

BS 5837:2012 Arboricultural Impact Assessment Report (AIA)

Client:	Duncan Collard
Site address:	8 Ridgeway, East Grinstead RH19 4BW
Report reference:	#Ref-160
Surveyor:	Ian Dalton TechArborA
Author:	Ian Dalton TechArborA
Date:	4th March 2026

Table of contents

1.0	Executive Summary	2
2.0	Introduction	4
3.0	The Site.....	4
4.0	Legal Status of the Trees	5
5.0	Arboricultural Impact Assessment	6
5.1	General.....	6
5.2	Tree Removals & Pruning.....	6
5.3	Buildability: Access and Logistics	6
5.4	Specific Arboricultural Impacts	7
5.5	Tree Protection Measures	7
6.0	Conclusions and Recommendations	8
6.1	Summary of Impact.....	8
6.2	Technical Viability	8
6.3	Overall Conclusion	8
Appendix 1:	Key to Tree Survey Schedule	9
Appendix 2:	Tree Survey Schedule	11
Appendix 3:	Tree Work Schedule	13
Appendix 4:	Tree Protection Plan (TPP)	14
Appendix 5:	Tree Protection Barriers & Ground Protection Design	15
Appendix 6:	Methods of Work in Close Proximity to Trees	23
Appendix 7:	Report Caveats, Tree Protection and References	27

Note: Click or tap on the section titles above to navigate directly to the corresponding page.

1.0 Executive Summary

1.1.1 Canopy IQ was commissioned to undertake a BS 5837:2012 tree survey at 8 Ridgeway, East Grinstead RH19 4BW on 2nd March 2026 and to prepare this Arboricultural Impact Assessment to support a planning application for the proposed development.

1.1.2 The proposal comprises demolition of the existing garage and construction of an extension to meet the property boundary, adjacent to off-site tree T1 (Sweet gum, Category B1).

1.1.3 No tree removals are proposed, and all surveyed trees, groups and hedges are to be retained, including the higher quality tree stock, with the Category B tree (T1) retained. No pruning is proposed.

1.1.4 The development has been designed to avoid below-ground impacts; a minor incursion into the Root Protection Area of T1 of less than 9% is identified. To mitigate potential impacts, a 'no-dig' construction solution will be used for the extension where it interfaces with the rooting environment, to avoid root severance and reduce the risk of soil compaction.

1.1.5 No demolition, excavation, new surfacing, or service installation is proposed within any RPA. No mitigation planting is proposed as there are no tree removals and no loss of tree cover.

1.1.6 Existing boundary fencing will be retained to protect T1 and hedge H2, and the remaining trees and groups will be safeguarded by site logistics controls that prevent access to the adjacent verge. Subject to these measures, the scheme is considered arboriculturally viable.

1.2 Table 1: Summary of Arboricultural Impacts

1.2.1 The table below provides a concise summary of all identified arboricultural impacts associated with the proposed development:

Impact Type	Affected Trees/Groups	Notes
RPA incursions	T1 (Category B1, off-site)	Minor incursion into the RPA of T1 of less than 9% associated with the proposed extension. Mitigation will be provided via a no-dig construction solution to avoid root severance and reduce soil compaction risk, with retained boundary fencing and access restrictions supporting the Construction Exclusion Zone.

1.2.2 A total of 4 individual trees, 1 tree group, 1 hedge, and 1 shrub/scrub area were recorded during the survey. These items have been categorised in accordance with BS 5837:2012, as summarised in Table 2 below.

1.3 Table 2: Summary of Tree Survey Categorisation

	<i>A</i>	<i>B</i>	<i>C</i>	<i>U</i>	<i>TOTAL</i>
<i>Trees</i>	0	1	3	0	4
<i>Groups</i>	0	0	1	0	1
<i>Hedges</i>	0	0	1	0	1
<i>Woodlands</i>	0	0	0	0	0
<i>Shrub/Scrub areas</i>	0	0	1	0	1
<i>TOTAL</i>	0	1	6	0	7

1.3.1 Full details for each item, including dimensions, condition, and specific recommendations, can be found in the [Tree Schedule \(Appendix 2\)](#).

2.0 Introduction

2.1 Scope and purpose

- 2.1.1** This report sets out the findings of the BS 5837:2012 tree survey and evaluates the direct and indirect effects of the proposed development on the existing trees, in accordance with section 5.4 of the Standard. It also provides a strategic framework for protecting retained trees.

3.0 The Site

3.1 Site Location and Context

- 3.1.1** The site is located at 8 Ridgeway, East Grinstead RH19 4BW. A plan showing the site location and survey boundary is provided below.

