210, 190, 150, 230	High	B2	20	Good vigor, growing towards the east and south, ivy clad, good habitat tree, grass cuttings restricting and suffocating roots to west	Do not disturb the ivy, remove the grass cuttings from base, protect during construction	2
T29	Ash (<i>Fraxinus excelsior</i>)	M	16	4.0	7.0	6.0	4.0	410 RPA 4.9m	Low	U		Poor vigor, significant signs of ash dieback thinning crown	Remove for safety reasons	1
T30	Ash (<i>Fraxinus excelsior</i>)	M	16		5.5	3.5	3.0	350 RPA 4.2m	Low	U		Poor vigor, significant signs of ash dieback including crown	Remove for safety reasons	1
T31	Hazel Coppice (<i>Corylus avellana</i>)	M		3.0	3.0	3.0	3.0	510 @ base, unable to measure each stem RPA 6.1m	High	A2	40	This is a well managed coppice for providing good addition to the setting	Coppice hard every 6-9 years starting in the next 12 months	2
T32	Ash (<i>Fraxinus excelsior</i>)	M	14	3.5	4.0	3.5	4.5	340 RPA 4.1m	Low	U		This tree is in average vigor with signs of ash dieback, it will decline further	Remove	1
T33	Whitebeam (<i>Sorbus aucuparia</i>)	M	7	2.0	2.0	2.0	1.0	85, 100, 75 RPA 1.5m	Low	C1	20	Average, over-shadowed by T32 & T34 with damage to east and dieback	Remove in way of construction	2
T34	Ash (<i>Fraxinus excelsior</i>)	M	17	6.0	5.0	6.0	6.0	330 RPA 4.0m	Low	U		Ash dieback with some new growth which is under attack from leaf cutter insect	Remove safety concern, roadside tree.	1

Tree No	Species	Age Class	Height in m	Canopy spread (m)				Diameter @ 1.5m Diameter @ base above ground	Physiological Condition	BS5837 Category	Remaining Years	Structural Condition	Preliminary Management Recommendations	Priority
				N	S	E	W							
T35	Wild cherry (<i>Prunus avium</i>)	M	11	7.0	3.0	8.0	360 low branch break, measurement farther at 70cm above ground RPA 4.3m	Low	U		Poor, conjoined stem, significant dieback and canker	Remove	1	
T36	Field maple (<i>Acer campestre</i>)	M	17.5	5.0	4.0	4.0	37.5 measured at 50cm above ground RPA 4.5m	Moderate	B2	20	Average vigor, some dieback in crown	Monitor and protect during construction	1	
G37	Field maple (<i>Acer campestre</i>) x 1	M	14	3.0	4.5	3.5	345 RPA 4.1m	High	B1	20	Good vigor, some amount of dieback in canopy of field maple. Elm is young re-growth.	Remove Elm re-growth - monitor and protect field maple during construction	1	
G38	Dead Elm, Elder and Bramble understory			as shown on plan					Low	U		Remove and replace with more appropriate species	3	
T39	Sycamore (<i>Acer pseudoplatanus</i>)	M	25	9.0	11.0	8.5	795 - on slope 1700cm from top on angle - measured at low branch break - 90 cm above ground upper slope RPA 9.5m	High	A1	40	To the north, the branches touch the ground. Understory of <i>Prunus spinosa</i> .	Prune back only the amount required to allow footpath access. Monitor and protect during construction.	1	
T40	Field maple (<i>Acer campestre</i>)	M	18.75	8.5	8.5	4.0	3500mm to centre of tree from top of bank 255, 225, 265, 140, 315 RPA 5.5m	High	A1	40	good vigor, some natural breaking and included bark in lower branch break - possible perch for raptor	Only prune what is necessary for footpath access, protect during construction	1	
T41	Ash (<i>Fraxinus excelsior</i>)	M	19.3	2.0	8.0	2.5	330 RPA 4.0m	Low	C2	10	This tree is thinning in the canopy, it has some signs of ash dieback, but it will likely not make a good future tree	Remove to allow T40 and T42 to properly spread and fill this gap	2	
T42	Sycamore (<i>Acer pseudoplatanus</i>)	M	20.5	9.0	5.5	6.0	590 measured at 80cm above ground RPA 7.1m	Moderate	B2	20	Conjoined stem with low branch break, included bark from base to 90cm at break. Slightly thinning canopy. Branches touch the ground to the east.	Monitor and protect during construction.	1	
T43	Ash (<i>Fraxinus excelsior</i>)	M	20	3.5	3.5	2.5	440 RPA 5.3m	Dying	U		Poor condition, thinning canopy evidence of ash dieback, not a good future tree	Remove	1	

