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BS5837:2012 Arboricultural Survey Impact Assessment & Arboricultural Method Statement

**Site Address:
The Old Vicarage
Coombe Bissett
Salisbury
SP5 4LR**

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HND Urban Forestry - ND Forestry - MArborA
Ref: RMT1055REVB
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Prepared for Fiona and David Walker



PRO2239

Contents

Ref no.	Title	Page no.
	Title Page	
	Contact and Report Details	
	Contents	
1	Instruction	1
2	Introduction	1
	- Site description	1
	- Limitations	2
	- Legal restrictions	2
	- Tree survey	3
	- Canopy spreads	3
	- Root protection areas	3
	- Arboricultural Officer consultee comments	4
	- Consideration of consultee comments	4
3	Soil Assessment	6
4	Arboricultural Impact Assessment	7
	- Arboricultural impact assessment overview	7
	- Tree protection fencing	7
	- Tree protection barrier	7
	- Ground protection	7
	- No dig surface over the existing drive	8
	- New fence posts	8
	- Areas for site compounds, storage and mixing	8
	- Services	8
	- Conclusions	9
5	Arboricultural Method Statement	10
	- Pre-commencement meeting	10
	- Tree protection fencing	10
	- Tree protection barriers for trees T5.1 and T5.2	11
	- Warning signs	12
	- Temporary ground protection within RPAs and no dig surface for the drive	13
	- Sensitive excavations for fence posts	13

Appendices

Appendix 1 – British Standard 5837:2012 tree categorisation chart	14
Appendix 2 – Tree survey schedule	15
Appendix 3 – Tree Constraints Plan – RMT1055 – TCP – Rev B	18
Appendix 4 – Tree Protection Plan – RMT1055 – TPP – Rev B	19
Appendix 5 – Arboricultural site supervision schedule	20
Appendix 6 – Site monitoring form	21
Appendix 7 – Cellweb installation guide	22
Appendix 8 – Qualifications and experience	25

1 Instructions

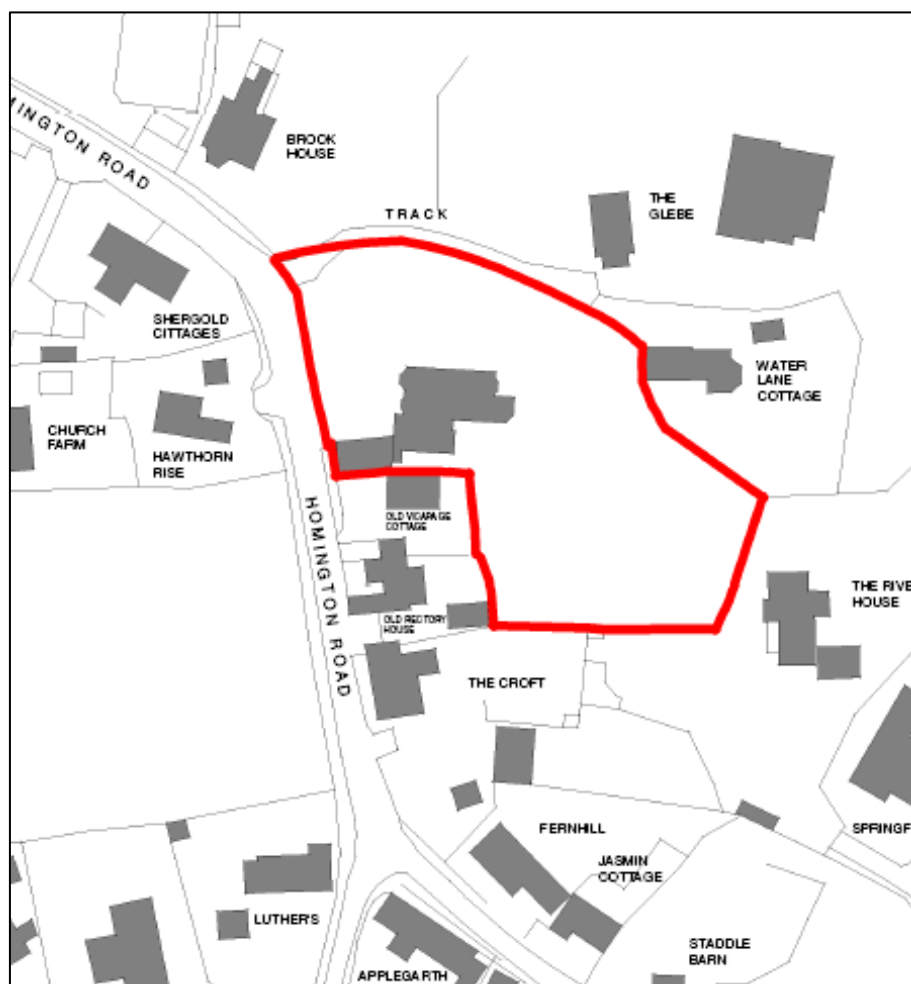
- 1.1 On the 15th November 2024 I was instructed on behalf of the client by Benchmark Development and Planning Ltd to undertake a survey of trees that are on or adjacent to The Old Vicarage, Coombe Bissett, Salisbury, SP5 4LR in accordance with *British Standard 5837:2012 Trees in relation to design, demolition and construction – Recommendations*.
- 1.2 I am a qualified arboriculturalist as it is detailed at **Appendix 8** and this report has been produced in support of a planning application to Wiltshire Council for demolition of the existing dwelling and garage and replacement with a new dwelling, with other associated works including landscape treatment, infrastructure and vehicle parking

2 Introduction

Site Description

- 2.1 The site is a residential property located to the east of Homington Road. The site is accessed via a drive located in the north-western corner and a house is located in the upper west corner. To the north-east, east and south-west of the house is predominantly garden, with an outbuilding midway along the western boundary.

Image 1 – The Old Vicarage, Coombe Bissett, Salisbury, SP5 4LR shown by an indicative yellow line



Limitations

- 2.2 I carried out the survey from ground level with the aid of a Bosch GLM 120 C Professional Laser Measure to measure distances, a Nikon Forestry Pro height measurer and diameter tape.
- 2.3 Prior to my visit I was supplied with a topographical survey showing the growing locations of all but three of the surveyed trees.
- 2.4 Trees T4, T11 and T12 have been annotated onto the plans to the best of the arboriculturalist's ability.
- 2.5 Measurements taken to calculate root protection areas and canopy spreads have been measured where possible. Where it has not been possible to access certain areas, dimensions have been estimated.
- 2.6 Where possible diameter measurements have been measured using a diameter tape at a height of 1.5m. Where it has not been possible to access the stems at 1.5m above ground level due to such things as dense Ivy, trees being offsite or the tree being inaccessible, an estimated measurement has been taken. All estimated measurements include the word "estimated" or the abbreviation "est" in the tree survey schedule shown at **Appendix 2**.
- 2.7 In some instances the diameter measurement has been taken at a height other than 1.5m due to such things as low fork unions. Where this has occurred, I have detailed this in the tree survey schedule shown at **Appendix 2**.
- 2.8 This report does not constitute a safety survey of the trees included within it. It is advised that if there are concerns regarding the risk posed by trees to persons and property then a tree condition inspection should be commissioned.