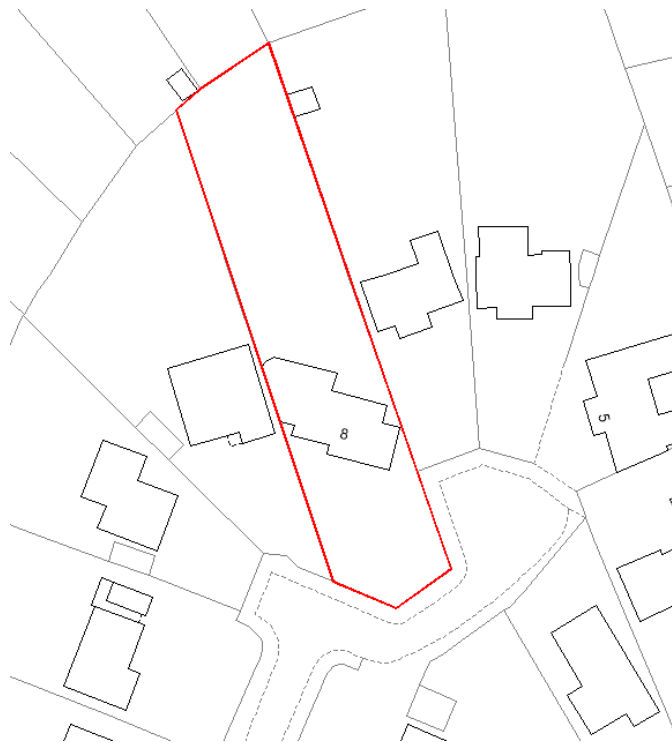


Figure 1 Site plan

4.0 Legal Status of the Trees

Protection Type	Yes/No
Tree Preservation Order (TPO)	No
Conservation Area	No

4.1.1 A search was conducted on 04/03/26 using Mid Sussex District Council’s interactive mapping system. The image below provides a snapshot of the relevant map, showing the extent of any Tree Preservation Orders (TPOs) and Conservation Areas affecting the site.

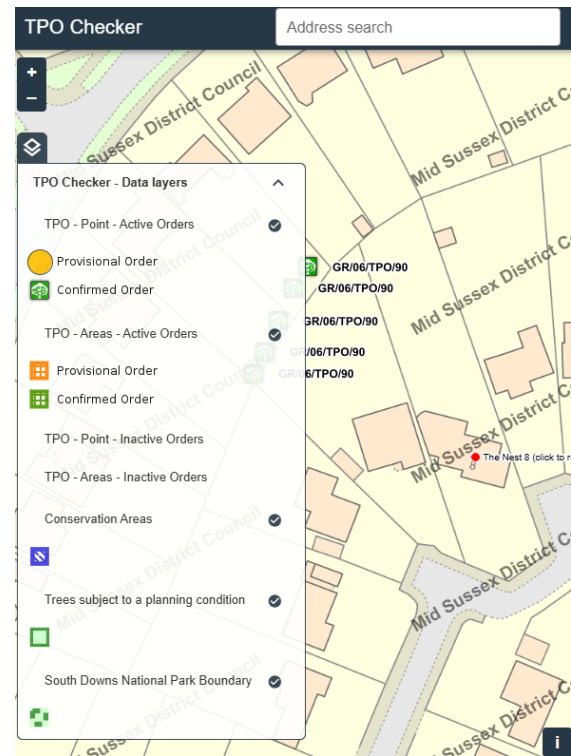


Figure 2 Snapshot from Mid Sussex District Council’s Interactive map showing TPOs and Conservation Areas

- 4.1.2** See [Appendix 7](#) for more information on the statutory protection of trees.
- 4.1.3** When work on protected trees is necessary to implement full planning permission, separate consent may not be required. Otherwise, written consent (TPO) or a Section 211 notice (for Conservation Areas) will be needed, subject to the relevant exemptions and time limits.

5.0 Arboricultural Impact Assessment

5.1 General

- 5.1.1** This section evaluates the direct and indirect impacts of the proposed development on existing trees, in accordance with BS 5837:2012. It has informed the recommendations for tree removal, pruning, protection, and mitigation set out in this report.
- 5.1.2** The assessment should be read alongside the [Tree Survey Schedule at Appendix 2](#), the [Tree Work Schedule at Appendix 3](#) and the [Tree Protection Plan at Appendix 4](#).
- 5.1.3** The principal arboricultural constraint is off-site tree T1 (Sweet gum, Category B1) located adjacent to the proposed extension. The design philosophy is to retain all surveyed trees, groups and hedges, and to minimise impacts through avoidance where practicable and proportionate mitigation where minor incursions cannot be fully avoided.
- 5.1.4** No tree removals and no pruning are proposed. A minor incursion into the Root Protection Area of T1 of less than 9% is identified, and a no-dig construction approach is proposed for the extension where it interfaces with the rooting environment, supported by retention of existing boundary fencing and access restrictions to the adjacent verge.