Tree No	Species	Age Class	Height in m	Canopy spread (m)				Diameter @ 1.5m Diameter @ base	Physiological Condition	BSS837 Category	Remaining Years	Structural Condition	Preliminary Management Recommendations	Priority
				N	S	E	W							
T44	Field maple (<i>Acer campestre</i>)	M	16	5.0	7.0	7.0	5.0	Low branch break, measurement taken at 465	A1	40	Good vigor, some die back as to be expected in this species - wide spreading tree at top of bank, canopy touching ground North-East and South.	Monitor and protect during construction. Carefully prune by hand only the amount necessary to allow footpath access. Removal of T43 will allow this tree to flourish.	1	
T45	Field maple (<i>Acer campestre</i>) with dog rose under-story to approx. 3m tall to east & south	M	15	4.0	4.0	4.0	3.0	345 RPA 4.1m	B1	20	Growing on top of bank. Average vigor with storm damage and branch loss to east with hung up branch.	Remove hung up branch. Monitor and protect during construction.	1	
T46	Ash (<i>Fraxinus excelsior</i>)	M	18		4.5	6.0		Low branch break. Measurement at 110cm above ground level - 445cm. RPA 5.3m	U		Poor, evidence of significant ash dieback with storm damage and branch break to north.	Remove	1	
T47	Ash (<i>Fraxinus excelsior</i>)	M	17.5	6.0	2.5	4.0		at 110cm - 355cm RPA 4.3m	U		Poor, evidence of significant ash dieback	Remove.	1	
G48	(<i>Ligustrum ovalifolium</i> , <i>Sorbus aria</i> , <i>Fraxinus excelsior</i> and <i>Malus</i>) Privet, Rowan, Ash and wilding apple with <i>Rosa rugosa</i> under-story.	Y	av. 3-4m	as shown on plan					Moderate	Low C2	10	The Rowan and ash are showing signs of decline with thin canopy and poor vigor, privet, rose and apple are good.	Remove ash. Rowan and rose can be removed as needed to allow for new pathway and managed to improve habitat.	
T49	Silver Birch (<i>Betula pendula</i>)	M	22	11.0	6.0	5.5		Low branch break. Measurement taken at 60cm above ground level - 535cm. RPA 6.4m	A1	40	Good	Minimal hand only prune as needed to allow for footpath access. Monitor and protect during construction	1	
T50	Silver Birch (<i>Betula pendula</i>)	M	18	7.0	4.0	5.0		Low branch break. Measurement taken at 40cm above ground level - 495cm. Top of bank approx. 1.4m above road level. RPA 5.9m	A1	40	Good, under-story of wild apple, Hawthorn and privet, canopy in east touching ground	Minimal hand only prune as needed to allow for footpath access. Monitor and protect during construction	1	