Legal Restrictions

- 2.9 I have not contacted the local planning authority (LPA) directly to ascertain whether the trees on or adjacent to the site are protected by Tree Preservation Orders (TPO) or if they are within a Conservation Order.
- 2.10 On the 11th August 2025 I carried out a check on the Wiltshire Council online protected tree maps it indicates that Coombe Bissett Conservation Area covers the property.
- 2.11 Trees protected by a TPO or Conservation Area benefit from statutory protection and no work can be carried out to them (including cutting roots, branches or felling) without the written consent of the LPA. In the event that planning permission is granted and trees are shown as removed or requiring works to facilitate development then this overrides the protection afforded by a TPO or Conservation Area. The removal of deadwood, the removal of dead trees or works to trees that are urgently necessary to remove an immediate risk of serious harm, can be carried out under exemption and without the submission of a formal application.

- 2.12** Trees protected by a TPO or Conservation Area does not inevitably necessitate that trees are worthy of being a material constraint as part of a planning application. Trees can be protected but due to any number of reasons, such as poor structural or physiological condition, have become unsuitable for retention. Additionally, a planning approval consequentially overrides these forms of statutory protection.
- 2.13** It is an offence under the Wildlife and Countryside Act 1981 and the Rights of Way Act 2000 to disturb nesting birds or roosting/breeding bats. When carrying out tree work care should be taken to avoid disturbance. If necessary, advice should be taken to avoid disturbance. If necessary, advice may need to be sought from a qualified Ecologist.

Tree survey

- 2.14** I visited the site on 21st November 2024 and recorded a total of twelve trees and two groups. The surveyed trees and groups have been categorised in accordance with British Standard 5837:2012 as shown at **Appendix 1** and the tree survey schedule can be seen at **Appendix 2**.
- 2.15** At the time of my survey one group was considered to be category A and high value, six trees and one group are considered to be category B and moderate value. The remaining trees are considered to be category C or U and low value.

Table 1 – Tree categorisations as BS5837:2012

Category A	Category B	Category C	Category U
G5	T1, T5.1, T5.2, T6, T7, G8, T9	T2, T3, T4, T10 T12, T13	T11

- 2.16** It was noted that there are other trees that are located on or adjacent to The Old Vicarage, Coombe Bissett, Salisbury, SP5 4LR but they have not been included within this report. This is because it is deemed that they are:
- far enough from the area proposed for development that they will not be affected;
 - they will be adequately protected by the tree protection measures afforded to the surveyed trees;
 - they are specimens of limited significance;

Canopy spreads

- 2.17** The canopy spreads have annotated on the tree constraints plan and tree protection plan at **Appendices 3 and 4**.

Root protection area (RPA) definition

- 2.18** The RPA is a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure are treated as a priority.

(British Standard 5837:2012 – Trees in relation to design, demolition and construction – Recommendations – The British Standard Institute 2012).

Arboricultural Officer consultee comments

2.19 Consultee comments made by the Wiltshire Council Arboricultural Officer were received via the Case Officer on the 3rd October 2025 and have been included at **Appendix 7**. The following summarises those comments:

- a) The tracking diagrams provided indicate space is just about sufficient for large construction vehicles to enter/exit site, but they do not appear to show the tree protection in place around the trunks of the two Plane trees at the entrance (as recommended in the Arb Report).
- b) Furthermore, the idea of scaffold poles being driven into the ground close to the base of such large trees, to create a frame to fix protective panels to (see extract from Arb Report below), seems a good idea in theory, but in practice it will be difficult to achieve without causing significant damage to large structural roots, and further restricting space for vehicle movement in and out of the site.
- c) The two Plane trees are such a significant feature of the local environment it is imperative we ensure they can be adequately protected during any development process before any permission is approved.
- d) With this in mind, and for the same reasons I would be reluctant to see any proposal to erect gates near to the two Plane trees. The Arb Report suggests gates could be installed as part of a landscaping scheme (reference section 5.18). If gates are required anywhere within the RPA of the trees it is important details are obtained before permission is granted, not left to condition.
- e) Finally, it seems the plan is to lift the Cellular Confinement System once the development is completed. However, for the benefit of the trees it would almost certainly be better if it were left in place, and dressed with a permeable surface layer, to provide ongoing protection against root compaction.

2.20 I held a phone conversation with the Arboricultural Officer on the 3rd October 2025 to discuss the comments.

Consideration of consultee comments

2.21 On the 3rd June 2025 an email was forwarded to the Forestry Officer via the Case Officer requesting clarification regarding the following points:

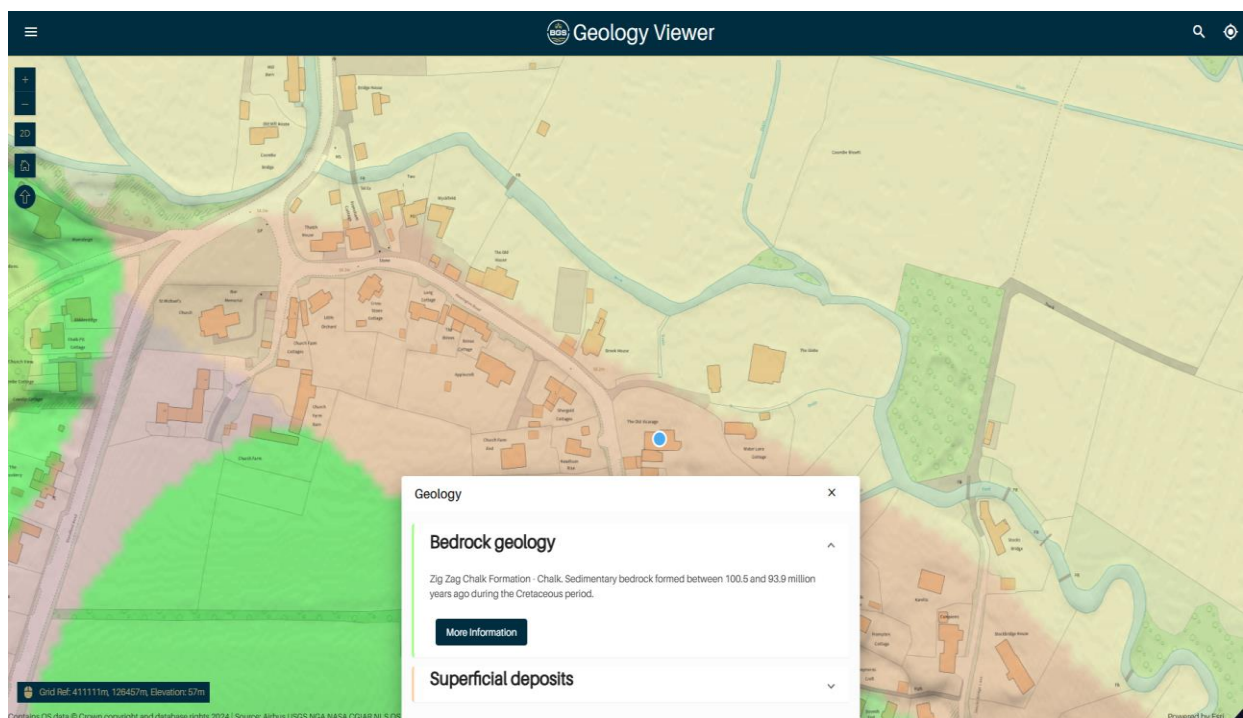
- a) The Planning Consultant has been advised to arrange for the tracking diagrams to include tree protection barriers to demonstrate that the access remains viable as previously stated. These documents will be provided by the requisite specialist and do not form part of this report.
- b) The tree protection proposals for trees T5.1 and T5.2 have been changed to wooden box construction as shown at **Appendix 4** and sections 5.3 and 5.4 of this report. It is considered that this design will provide a wooden structure which can be pinned further from the main stem, while flexing ply or metal sheets around the main stems of the trees. The pins will be substantial enough to hold the hoarding and will pose minimal risk to either tree.