5.2 Tree Removals & Pruning

- 5.2.1** No trees are proposed for removal to facilitate the development.
- 5.2.2** No facilitation pruning of retained trees is currently proposed. Should any unforeseen conflicts arise during implementation, any works would be subject to review and, where necessary, undertaken in accordance with BS 3998:2010.

5.3 Buildability: Access and Logistics

- 5.3.1** Access to the works will be via the existing driveway. Clearance for tall loads will be maintained, and should any unforeseen canopy conflicts arise along the delivery route, these will be addressed through minor, targeted pruning in accordance with BS 3998:2010, following agreement with the project team, in line with BS 5837:2012 Clause 6.2.4.1.
Site storage, including any welfare facilities, materials, plant and fuel,

will be located outside all RPAs of retained trees, consistent with BS 5837:2012 Clause 6.2.4.3. No skips are to be stored on site, with skips kept on the highway, and access for plant and large vehicles along the driveway strictly limited.

- 5.3.2** No scaffolding is currently proposed within any RPA. If scaffolding or temporary working areas are subsequently required near retained trees, a defined set-back barrier will be installed to protect the CEZ, and appropriate ground protection will be used where there is any risk of compaction, to accord with BS 5837:2012.

5.4 Specific Arboricultural Impacts

- 5.4.1** No demolition, excavation, new surfacing, or service installation is proposed within any RPA. A minor incursion into the Root Protection Area of off-site tree T1 of less than 9% is identified in association with the proposed extension.
- 5.4.2** To mitigate potential impacts, the extension will be constructed using a no-dig solution where it interfaces with the rooting environment, to avoid root severance and reduce the risk of soil compaction.
- 5.4.3** Subject to implementation of the protection and logistics measures set out in this report, no significant adverse arboricultural impacts are anticipated.

5.5 Tree Protection Measures

- 5.5.1** Prior to any works commencing, a tree protection strategy will be implemented to define the Construction Exclusion Zone (CEZ). Existing boundary fencing will be retained to protect off-site tree T1 and hedge H2, and will form the CEZ boundary in these locations.
- 5.5.2** To ensure the adjacent verge containing the remaining trees and groups is not accessed during construction, access restrictions will be implemented through site management controls, and where required to physically prevent encroachment, temporary welded mesh panels on a scaffold framework, in accordance with BS 5837:2012 (Figure 3), will be installed at the driveway edge to demarcate the no-access zone.
- 5.5.3** No temporary ground protection is required as all construction access is located outside the RPAs or on retained hard surfacing.
- 5.5.4** Weatherproof signage (e.g., "CONSTRUCTION EXCLUSION ZONE - NO ACCESS") must be attached to the fencing at 5-metre intervals. An example of a suitable sign is provided in [Appendix 6](#).
- 5.5.5** Technical specifications for Tree Protection Fencing (TPF) and ground protection are provided in [Appendix 5](#).

6.0 Conclusions and Recommendations

6.1 Summary of Impact

- 6.1.1** The proposed development has been designed to minimise arboricultural impacts. No trees, groups or hedges are proposed for removal and no pruning is proposed, therefore there is no direct loss of tree cover or amenity from felling or canopy works. The principal arboricultural constraint is off-site tree T1 (Category B1), which is retained. A minor incursion into the Root Protection Area of T1 of less than 9% is identified, and this will be mitigated through a no-dig construction solution for the extension where it interfaces with the rooting environment, supported by retention of existing boundary fencing and controlled site logistics that prevent access to the adjacent verge. Overall, the scheme retains the higher quality tree stock and is arboriculturally acceptable.

6.2 Technical Viability

- 6.2.1** The assessment has demonstrated that the retained trees can be successfully protected during development. Through the use of Construction Exclusion Zones, retention of existing boundary fencing, controlled site logistics preventing access to the adjacent verge, and a no-dig construction approach where the extension interfaces with the rooting environment of T1, the proposal avoids significant damage to root systems and preserves the soil environment.

6.3 Overall Conclusion

- 6.3.1** Provided that the tree protection measures specified in this report and the detailed [Tree Protection Plan \(Appendix 4\)](#) are strictly adhered to, the development is considered arboriculturally sound. The proposal allows for the harmonious integration of the new build with the existing tree stock, in accordance with the principles of BS 5837:2012.