Tree No	Tree Species	Age Class	Height in m	Canopy spread (m)				Diameter @ 1.5m Diameter @ base	Physiological Condition	BSS837 Category	Remaining Years	Structural Condition	Preliminary Management Recommendations	Priority
				N	S	E	W							
G51	Blackthorn, Vych Elm, Hawthorn, with some Gorse and Broom to the north, and Dog Rose (<i>Prunus spinosa</i> , <i>Ulmus glabra</i> , <i>Cataegus monogyna</i> and <i>Sorbus aris</i> with <i>Ulex europaeus</i> , <i>Cytisus scoparius</i> , and <i>Nosa Canina</i>)	M	3.5-6m	as shown on plan				as shown on plan.	Low	C2	20	This is dominated by Elm and currently alive, but will not make a good future hedge when these succumb to disease.	Remove in the way of development	2
T52	English Oak (<i>Quercus robur</i>)	M	22	8.0	8.0	7.0	5.37 RPA 6.4m	Good	A1	40	Good vigor, some grass clippings on boundary side	Monitor and protect during construction.	1	
G53	2no. Hawthorn, Blackthorn with stinging nettles understorey, wild hop and hazel (3no. <i>Cataegus monogyna</i> , many <i>Prunus spinosa</i> , <i>Hamulus lupulus</i> and 1no. <i>Corylus avellana</i>)	M	Av. 9m	as shown on plan				Unable to measure	Good	B2	20	This is part of a larger area of scrub and is a high value area of biodiversity in this area of the site. There is evidence of some damage to trees and the remains of some fungal blooms.	Only remove the minimal amount of this area as needed to enable development. Monitor and protect during construction.	1
T54	Ash (<i>Fraxinus excelsior</i> with dead <i>Prunus spinosa</i> and <i>Sambucus nigra</i> nearby to south also Hawthorn leaning but in good vigor)			as shown on plan				Unable to measure	Low	C1	NA	Evidence of ash dieback, however this will make for a future habitat tree.	Remove enough material to make safe as a monolith tree and retain the Hawthorn. Clear dead scrubby shrub layer and seed the area in accordance with landscape and ecology instructions.	2
T55	Crack Willow (<i>Salix fragilis</i>)	V	35	10.0	11.0	11.0	1100mm RPA 13.2m	Average	B2	20	Average - hollow tree with significant decay, branches cracked and fallen touching ground to west and south. Storm damage and ... regrowth which is a potential hazard - excellent habitat tree for bats.	Refer to MIKA Ecology tree assessment technical note Nov 25th 2022 for guidance on management. Carefully cut back as required to make safe and remove hung up branches, leave as habitat tree and design landscape to encourage people away from this tree.	1	
T56	Crack Willow (<i>Salix fragilis</i>)	V	35	8.0	14.0	11.0	108cm RPA 1.3m	Average	B2	20	Significant die-back up to 50% of the tree. Large significant hung up branches, potential hazard.	Refer to MIKA Ecology tree assessment technical note Nov 25th 2022 for guidance on management. Carefully cut back as required to make safe and remove hung up branches, leave as habitat tree and design landscape to encourage people away from this tree.	1	

Tree No	Species	Age Class	Height in m	Canopy spread (m)				Diameter @ 1.5m Diameter @ base	Physiological Condition	BSS837 Category	Remaining Years	Structural Condition	Preliminary Management Recommendations	Priority	
				N	S	E	W								
GS7	Lombardy Poplar (<i>Populus nigra</i>) row.	M	41	as shown on plan				NA	Low	CZ	10	Significant bacterial canker (<i>Xanthomonas populi</i>) with potential vascular wilt. These are potentially good habitat trees for bat roost, but pose a hazard to footpath users and some have already fallen. Remove	Liase with MKA Ecology to ascertain the best methods to avoid damaging habitat and also how to recreate this elsewhere. Hazard trees, remove.	1*	

Appendix 5: Keep Out Sign

To be attached to all protective fencing

TREE PROTECTION BARRIER – ACCESS PROHIBITED

DO NOT TAMPER WITH THIS BARRIER OR REMOVE IT



This area contains trees which must be retained as part of the planning permission. Additional legal protection may also apply e.g. tree preservation order. Removing or damaging trees in this area may be a breach of planning permission. Damage to protected trees may lead to a criminal conviction and/ or a fine.

Only the site manger may permit for removal or moving of tree protection measures. This should always be in accordance with the planning permission.

Appendix 6: Site Inspection Record

Site	Land Adjacent to Stebbing	Date	
Developer		Surveyor	
Site Agent		Planning Application No	
1) Has the pre-start site meeting taken place with Main Contractor importance of the Root Protection Areas, Run through the AIA and Method Statement and explain the implications working with trees.			
2) Has the line of the protective fencing been set out.			
3) Has the Protective Fencing and Tree Trunk Protection been Installed correctly			
Was there any evidence of damage to trees?			
Give Details			
4) Has the setting out of the protective geo-mesh, either with line marker or twine been supervised and approved by a qualified arborist?			
5) & 6) Has the Installation of the protective geo-mesh been carried out correctly.			
Signed:		Signed :	
Name:		Name:	
Consulting Arborist for and on behalf of:		Developer/Main Contractor for and on behalf of:	
Company:		Company:	
Circulation:			
	Name:	Email Address:	
LPA Tree Officer			
Developer head office			
Site Agent			
Architect			
ACoW			

LPA may request photographic evidence of compliance with the requirements of this document. Photographs are to be attached to this form and submitted at each stage.

Appendix 7: Guide for the installation of protective geo-mesh.