- c) The drive access which passes by the main stems of trees T5.1 and T5.2, is legally recognised as the only access route into the The Old Vicarage. The protection details provided within this and the previous report meet the requirements of BS5837:2012 and stipulate protection which it is demonstrated as being practical. The tree protection information demonstrates that we share the LPAs concerns about the protection of these trees. If, following submission of the latest tree protection barrier specification for T5.1 and T5.2 the LPA continue to have concerns, then it is requested that they provide guidance as to a practical and achievable solution to facilitate access through the legally recognised drive and is in accordance with BS5837:2012.
- d) Inclusions of a reference to new entrance gates is error and has been removed. To confirm there are no new entrance gates proposed as part of this development proposal.
- e) While it is considered that the existing drive surface has already resulted in compaction and is adequate for the continued residential use of the property, it has been agreed that a 75mm three-dimensional cellular confinement system will be laid near the completion of the development.

3 Soil Assessment

- 3.1** The soil assessment is necessary to establish whether the soil on the proposal site is shrinkable. Tree roots and those of other vegetation have the potential to extract moisture from shrinkable soils such as clay, making the soil expand and contract as the soil desiccates and re-hydrates. Where new structures are proposed on shrinkable soils and close to trees, foundations will need to be sufficiently deepened or able to withstand to minimise the risk of indirect damage to foundations.
- 3.2** No soil assessments have been provided however a check the British Geological Survey gives the soil type as Zig Zag Chalk Formation – Chalk. This means that the underlying soil is potentially non shrinkable and as such foundations should not need to be deepened. If further assessments are undertaken that show that there is shrinkable clay, then foundations must be designed in accordance with the guidance within the National House Building Council's Standards Chapter 4.2 Building near trees.

Figure 1 – The British Geological Survey indicates that the soil make up at The Old Vicarage, Coombe Bissett, Salisbury, SP5 4LR is potentially non-shrinkable Zig Zag Chalk Formation – Chalk.



4 Arboricultural Impact Assessment

Arboricultural Impact Assessment overview

- 4.1** The arboricultural impact assessment assesses the direct and indirect effects of the proposed design on trees that are growing or adjacent to the site. Where appropriate mitigation will be recommended to prevent or minimise harm and details mitigation as appropriate. Consideration will be given to the practicality of the design and the viability of tree retention.

Tree protection fencing

- 4.2** Tree protection fencing will be required throughout the construction process to restrict construction access within the RPAs of trees T1 – T13. The areas to be protected by the tree protection fencing can be seen as blue lines on the accompanying Tree Protection Plan at **Appendix 4**.
- 4.3** Tree protection fencing will consist of 1.8m high wire mesh panels placed in rubber blocks. The panels will be securely bolted together to prevent movement and a backstay must be attached to each panel to prevent movement and resist impacts. Un-braced weld mesh panels on unsecured rubber or concrete feet will not be used as these are not resistant to impact and are too easily removed by site operatives. A notice will be attached to the fencing which says 'Tree Protection Area. Keep Out!'.

Tree protection barrier

- 4.4** Due to the restricted space for large construction vehicles to enter the site, it will not be practical to erect heras fencing around the main stems of trees T5.1 and T5.2. Therefore the protection will consist of a wooden structure built to the edge of the drive with a ply of metal sheets curved around the main stems. The finished line of the protection around the main stems and buttressing has to be curved to maximise the width of the access. The box will be pinned as far from the main stem as possible to prevent movement. A layer of robust but compressible material will be wrapped around the main stem and buttressing to provide additional resistance to impacts. A notice will be attached to the tree protection which says 'Tree Protection Area. Keep Out!'.

Ground protection

- 4.5** It has been stated above, the RPA is a sacrosanct area of ground where encroachment by construction activities should be avoided wherever possible. In the case of trees T1 to T7, there will be a requirement for construction access within their RPAs throughout development. Where it is considered that the construction working space or temporary access is justified within their RPAs, this will be facilitated by a set-back in the alignment of the tree protection barrier and suitable ground protection will be installed.
- 4.6** In all cases the objective should be to avoid compaction of the soil, which can arise from the single passage of a heavy vehicle or continual pedestrian movement over the same area, especially in wet conditions. Compaction of the soil can impair root development and function leading to a decline in the physiological and structural condition of the tree.

- 4.7** Access through RPAs for the duration of the build is required to accommodate the access requirements shown on the Bellamy Roberts Tracking Plans referenced as 6345-201 rev A and 202 rev A.
- 4.8** The development of the site will require large vehicles such as lorries to access the site. It is therefore important that the temporary surface provides sufficient protection. In this instance the ground protection over the existing drive and existing soft landscape within RPAs will be formed of a three-dimensional cellular confinement system (CCS) (Cellweb). The CCS will be overlaid with metal road plates to provide protection to the CCS and to provide additional load spreading capacity.

No dig surface over the existing drive

- 4.9** A no dig surface will be laid over the section of drive that is within the RPAs of trees T5.1 and T5.2 at the behest of the Wiltshire Council Arboricultural Officer. This will be laid following the removal of the ground protection from the drive so as to provide an additional layer of protection over the drive.

New fence posts

- 4.10** The new boundary fence posts will overlap with the RPA of tree and T7 respectively. The localised excavations for the fence posts will pose minimal risk to the health of trees T7 as long as they are carried sensitively to avoid damaging roots. To avoid damaging roots, all excavations must be carried out by hand or compressed air device (Air Spade). If the posts are to be secured using concrete, the holes will be lined with an impermeable membrane such as polythene.

Areas for site compounds, storage and mixing

- 4.11** Site compounds will be located away from trees wherever possible and ideally 2m from any protective barriers.
- 4.12** On this occasion it is proposed to utilise the existing driveway for the site compound, storage and mixing as shown at **Appendix 4**.

Services

- 4.13** The proposed layout of incoming (water, gas and electricity) and outgoing (foul sewer) services is not yet established but they should be installed outside root protection areas. If it is necessary for a trench to be dug through an RPA a specific method statement will be required which will need to specify that the trench will be hand dug and that care will be taken to preserve all roots encountered which are larger than 25 mm diameter.
- 4.14** It is anticipated that the services serving the existing house will be utilised in this instance.

Conclusions

- 4.15** I visited The Old Vicarage, Coombe Bissett, Salisbury, SP5 4LR on the 21st November 2024 and recorded a total of twelve trees and two groups in accordance with BS5837:2012.
- 4.16** At the time of my survey one group was considered to be category A and high value, six trees and one group are considered to be category B and moderate value. The remaining trees are considered to be category C or U and low value.
- 4.17** All trees were categorised in accordance with British Standard 5837:2012 as shown at **Appendix 1**.
- 4.18** The development will not require the removal or pruning of any surveyed trees.
- 4.19** Ground protection will be required through the RPAs of a number of trees, but it is considered that the protection specified is adequate to provide protection for the size of vehicles.
- 4.20** The trees to be retained will be protected during development and methods for ensuring their protection have been described.
- 4.21** The development is sympathetic to the leafy character of the area.