Ian Dalton TechArborA

Ian Dalton

Principal Arboricultural Consultant
Canopy IQ Ltd



Appendix 1: Key to Tree Survey Schedule

Tree no. (with Google map link) – The individual identification reference numbers for the tree. For example:

✚ **T1** – Individual tree

✚ **G1** – Group of trees

This field also includes a link to the tree's location on Google Maps.

Species – The species of the tree, listed by scientific name, with the accompanying common name in parentheses.

Structural Condition – An assessment of the tree's structural integrity, noting any physical defects or signs of instability, categorised as follows:

✚ **Stable** – No significant structural defects; stable and unlikely to fail under normal conditions.

✚ **Manageable** - Defects are present but can likely be corrected through interventions like pruning.

✚ **Irremediable** - Defects are significant and cannot be corrected, compromising the tree's stability over time.

✚ **Critical** - Structure is critically weak, posing an immediate hazard and unsuitable for retention.

Physiological Condition – Observations on the tree's health and vitality, categorised as follows:

Attributes – Characteristics or features of the tree, such as:

✚ **Height** – Total height from ground to top of the crown, measured in metres.

✚ **Stem diameter** – Diameter of the main stem at 1.3 metres above ground, in millimetres.

✚ **Spread** – The horizontal reach of the crown measured from the trunk to the edge of the foliage, taken from the four cardinal points (north, south, east, and west).

✚ **Crown clearance** – Height above ground to the lowest part of the crown, important for clearance assessments.

✚ **Lowest branch** – Height of the lowest branch above ground, noting its orientation.

✚ **Life stage** – An estimate of the tree's age based on visual indicators; considered provisional unless supported by additional information, such as historical records or local knowledge.

✚ **Remaining contribution in years** - Estimated remaining lifespan based on health and structure, indicating future landscape value.

General Observations – General comments on the tree's overall condition, noting any physiological or structural issues, health, vitality, and form. Observations may include any visible defects, pests, diseases, or disorders affecting the tree.

Retention Category – The recommended category for tree retention is based on BS5837 criteria, which indicates the tree's suitability for retention in the context of site development or management. The categories are as follows:

✚ **Category A (High Quality)** – Trees of high value due to their age, size, condition, or special significance (e.g., historical, ecological, or landscape importance). They have a long-anticipated lifespan and contribute significantly to the landscape. Retention is strongly recommended wherever possible.

✚ **Category B (Moderate Quality)** – Trees of moderate value, in fair condition with some defects or younger age. They make a positive contribution to the landscape but are not as essential as Category A trees. Retention is desirable if it does not hinder site development.

✚ **Category C (Low Quality)** – Trees of lower value due to poor health, limited longevity, or minor landscape significance. Often younger or smaller, they may have defects that limit their lifespan. Retention is optional, and they can be removed if needed for site development.

✚ **Category U (Unsuitable for Retention)** – Trees in poor condition with serious structural defects or health issues, unlikely to survive beyond 10 years. These trees are not recommended for retention due to safety concerns and limited future value.

Lowest Branch – The height of the lowest branch above ground level, noted to aid in assessing tree clearance for access or visibility.

Root Protection Area (RPA) – The calculated area surrounding a tree is required to protect its root system and ensure its health, as per BS5837 guidelines.

Appendix 2: Tree Survey Schedule

Site address: 8 Ridgeway, East Grinstead RH19 4BW
Client: Duncan Collard

Report ref: #Ref-160
Survey date: 2nd March 2026

Tree no. (with Google map link)	Species	Structural Condition	Physiological Condition	No. of stems	Attributes	General Observations	Retention Category	RPA	Photo
T1	Sweet gum (<i>Liquidambar styraciflua</i>)	Stable	Normal	1	Height (m): 9 Stem Diam(mm): 250 Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 1 Life Stage: Young Rem. Contrib.: At least 20 Years	Off-site tree – measurements estimated. Healthy tree with no significant defects visible.	B1	Radius: 3.0m. Area: 28 sq m.	
H2	Laurel cherry (<i>Prunus laurocerasus</i>)	Stable	Normal	1	Height (m): 4 Stem Diam(mm): 50 Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 2 Life Stage: Young Rem. Contrib.: At least 10 years	Clipped boundary hedge.	C2	Radius: 0.6m. Area: 15 sq m.	
S3	Mixed species (<i>Mixed species</i>)	Stable	Normal	1	Height (m): 4 Stem Diam(mm): 100 Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 0 Life Stage: Early mature Rem. Contrib.: At least 10 years	Group of young trees and shrubs acting as a boundary screen.	C2	Area: 141 sq m.	
T4	Japanese maple (<i>Acer palmatum</i>)	Stable	Normal	3	Height (m): 3 3 stems (mm): 50, 100, 120 Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 1 Life Stage: Young Rem. Contrib.: At least 10 years	Young healthy tree.	C3	Radius: 2.0m. Area: 13 sq m.	