PRODUCT DATA SHEET

Geosynthetics Limited Tel: 01455 617 139 Fax: 01455 617 140 Email: sales@geosyn.co.uk

Cellweb® TRP Installation Guide



Step 1: Prepare Surface



Step 2: Lay out Treetex™



Step 3: Lay out Cellweb® TRP

- Cellweb® TRP is a NO DIG tree root protection measure and it is recommended that no excavation be performed without prior approval and guidance from the Local Authority Arboricultural Officer.
- Soil compaction from vehicles, machinery and materials is to be strictly prohibited during construction within Root Protection Areas (RPAs).
- Approval must be obtained from the Local Authority that the design and the method of construction is acceptable.
- Further information is available from the following two documents;
 - British Standard B55837: 'Trees in Relation to Design, Demolition and Construction' (2012).
 - Arboricultural Advisory and Information Service: Practice note 12 – 'Through the Trees to Development' (APN12).

Installation Method

1. Prepare the Surface

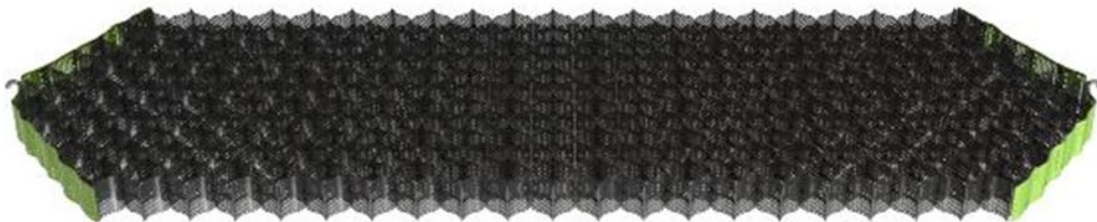
- Remove the surface vegetation using appropriate hand held tools or herbicide (see Note 1).
- Remove any surface rocks, debris and organic material.
- Create a level surface by filling any hollows with clean angular stone or sharp sand.
- Do not level off high spots or compact the soil through rolling.

2. Lay out the Treetex™ Non-Woven Geotextile

- Lay out the Treetex™ over the prepared area, overlaying the edges of the required area by 300mm.
- Overlap any joins by 300mm minimum or more, depending on soil structure (see Note 2).

3. Lay out the Cellweb® TRP Cellular Confinement System

- Lay out the collapsed Cellweb® TRP on-top of the Treetex™.
- Place one of the supplied J pins into the centre cell at the end of the panel and secure into the ground.



Cellweb® TRP - Installation Guide

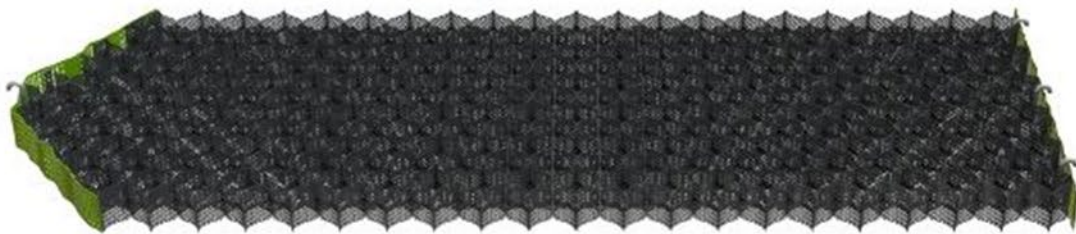


Step 3: Pinning Cellweb® TRP



Step 3: Stapling Cellweb® TRP

- Pull out the Cellweb® TRP to its full 8.1m length and secure its length with another J pin.



- Now measure its width to 2.56m and secure in each of the corners with the J pins.
- Use 10 pins per panel to create a panel measuring 8.1m x 2.56m.



- This will produce a cell size of 259mm x 224mm which is the required cell aperture. Each cell must be fully extended and under tension.
- Staple adjacent panels together at each cell (see Note 3).
- If a curved path or shape is required, this should be cut when the Cellweb® TRP panel is pinned out to 8.1 x 2.56m, ensuring complete cells remain. Do not try to curve or bend the Cellweb® TRP panels into place.
- When cutting Cellweb® TRP, please bear in mind that you will lose two internal cells per cut. Across a 8.1m long panel, this equates to a loss of 0.224m x 2 along the length or 0.259m x 2 across the width.

Cellweb® TRP - Installation Guide



Step 4: Clean Angular Stone



Step 5: Edge Restraints



Step 6: Surface Options

4. Infill the Clean Angular Stone

- The infill material must be a clean angular stone, Type 4/20mm or Type 20/40mm (see Note 4).
- Do not use M.O.T type 1 or crushed stone with fines for tree root protection.
- Infill the Cellweb® TRP cells with the clean angular stone, working towards the tree and using the infilled panels as a platform.
- Minimum 25mm overfill of clean angular stone when used in conjunction with a hard surface.
- No compaction is required of the infill. Do not use a whacker plate or other means of compaction.
- Encourage settlement of the stone with the use of a light roller or with 2-3 passes of the construction plant used for installation.
- If the clean angular stone is being used as the final surface; regular maintenance will be required to ensure a minimum overfill of 50mm.