5 Arboricultural Method Statement

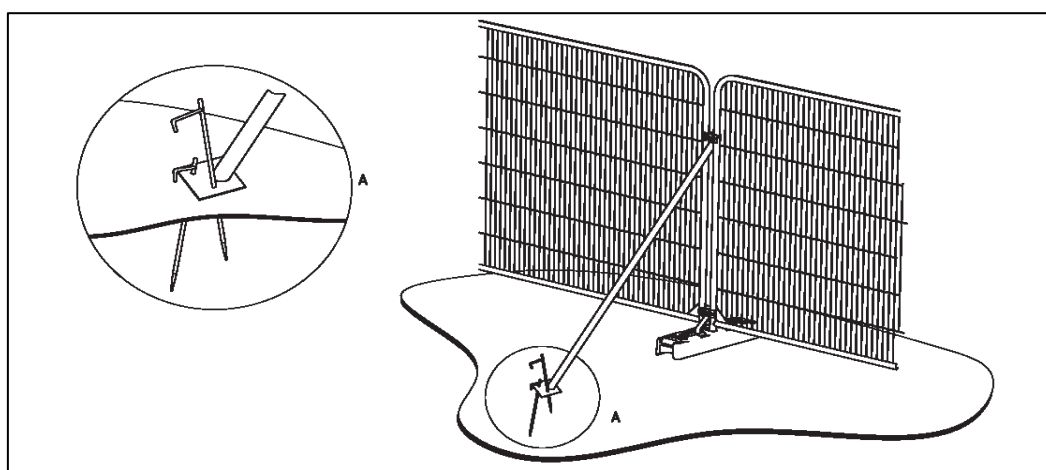
Pre-commencement meeting

- 5.1 Prior to the commencement of development all tree protection will be erected and a site meeting will be held between the appointed building contractors, the appointed arboriculturalist and local authority Tree Officer as it is stipulated at **Appendix 5**. This meeting is necessary to agree that the position of the tree protection is correct.

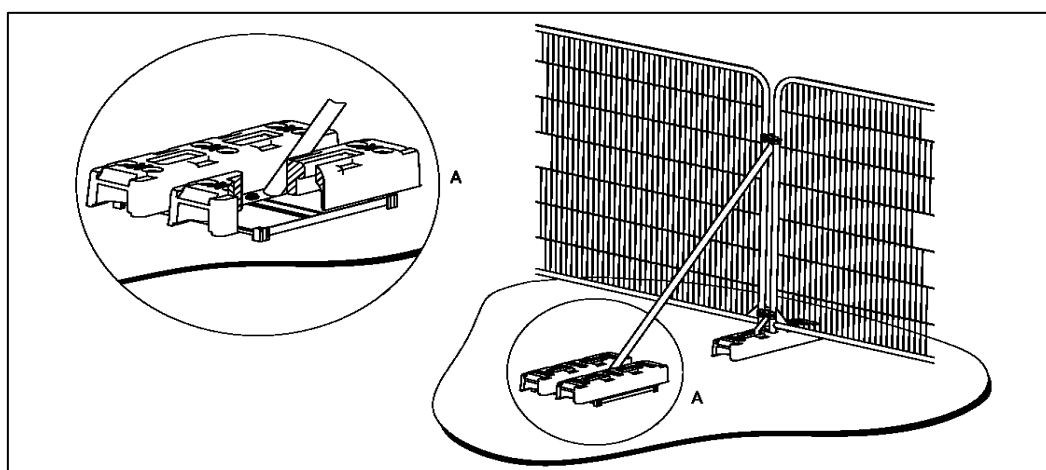
Tree protection fencing

- 5.2 Tree protection barriers will be erected in the positions shown in **Appendix 4** and in accordance with the specifications detailed in Figures 2 and 3.

Figures 2 and 3 – Examples of above-ground stabilizing systems



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

Image taken from British Standard 5837:2012 – Trees in relation to design, demolition and construction – Recommendations.

Tree protection barrier for trees T5.1 and T5.2

- 5.3** The tree protection barrier will be erected in the position shown as blue lines at **Appendix 4** and in accordance with the specifications detailed in Figures 4 and 5.
- 5.4** The tree protection fencing detailed at section 5.2 will protect the wider RPAs of trees T5.1 and T5.2 as shown at **Appendix 4**.

Figure 4 – Indicative example of a curved tree protection barrier from viewed from above