Site address: 8 Ridgeway, East Grinstead RH19 4BW
Client: Duncan Collard

Report ref: #Ref-160
Survey date: 2nd March 2026

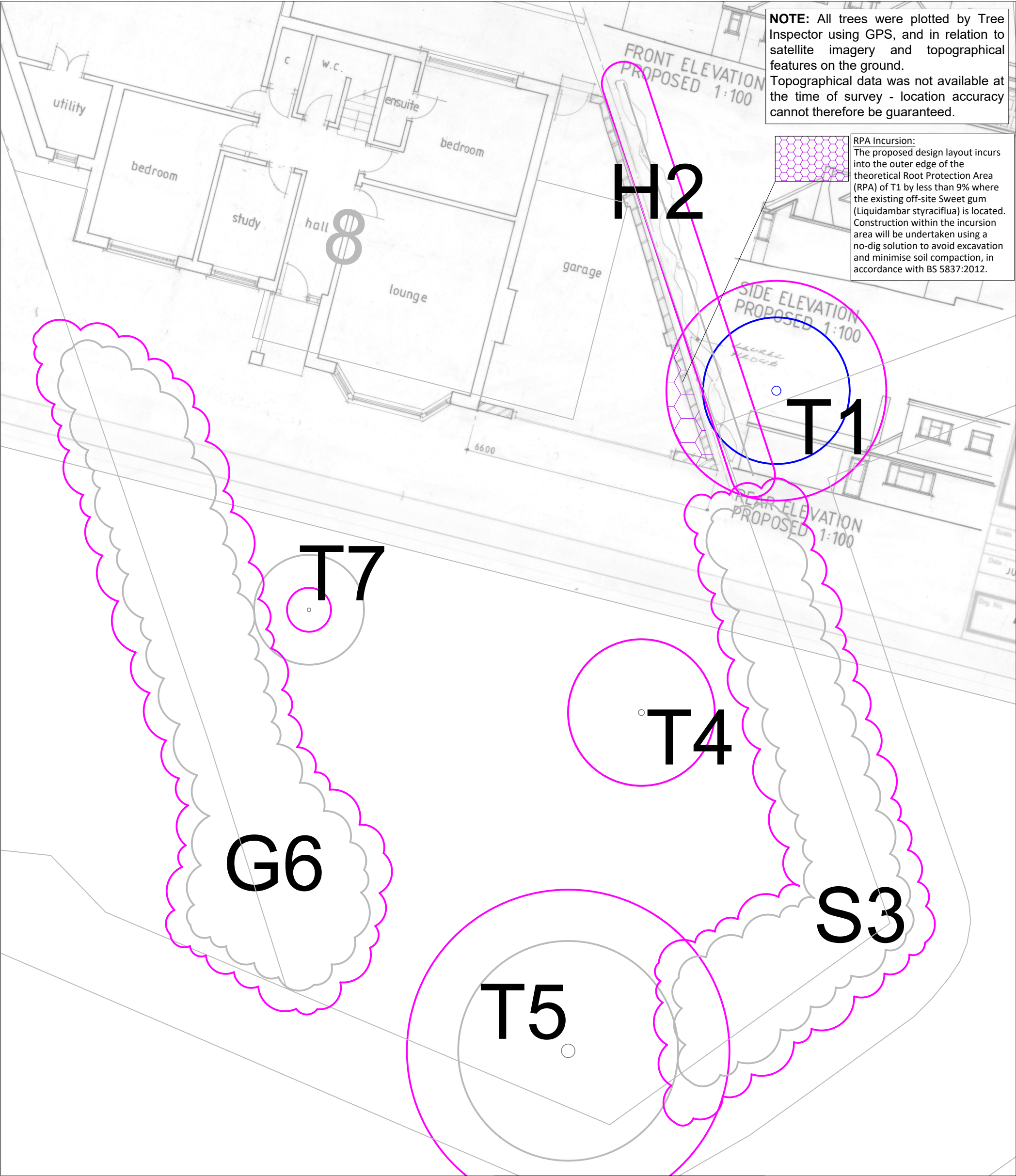
Tree no. (with Google map link)	Species	Structural Condition	Physiological Condition	No. of stems	Attributes	General Observations	Retention Category	RPA	Photo
T5	Willow (<i>Salix sp.</i>)	Stable	Normal	1	Height (m): 8 Stem Diam(mm): 370 Spread (m): 3N, 3E, 3S, 3W Crown Clearance (m): 2 Life Stage: Early mature Rem. Contrib.: At least 10 years	Recently, the crown was reduced, but it is recovering well. No significant defects visible.	C3	Radius: 4.4m. Area: 61 sq m.	
G6	Mixed species (<i>Mixed species</i>)	Stable	Normal	1	Height (m): 4 Stem Diam(mm): 50 Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 0 Life Stage: Young Rem. Contrib.: At least 10 years	Group consisting of one Lawsons Cyprus, a Bay tree and a tightly clipped Conifer hedge.	C2	Area: 75 sq m.	
T7	Japanese maple (<i>Acer palmatum</i>)	Stable	Normal	1	Height (m): 3 Stem Diam(mm): 50 Spread (m): 1.5N, 1.5E, 1.5S, 1.5W Crown Clearance (m): 1 Life Stage: Young Rem. Contrib.: At least 10 years	Young healthy tree.	C3	Radius: 0.6m. Area: 1 sq m.	