5. Edge restraints

- Excavations for kerbs and edgings should be avoided within the RPAs.
- Where edging is required for footpath and light structures, a peg and treated timber board edging is acceptable
- Other options include wooden sleepers, kerb edging constructed on-top of the Cellweb® TRP system, plastic and metal edging etc.

6. Surface options

- All surfaces in Root Protection Areas must be porous. Surfaces can include porous block paving, porous asphalt, loose gravel, grass and gravel retention systems (e.g Golpla), resin bound gravel, concrete and astro turf.

NOTES

1. **Herbicide:** According to BS5837:2012 "The use of herbicides in the vicinity of existing trees should be appropriate for the type of vegetation to be killed, and all instructions, warnings and other relevant information from the manufacturers should be strictly observed and followed. Care should be taken to avoid any damaging effects upon existing plants and trees to be retained, species to be introduced, and existing sensitive habitats, particularly those associated with aquatic or drainage features."
2. **Geotextile:** We recommend the installation of a Treetex™ under the Cellweb® TRP, or under the sub-base, if installed. The overlapping between adjacent rolls of Geotextile should be: CBR > 3%: 300mm minimum, CBR between 1% and 3%: 500mm minimum. CBR ≤ 1%: 750mm minimum.
3. **Staples:** Number of staples per join: 200mm: 5 staples. 150mm: 4 staples. 100mm: 3 staples. 75mm: 3 staples.
4. **Granular Fill:** Open graded sub-base, clean angular stone Type 4/20 or Type 20/40. Please refer to BS7533-13:2009 and to the Design Manual for Roads and Bridges (DMRB), Volume 4 Geotechnics and Drainage, Section 1 Earthworks, HA44/91, Volume 7 – IAN 73/06 Design Guidance for road pavement foundations and Manual of Contract Documents for Highway Works (MCHW), Volume 1 Specification for Highway Works for the construction and maintenance of the fill material.



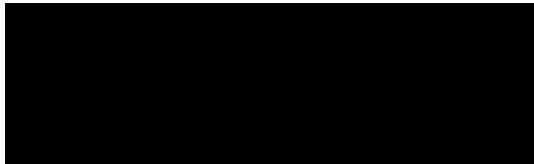
Appendix 8: Caveat

This document should not be relied on or used in circumstances other than those for which it was prepared and for which Austin Design Works were appointed. Austin Design Works accepts no responsibility for this document to any other party other than the person by whom it was appointed.

Any and all information supplied to Austin Design Works by/on behalf of the client is assumed to be accurate unless otherwise informed. This advice is limited to the observations made on the date of inspection as detailed herein and any deletion, editing or alteration will result in the advice being null and void in its entirety. This advice in its entirety may be deemed null and void if remedial works are undertaken on any area of the site, on or after the date of the survey. No liability is assumed by the author or by Austin Design Works for any misuse, misinterpretation or misrepresentation of this advice.