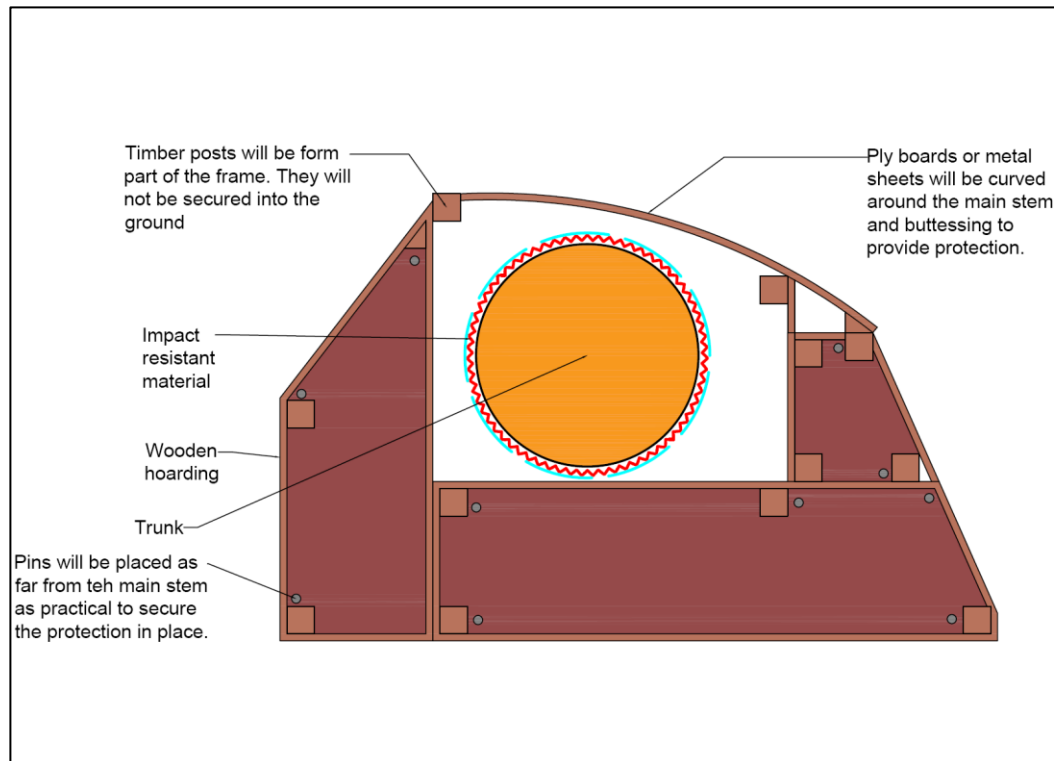
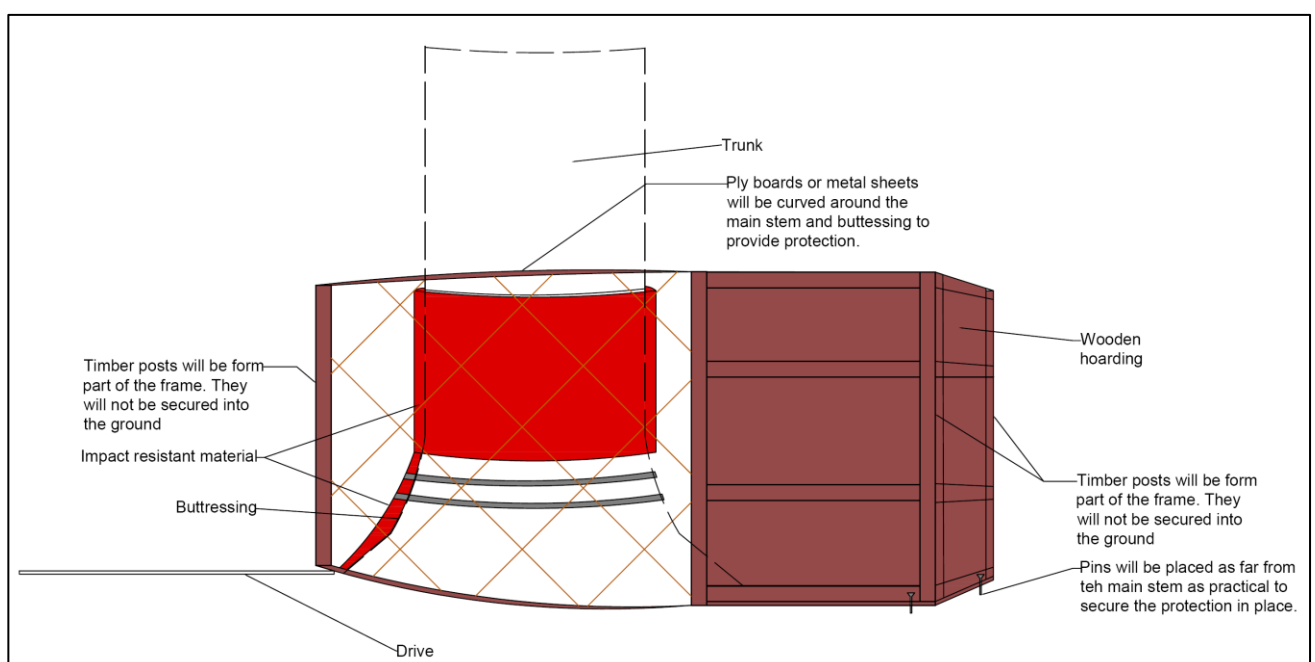


Figure 5 – Indicative example of a curved tree protection barrier from viewed from side



Warning signs

- 5.5 All weather notices will be attached to the tree protection fencing.

Figure 6 – Examples of tree protection warning sign

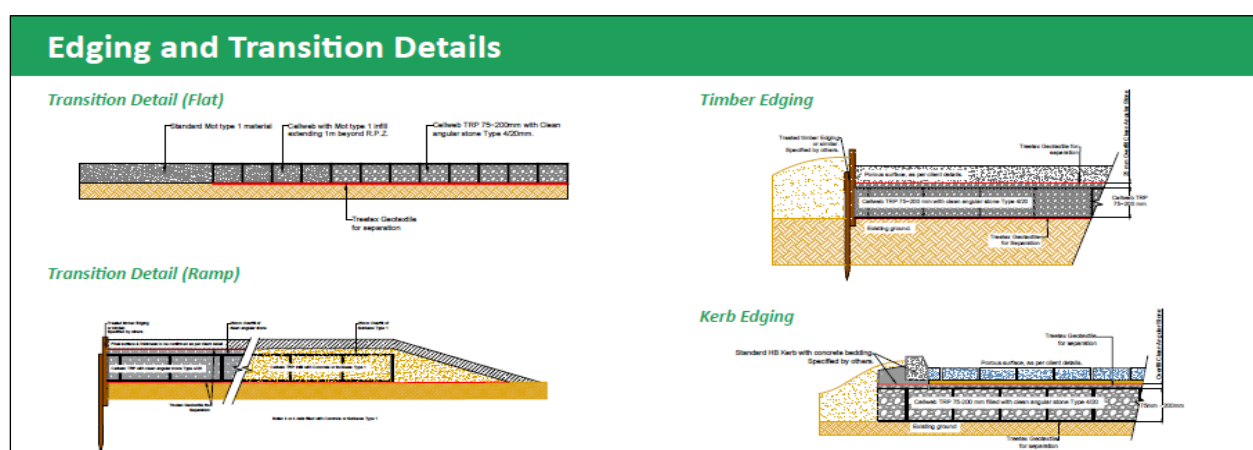


Temporary ground protection within RPAs and no dig surface for the drive

- 5.6 Areas to be covered with ground protection have been shown as orange hatching and the final no dig drive surface as light blue hatching at **Appendix 4**.
- 5.7 A cellular confinement system with a minimum depth of 200mm, or the minimum depth specified by an engineer to support large construction vehicles such as HGVs, will be utilised for the ground protection as shown by the orange hatching at **Appendix 4**. A 75mm deep system will be utilised for the final drive surface shown by the light blue hatching at **Appendix 4**.
- 5.8 The appointed arboriculturalist will be invited to site to supervise the installation. Prepare the site by carefully hand raking any excessive organic matter and removing all debris and significant protrusions such as rocks. Use ground protection system if vehicular movements are unavoidable.
- 5.9 Ensure that the prepared surface is reasonably even and fill any significant depressions with 40/20 granular material to achieve an even surface profile. Do not roll or consolidate the area.
- 5.10 Install tanalised timber edging boards to the perimeter of the construction zone as appropriate to the total layer profile thickness. Avoid damage to tree roots when placing posts and pegs.
- 5.11 Install a geotextile layer across the site (a possible suggestion is Treetex T-300 supplied by Geosynthetics). The adjacent roles of geotextile membrane should overlap by 150mm. It may be necessary to lightly pin the geotextile membrane in place until the overlying layers are installed.

- 5.12** Place the Geogrid layer over the Geotextile Membrane layer and fix down using steel pins to hold flat. Overlap adjacent rolls by minimum 150mm. Avoid tree root damage and soil compaction by avoiding vehicular movements over the area.
- 5.13** Open out and lay the specified layer thickness of the Cellular Confinement System and pin in place between the edging boards. Pin the CCS in place using Steel Fixing Pins or similar and fully expanded position whilst the cells are being filled and to stop the structure from being pushed up by migrating aggregate during the filling process. Pin spacing will vary according to the site conditions but will generally be required at 1m - 2m centres on flat surfaces, mainly placed around the perimeter of the area and where adjacent sections of CCS about each, with less in the middle of the area. Drive the pins in so that they are just touching the top of the cells but do not compress the fabric. Avoid any obvious surface tree roots during the pinning process.
- 5.14** Fill the CCS, working toward the trees from the furthest point away and using the filled CCS as a platform. The Cells must be filled with clean, open graded angular aggregate, normally in the particle size range of 5mm - 45mm – not single sized or rounded aggregate. The surface can be rolled to settle the stone into the cells but a compaction plate (whacker) should not be used. Do not contaminate the filled cells with site debris, soil or mud.
- 5.15** Lay steel road plates over the surface to provide protection to the top layer of the Cellweb system.