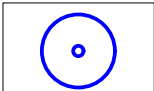
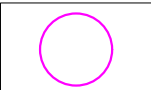
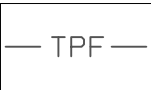
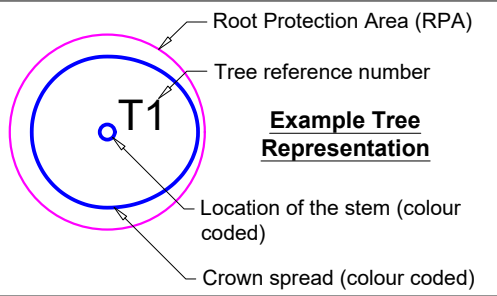
Appendix 3: Tree Work Schedule

- 1.1.1** No tree removals or pruning works are currently proposed to facilitate the development.

Appendix 4: Tree Protection Plan (TPP)





Key  Category A - Trees of high quality with an estimated remaining life expectancy of at least 40 years  Category B - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years  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  Category U - Trees unsuitable for retention 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  Group of trees (G) / Hedgerows (H) / Woodlands (W) / Shrub (S) Colour coded according to categories above  Root Protection Area (RPA)  Group of trees (G) / Hedgerows (H) / Woodlands (W) / Shrub (S) to be removed/partially removed.  Trees to be removed  Tree Protective Fencing (TPF) Note: TPF alignment is indicative. Minor on-site adjustments to accommodate ground conditions and access are permitted, provided the RPA remains fully protected. NOTE: TO BE PRINTED IN COLOUR AT A3 SIZE   Example Tree Representation Site 8 Ridgeway Client Duncan Collard Drawing title Tree Protection Plan for Arboricultural Impact Assessment Drawing no. TPP-AIA/#Ref-160/03-03-26  Revision ~ Scale 1/XXXX@A3 Drawn by ID Date 03-03-26	
--	--

Appendix 5: Tree Protection Barriers & Ground Protection Design

2.0 Purpose and Function

- 2.1.1** Tree protection barriers are to be erected prior to any site clearance, demolition or construction activity. Their purpose is to prevent physical damage to retained trees and to preserve soil structure within the Root Protection Area (RPA) throughout the project duration.
- 2.1.2** The barrier type and positioning must be proportionate to the nature and scale of the adjacent works, in accordance with BS 5837:2012, Clause 6.2.2.

2.2 Specification

- 2.2.1** Unless otherwise agreed in writing with the Local Planning Authority (LPA), the protective barrier shall conform to the default specification illustrated in BS 5837:2012 [Figure 3](#):

-  Height: Minimum 2.0 m.
-  Framework: Scaffold poles arranged both vertically and horizontally, with vertical poles spaced at no more than 3.0 m centres, braced to resist impact.
-  Infill: Weldmesh panels securely attached to the scaffold framework.
-  Foundations: Scaffold poles driven firmly into the ground or mounted on fixed base plates where underground constraints apply.
-  Alternative Systems: Where site conditions or risk assessments indicate a low likelihood of incursion, lightweight systems such as 'Heras' panels on concrete or rubber feet may be used only with LPA agreement. Such panels must be secured with a minimum of two anti-tamper couplers per panel and stabilised with additional support struts.
-  Signage: Weatherproof notices stating "TREE PROTECTION ZONE – KEEP OUT" shall be affixed to the fencing at 5 m intervals, facing the working area ([Click here](#)).

2.3 Installation and Maintenance

- 2.3.1** Barriers must be installed in the locations shown on the Tree Protection Plan prior to the commencement of works. They are to remain in place, intact, and fit for purpose for the full duration of the construction phase, unless agreed otherwise in writing with the project arboriculturist and the LPA. Any damage to the fencing must be rectified immediately.