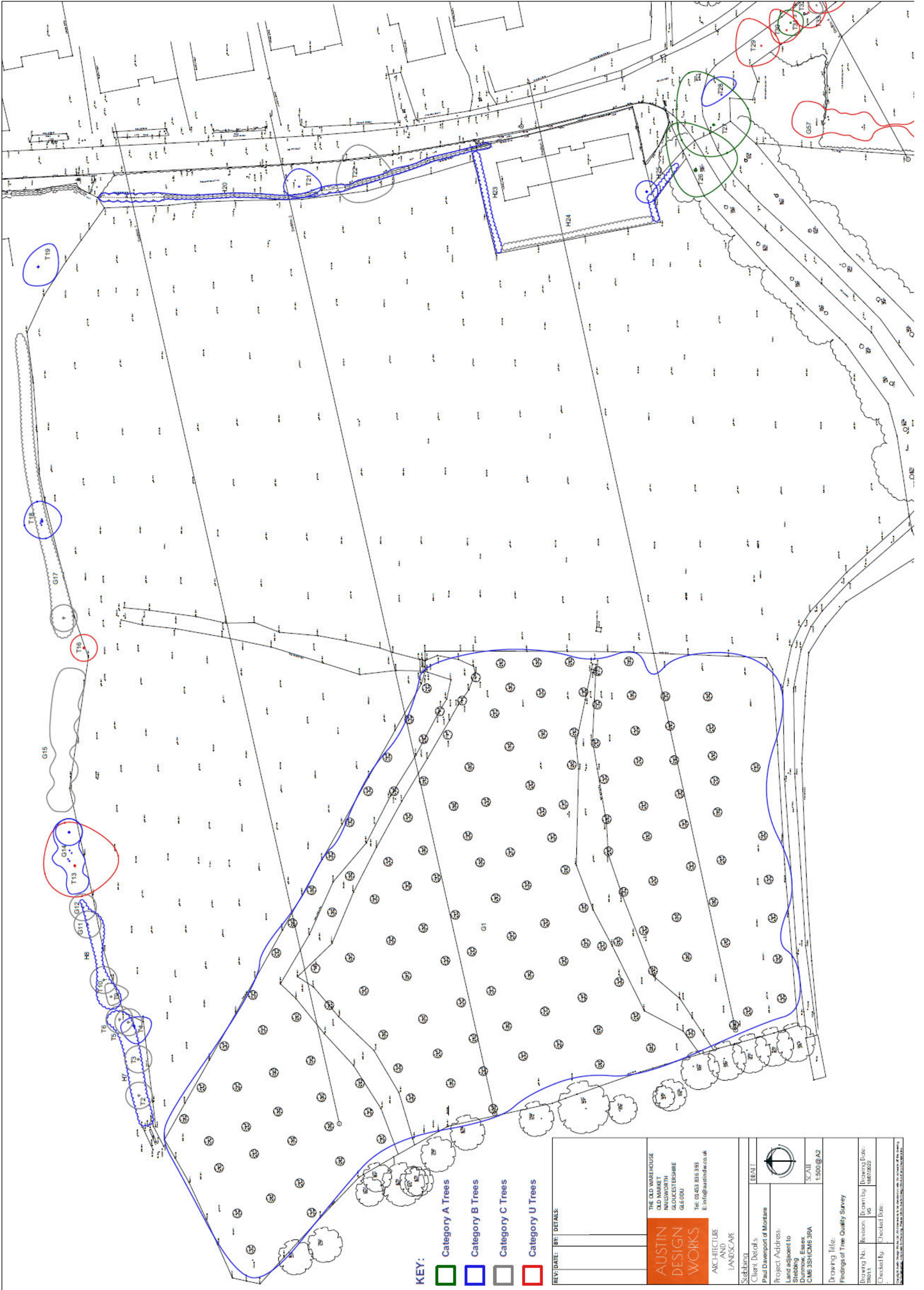
This advice is not valid in adverse or unpredictable weather conditions or for any failure due to 'force majeure' or unpredictable events, Trees are living organisms whose health and overall condition can change rapidly. The conclusions and recommendations contained within this report are valid for a period of 18 months. The period of validity may be reduced if significant changes occur either to the trees or to the landscape within the immediate proximity of the trees. No responsibility is assumed either by the author of this advice or Austin Design Works for any legal matters that may arise as a consequence of the recommendations within this report.

Signed:



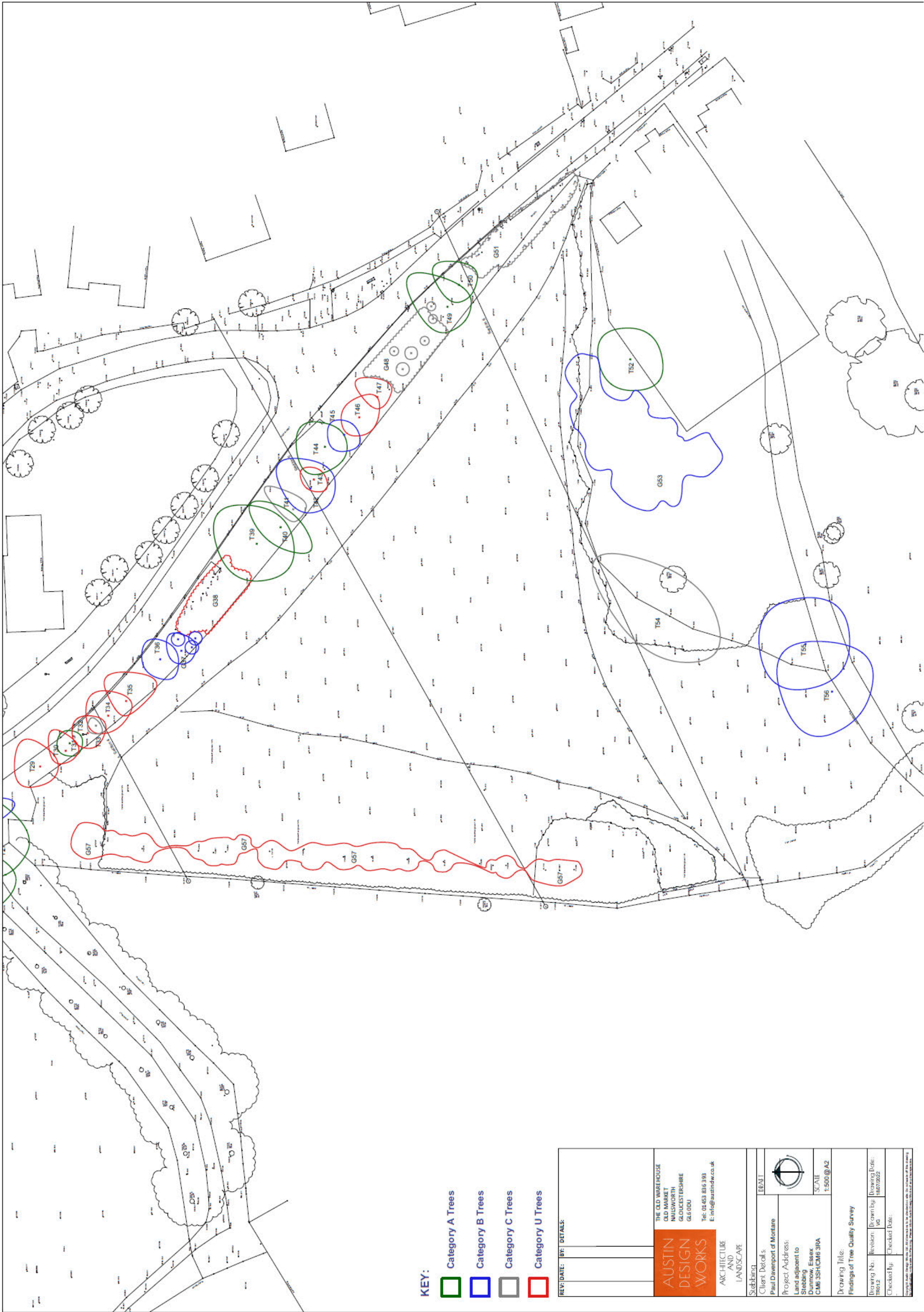
Rachael Emous-Austin, Landscape Architect BA Hons Dip LA, CMLI Arborist TechArborA

Date: 8th July 2022



- KEY:**
- █ Category A Trees
 - █ Category B Trees
 - █ Category C Trees
 - █ Category U Trees

REV: DATE: BY: DETAILS:	<p>THE OLD WAREHOUSE OLD MARKET NAILSWORTH GLOUCESTERSHIRE GL6 0DU Tel: 01453 836 393 E: info@austindw.co.uk</p> <p>AUSTIN DESIGN WORKS</p> <p>ARCHITECTURE AND LANDSCAPE</p>	DEPT:
<p>Scabbling</p> <p>Client: Detail's</p> <p>Project Address: Land adjacent to Shebbing Dunmow, Essex CM8 3SH/CM8 3PA</p>		<p>Scale: 1:500 @ A2</p>
<p>Drawing Title: Findings of Tree Quality Survey</p>		<p>Drawing No. / Revision: / v0</p> <p>Drawn by: / 18/07/2022</p> <p>Checked by: /</p> <p>Checked Date: /</p>



- KEY:**
- Category A Trees
 - Category B Trees
 - Category C Trees
 - Category U Trees

REV: DATE: BY: DETAILS:	<p>AUSTIN DESIGN WORKS</p> <p>ARCHITECTURE AND LANDSCAPE</p> <p>THE OLD WAREHOUSE OLD MARKET MALSWORTH GLOUCESTERSHIRE GL6 0DU Tel: 01453 836 393 E: info@austindw.co.uk</p>	<p>Client: Details</p> <p>Paul Davoport of Montare</p>	<p>IBNT</p>
		<p>Project Address: Land adjacent to Stebbing Dunmow, Essex CM6 3SH/CM6 3RA</p>	<p>SCAII 1:500 @ A2</p>
<p>Drawing Title: Findings of Tree Quality Survey</p>		<p>Revision No.: 186272022</p> <p>Revision: 186272022</p> <p>Checked by:</p> <p>Checked Date:</p>	<p>Drawing Date: 186272022</p>

Copyright Austin Design Works. All rights reserved. No part of this drawing may be reproduced without the written permission of Austin Design Works.