Figure 7 – Cellweb edging and transition details



- 5.16** Development can commence in accordance with the planning consent.
- 5.17** Following completion of all development the tree protection can be dismantled to allow landscaping works to take place.

Sensitive excavations for fence posts

- 5.18** The installation of new fencing will be carried out as landscaping works.
- 5.19** The excavations will be carried out using hand tools or compressed air device (Air Spade). If roots of 25mm diameter or greater are uncovered at the proposed mini/screw pile location, then the post location will be adjusted to avoid it. The holes must be lined with an impermeable membrane if concrete is to be poured.

Appendix 1 – British Standard 5837:2012 tree categorisation chart

TREES UNSUITABLE FOR RETENTION				
CATEGORY AND DEFINITIONS	CRITERIA			IDENTIFICATION ON PLAN
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning). • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality. <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5 of BS5837:2012</i>			RED . RGB 127.000.000
TREES TO BE CONSIDERED FOR RETENTION				
CATEGORY AND DEFINITIONS	CRITERIA - SUBCATEGORIES			IDENTIFICATION ON PLAN
	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation	
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue).	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN . RGB 000.255.000
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.	Trees with material conservation or other cultural value	MID BLUE . RGB 000.000.255
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value.	GREY . RGB 091.091.091

Appendix 2 - Tree survey schedule

agl:above ground level – c:circa – gl:ground level

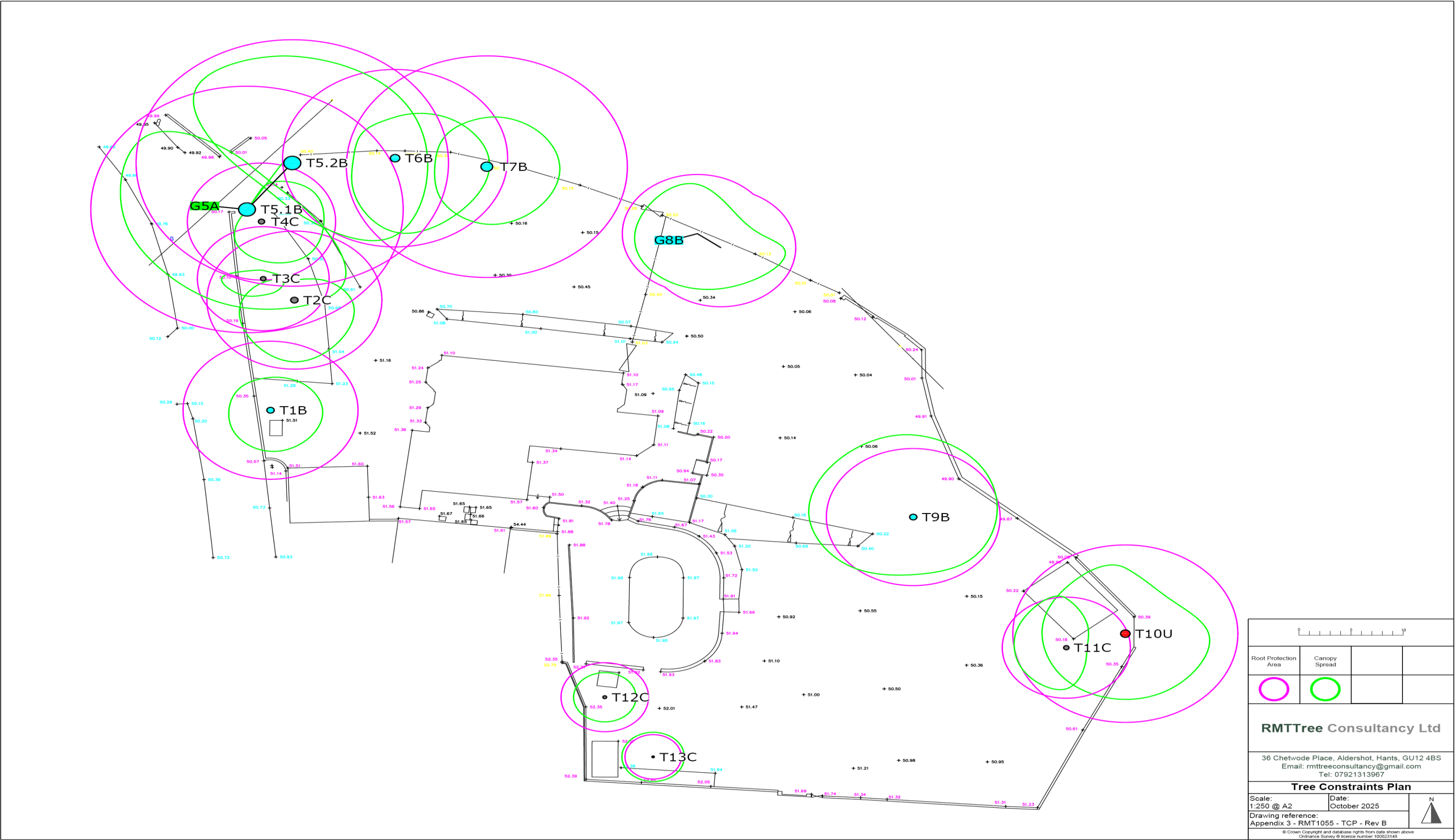
Tree No.	Species	Height (m)	Trunk dia. at 1.5m	Canopy Spread	Crown Height (m)	Age Class	Physiological Condition	Structural Condition	Comments/ Recommendations	Useful Life Expect	BS5837 grade	Root Protection Area	
												Radius	RPA Area
T1	Common Yew (<i>Taxus baccata</i>)	9m	700mm est	N4m E5m S5m W4m	1.5m	Mature	Good	Good	Ivy on main stem impedes survey.	20+	B	8.4m	221.7m ²
T2	Common Yew (<i>Taxus baccata</i>)	10m	700mm est	N2.5m E5.5m S7.5m W5m	4m	Mature	Fair	Fair	Unremarkable tree. Fair vitality due to ivy suppressing foliage growth in upper crown. Unbalanced crown biased to the south due to the proximity of adjacent trees.	10+	C	8.4m	221.7m ²
T3	Common Yew (<i>Taxus baccata</i>)	10m	450mm 275mm est	N1m E2m S2m W4m	2.5m	Early mature	Fair	Good	Ivy impedes survey. Unremarkable tree. Fair vitality due to suppression of foliage by ivy.	10+	C	6.3m	125.8m ²
T4	Common Yew (<i>Taxus baccata</i>)	9m	422mm 417mm	N4m NE6m SE6m SW3.5m NW2m	4m	Mature	Good	Fair	Unremarkable tree. Suppressed as overtopped by adjacent tree. Three stemmed from 600mm with northern stem historically removed at 1m.	10+	C	7.1m	159.2m ²
G5	Group of London Plane (x2)	29m	-	-	-	Mature	Good	Good	Group categorisation of trees T5.1 and T52.	40+	A	-	-