2.4 Location

- 2.4.1** The protective barriers will be aligned to enclose the full extent of each RPA, thereby defining the Construction Exclusion Zone (CEZ). The CEZ is a no-entry zone for all personnel, vehicles, plant and materials, except where specific access is authorised in accordance with an approved Arboricultural Method Statement (AMS).

Figure 3 Example of welded mesh barriers in use

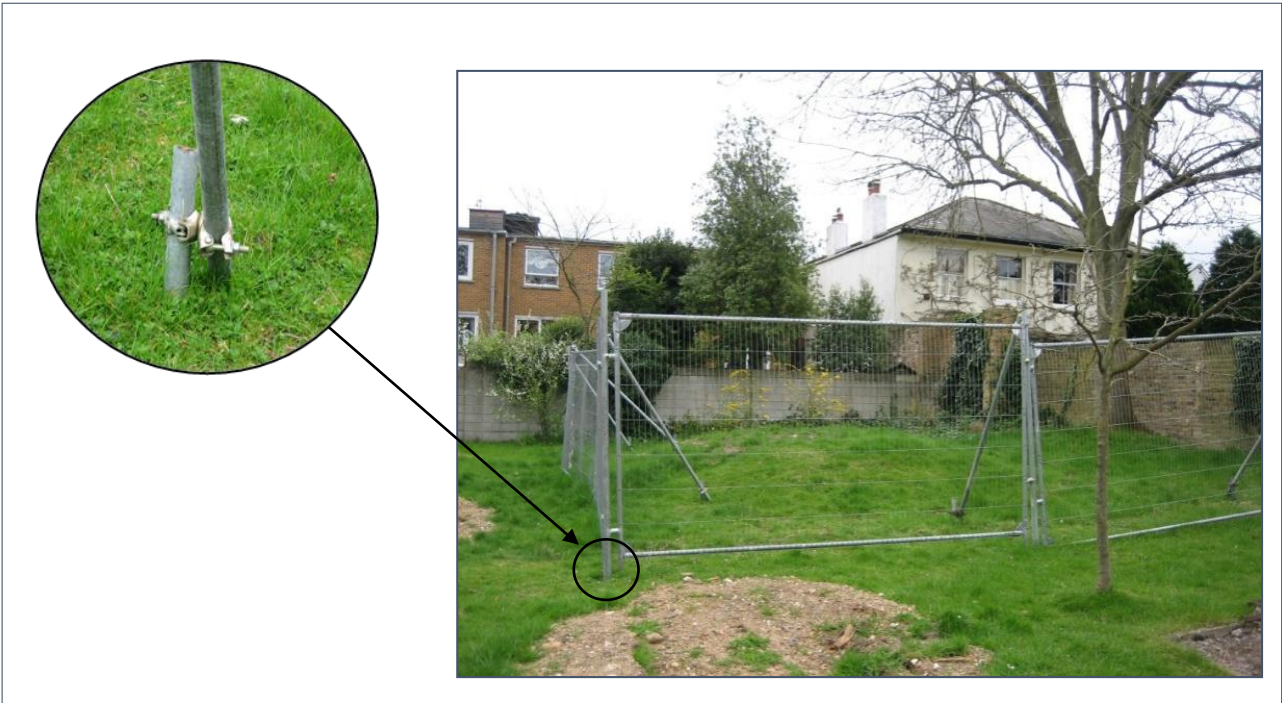


Figure 4 Default specification or protective barrier

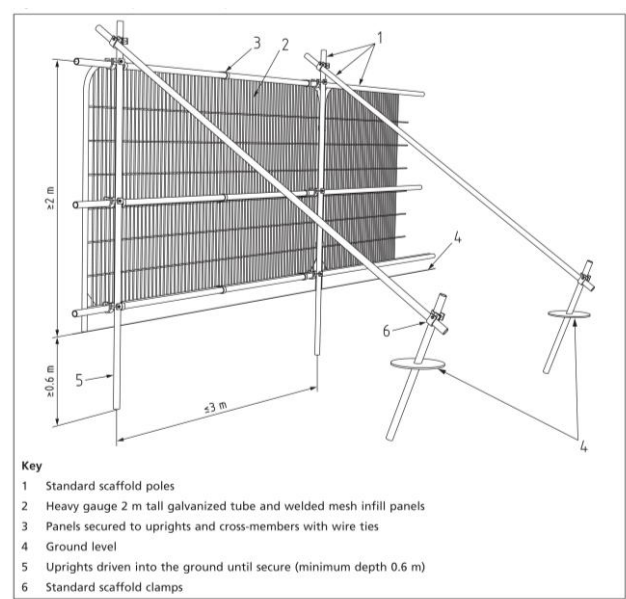
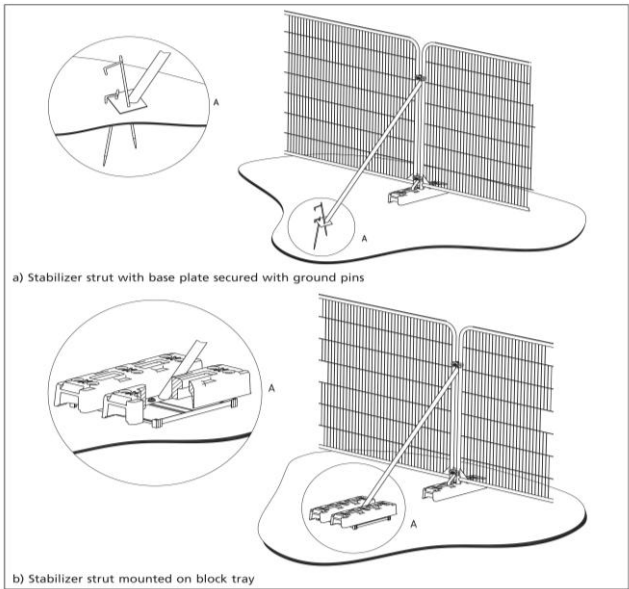