Trees Category U outside of boundary

- KEY:**
- Category A Trees
 - Category B Trees
 - Category C Trees
 - Category U Trees
 - Trees to be removed in the way of Construction
 - Root Protection Area

REVISIONS:

NO.	DATE	BY	DETAILS
A	14/03/2022	AW	Following update of proposed design scheme

THE OLD WAREHOUSE
 OLD MARKET
 MILSWORTH
 GLOUCESTERSHIRE
 GL6 0DU

AUSTIN DESIGN WORKS
 ARCHITECTURE
 A I D
 I A I D S C A P F

Tel: 01453 816399
 E: info@austindw.co.uk

Client Details:
Paul Davenport of Mortare

Project Address:
 Land adjacent to
 Stebbing, Essex
 CM6 3SH/CM6 3RA

Drawing Title:
Tree Constraints Plan

Scale:
 1:500 @ A2

Revision	By	Date
A	AW	14/03/2022

Checked by: C

Copyright © Austin Design Works 2022. All rights reserved. No part of this drawing may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Austin Design Works.



KEY:

- Category A Trees
- Category B Trees
- Category C Trees
- Category U Trees
- Trees to be removed in the way of Construction
- Root Protection Area

<p>REV: DATE: BY: DETAILS:</p> <p>A: 15/03/2022 P.Montare Planning Update of proposed design scheme</p>	<p>AUSTIN DESIGN WORKS</p> <p>ARCHITECTURE A I D L A I D S C A P E</p>	<p>THE OLD WAREHOUSE OLD MARKET NALSWORTH GLOUCESTERSHIRE GL6 0DU</p> <p>Tel: 01453 836 393 E: info@austindw.co.uk</p>	<p>Client Details:</p> <p>Paul Davenport of Montare</p> <p>Project Address: Land adjacent to Skebbing, Essex CM8 3SH/CM8 3RA</p> <p>Scale: 1:500 @ A2</p>	<p>Drawing Title: Tree Constraints Plan</p> <p>Drawing No: TR022 Revision: A Drawing Date: 15/07/2022</p> <p>Checked By: [Signature] Checked Date:</p>
---	---	--	--	---



Trees Category U outside of boundary

- KEY:**
- Category A Trees
 - Category B Trees
 - Category C Trees
 - Category U Trees
 - Root Protection Area
 - Protective Heras Fencing

REV: DATE: BY: DETAILS:
 A 18/07/2022 P/G Following update of proposed design scheme

AUSTIN DESIGN WORKS
 ARCHITECTURE
 A I D
 I A I D S C A P
 THE OLD WAREHOUSE
 OLD MARKET
 GLOUCESTERSHIRE
 GL6 0DU
 Tel: 01453 826393
 E: info@austindesign.co.uk

Client Details:
Paul Davenport of Montare
 Project Address:
 Land adjacent to
 Stebbing
 Dunmow, Essex
 CM6 3SH/CM6 3RA

Drawing Title:
Tree Protection Plan

Scale:	1:500 @ A2
Drawing / No:	TR001 / A
Revisions:	Drawn By: VG Drawing Date: 18/07/2022
Checked by:	Checked Date:

Copyright © Austin Design Works. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Austin Design Works.



KEY:

- Category A Trees
- Category B Trees
- Category C Trees
- Category U Trees
- Root Protection Area
- Protective Heras Fencing

<p>REV/DATE: BY: DETAILS: A 18/07/2022/YG Following update of proposed design scheme</p>	<p>THE OLD WAREHOUSE OLD WAREHOUSE MILTON WORTH GLOSCESTERSHIRE GL6 0DU Tel: 01453 836393 E: info@austindw.co.uk</p>	<p>AUSTIN DESIGN WORKS ARCHITECTURE A/D IAI/DSC/AP</p>	<p>Client Details: Paul Davenport of Mortlake</p> <p>Project Address: Land adjacent to Slebbing Dunmow, Essex CM6 3SH/OM6 3RA</p> <p>SCALE: 1:500 @ A2</p>	<p>Drawing Title: Tree Protection Plan</p> <p>Drawn By: M Checked By: M Revision: M Drawn Date: 18/07/2022 Checked Date:</p>
---	---	---	---	--