Tree No.	Species	Height (m)	Trunk dia. at 1.5m	Canopy Spread	Crown Height (m)	Age Class	Physiological Condition	Structural Condition	Comments/ Recommendations	Useful Life Expect	BS5837 grade	Root Protection Area	
												Radius	RPA Area
T5.1	London Plane (<i>Platanus X hispanica</i>)	29m	1613mm	NE4m SE13m SW11m NW13m	7m	Mature	Good	Fair	Crown biased to the south-west due to the proximity of adjacent tree. Medium sized deadwood 25mm to 100mm.	20+	B	15.0m	706.9m ²
T5.2	London Plane (<i>Platanus X hispanica</i>)	29m	1638mm	NE13m SE13m SW4m NW13m	6m	Mature	Good	Fair	Crown biased to the north-east due to the proximity of adjacent tree.	40+	B	15.0m	706.9m ²
T6	Common Lime (<i>Tilia x europaea</i>)	29m	900mm	N5m E9m SE9m S9m W4m	4m	Mature	Good	Fair	Trunk leans to east by c25 degrees and straightening to vertical at c15m due to proximity of adjacent tree.	20+	B	10.8m	366.4m ²
T7	Common Yew (<i>Taxus baccata</i>)	13m	1030mm 450mm est	N6m E7m S7m W5m	3m	Mature	Good	Good		20+	B	13.5m	571.5m ²
G8	Group of Common Yew (x2)	14m	Max 600mm est	N6m E6m S5m W6m	3m	Mature	Good	Good	Ivy and vegetation impede survey.	20+	B	7.2m	162.9m ²
T9	Common Walnut (<i>Juglans regia</i>)	15m	695mm	N10m E8m S7m W10m	3m	Mature	Good	Fair	Medium sized deadwood 25mm to 100mm. Crown has been previously reduced.	20+	B	8.3m	218.5m ²

Tree No.	Species	Height (m)	Trunk dia. at 1.5m	Canopy Spread	Crown Height (m)	Age Class	Physiological Condition	Structural Condition	Comments/ Recommendations	Useful Life Expect	BS5837 grade	Root Protection Area	
												Radius	RPA Area
T10	Common Ash (<i>Fraxinus excelsior</i>)	22m	900mm est	N8m NE6m E8m S8m W8m	7m	Mature	Good	Fair	Ivy impedes survey; 400mm dia branch failure wound with significant decay on the southern side of the main stem at 1.8m. Twin-stemmed from 2.5m. Medium sized deadwood 25mm to 100mm.	<10	U	10.8m	366.4m ²
T11	Goat Willow (<i>Salix caprea</i>)	8m	175mm 175mm 175mm 175mm 175mm 125mm 125mm 125mm 150mm 150mm 150mm	N6m NE3m E2m S5m W5m	2m	Mature	Good	Fair	Multi-stemmed coppice; suppressed as overtopped by adjacent tree.	10+	C	6.2m	118.9m ²
T12	Leyland Cypress (<i>X Cupressocyparis leylandii</i>)	13m	350mm est	N3m E3m S3m W3m	0m	Early mature	Good	Good	Vegetation impedes survey. Unremarkable tree.	10+	C	4.2m	55.4m ²
T13	Goat Willow (<i>Salix caprea</i>)	7m	225mm @750mm est	N3m E3m S3m W3m	1m	Young	Good	Fair	Unremarkable tree. Main stem has been topped at 750mm.	10+	C	2.7m	22.9m ²

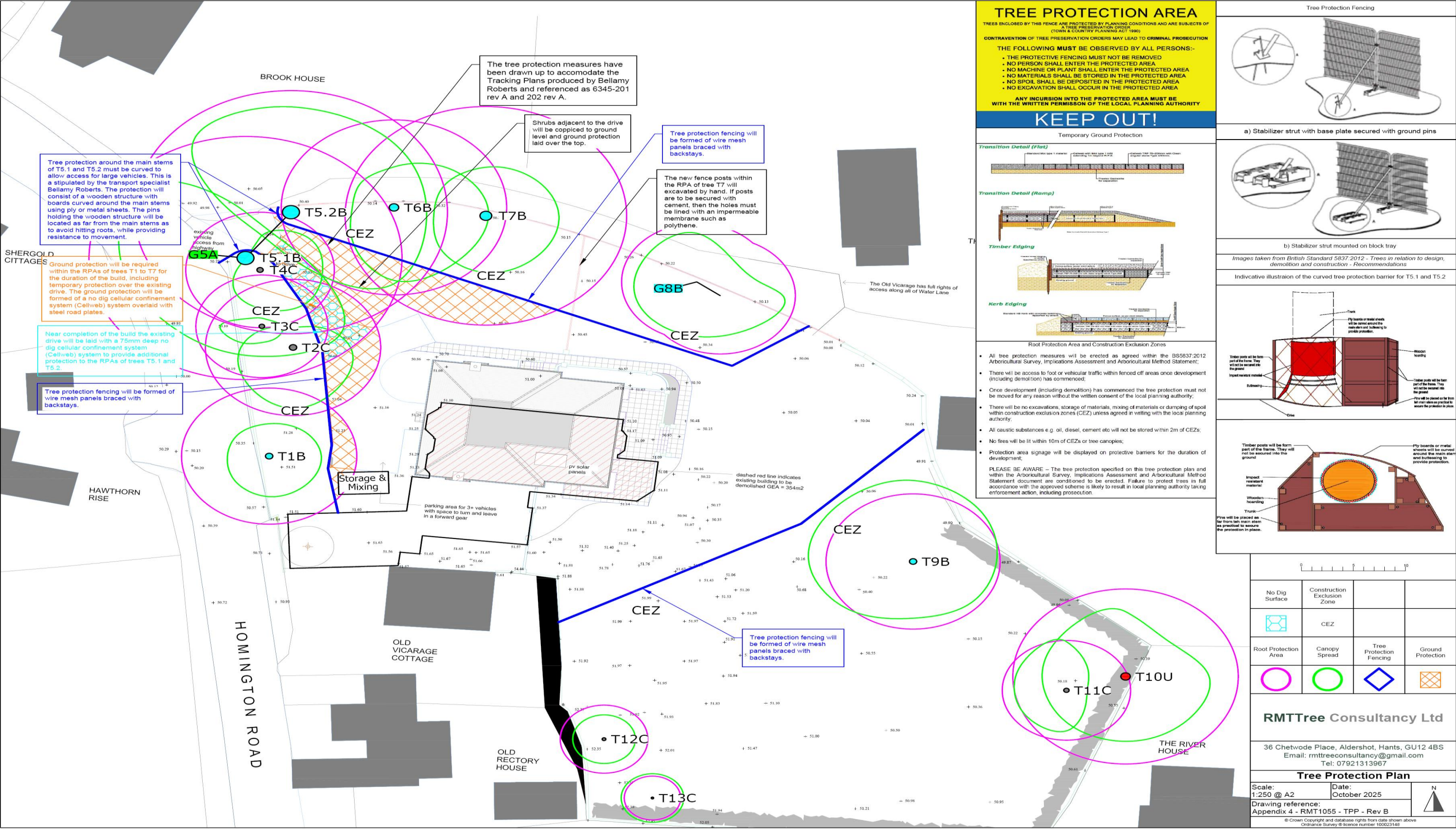
Appendix 3 – Tree Constraints Plan – RMT1055 – TCP – Rev B

Tree constraints plan (TCP) showing retained trees, tree numbers, root protection areas (magenta circles/polygons) and canopy spreads (green lines). The plan has been provided separately as a PDF at a scale of 1: 250 @ A1.



Appendix 4 – Tree Protection Plan – RMT1055 – TPP – Rev B

Tree protection plan (TPP) showing retained trees, tree numbers, root protection areas (magenta circles/polygons) and canopy spreads (green lines). The location of protective fencing is shown as blue lines and ground protection as orange hatching and no dig surfacing as light blue hatching. The plan has been provided separately as a PDF at a scale of 1: 250 @ A2.



Appendix 5 – Arboricultural site supervision schedule

Activity	Supervision Required
Pre-commencement meeting between the local authority arboricultural officer, the appointed arboriculturalist and the appointed building contractor.	✓
At any time that there are conflict issues with the agreed tree protection.	✓

Following every visit the appointed arboriculturalist will fill out the site monitoring form which is shown at **Appendix 6** and this will be forwarded to the LPA.

Appendix 6 – Site monitoring form

RMTTree Consultancy Ltd 			
Site monitoring form			
Date of visit		Site	
Consultant in attendance			
Observations/status of tree protection/comments:			
Recommendations (if necessary):			
Date of next visit		Signature	

Appendix 7 – Installation guide for above-ground Cellweb system

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 BS5837: '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

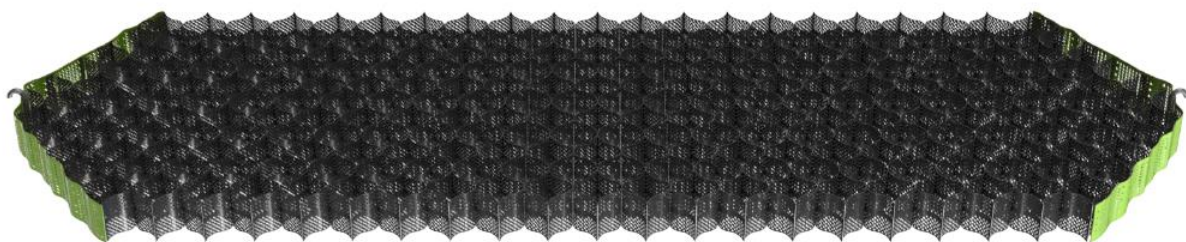
- Remove the surface vegetation using appropriate hand held tools or herbicide (see Note 1).
- Remove any surface rocks, debris and organic material.
- Create a level surface by filling any hollows with clean angular stone or sharp sand.
- Do not level off high spots or compact the soil through rolling.

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

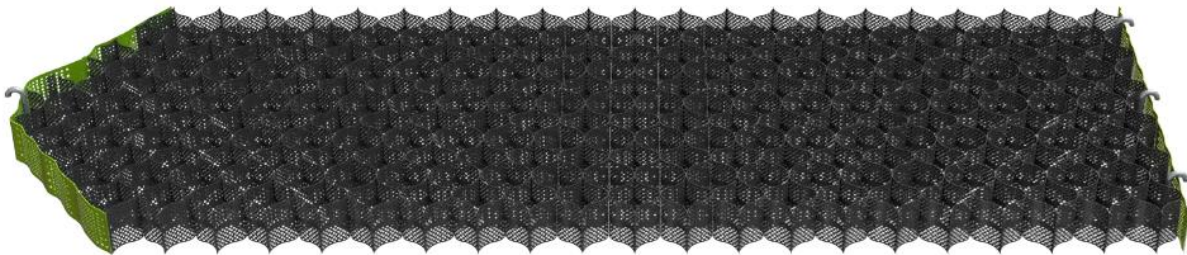


Step 3: Pinning Cellweb® TRP

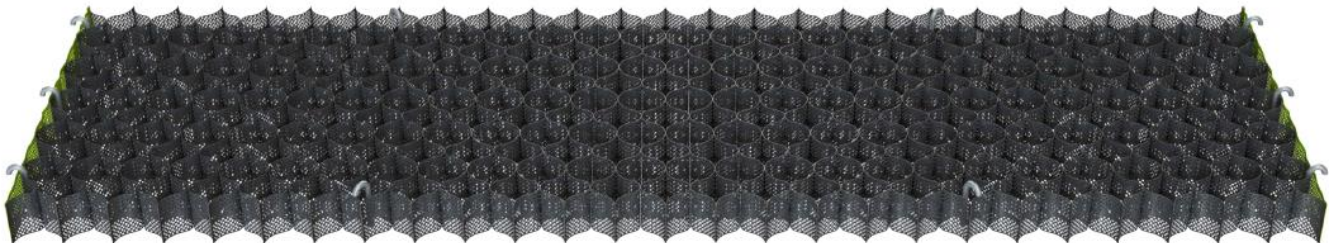


Step 3: Stapling Cellweb® TRP

- 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 diameter. 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.
- All cells must be fully opened to the required diameter.

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 block paving, asphalt, loose gravel, grass and gravel retention systems (e.g Golpla), resin bound gravel, concrete etc.

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.

This information corresponds to our current knowledge on the subject. It is offered solely to provide possible suggestions for your own experimentation. It is not intended, however, to substitute for any testing you may need to conduct to determine for yourself the suitability of our products for your particular purposes. This information may be subject to revision as new knowledge becomes available. Since we cannot anticipate all variations in actual end use conditions, Geosynthetics Limited makes no warranties and assumes no liabilities in connection with this information. Nothing in this publication is to be considered as a licence to operate under or a recommendation to infringe any patent right.

DR: 81/V4/13.05.16 (Page 3 of 3)



Appendix 8 – Qualifications and experience

Robert Toll has been working with trees since 2004 when he completed his studies.

In 2000 he began his studies at Riseholme College, Lincoln where achieved a pass with merit in Forestry at National Diploma level. In 2002 he attended Moulton College in Northampton where he gained a Level Five Higher National Diploma in Urban Forestry with merit.

In 2004 Robert began work as a temporary tree inspector at Northampton Borough Council, undertaking inspections of trees in response to enquiries from the public. After 4 months Robert took up a permanent tree inspector role at Coventry City Council which predominantly involved undertaking safety inspections of trees on school sites.

In 2006 Robert moved to Warwick District Council to take up a temporary post of Tree Protection Officer which involved reviewing old area tree preservation orders and identifying those trees which were considered worthy of protection under new specific orders. He also streamlined the council procedure for making new tree preservation orders, cutting the time from making to serving from up to 2 weeks to within 2 hours.

In 2008 Robert moved to Hart District Council, Hampshire to take up the role of Tree Officer within the planning department. This role included determining works trees applications, commenting on planning proposals, liaising with the public and providing arboricultural advice to other departments within the Council.

Between 2014 and 2016 Robert took up the role of Tree Officer at Elmbridge Borough Council, Surrey, once again carrying out tasks such as determining works trees applications, commenting on planning proposals and liaising with the public. While at Elmbridge Borough Council he passed the Arboricultural Association's Professional Tree Inspection course.

Robert is a professional member of the Arboricultural Association.