Figure 5 Examples of above-ground stabilising systems



Figures above are reproduced with the permission of the British Standards Institute.



TREE PROTECTION AREA KEEP OUT

PROTECTED AREA. NO ENTRY, STORAGE OF MATERIALS, EXCAVATION OR USE OF PLANT OR MACHINERY IS PERMITTED WITHIN THIS AREA WITHOUT THE PRIOR WRITTEN APPROVAL OF THE PROJECT ARBOROCULTURALIST. UNAUTHORISED DAMAGE TO TREES MAY LEAD TO ENFORCEMENT ACTION AND POSSIBLE PROSECUTION.

**PROJECT ARBORICULTURALIST: CANOPY IQ LTD
TEL: 07738739795 EMAIL: ADMIN@CANOPYIQ.CO.UK**

3.0 Box Hoarding

3.1 Purpose

- 3.1.1** Where it is not feasible to erect protective fencing due to space constraints or site layout, the trunks of retained trees within or adjacent to the working area shall be safeguarded with box hoarding. This method provides robust physical protection against accidental impact from machinery, materials handling, or other construction activities.

3.2 Specification

- 3.2.1** The hoarding shall consist of timber or exterior-grade plywood panels fixed to a rigid supporting frame. The frame must be braced and anchored to prevent movement, ensuring the panels remain in close proximity to (but not in direct contact with) the trunk.

-  **Panel Material:** Minimum 18 mm exterior-grade plyboard or equivalent.
-  **Frame Construction:** Treated timber or other durable material, designed to resist displacement or collapse.
-  **Clearance:** A minimum gap of 25 mm should be maintained between the trunk and the hoarding to prevent abrasion to the bark.
-  **Height:** Hoarding should extend to a minimum height of 2.0 m or to the first significant branch union, whichever is lower.

3.3 Installation and Duration

- 3.3.1** Box hoarding must be installed prior to the commencement of works in the vicinity of the tree and maintained in a serviceable condition for the duration of the activity that necessitated its installation. Removal should only take place when the risk of damage has passed and with the agreement of the project arboriculturist.



Figure 6 Example of Box Hoarding

4.0 Ground protection

- 4.1.1** Where temporary construction access or working space is required within a Root Protection Area (RPA), the soil structure must be protected from compaction. The appropriate specification for ground protection will depend on the load it is expected to carry.
- 4.1.2** For pedestrian traffic only: A single thickness of scaffold boards placed on top of a compression-resistant layer (e.g., a 100 mm depth of woodchip) laid onto a geotextile membrane.
- 4.1.3** For light plant and pedestrian-operated machinery (up to 2 tonnes): Proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g., a 150 mm depth of woodchip) on a geotextile membrane.
- 4.1.4** For heavy vehicles (exceeding 2 tonnes): A specific engineered solution designed to distribute the load without compressing the soil beneath. This typically involves proprietary systems of interlocking plastic or metal plates (e.g., Trakmats or similar) or cellular confinement systems. The precise specification will be confirmed in a detailed Arboricultural Method Statement.



Figure 6 First example of proprietary ground protection panels



Figure 7 Second example of proprietary ground protection panels

Appendix 6: Methods of Work in Close Proximity to Trees

5.0 Working Within Root Protection Areas (RPAs)

- 5.1.1** All activities within RPAs must follow specific working practices to minimise the risk of root damage. Excavation and construction in these areas should be avoided wherever possible. Where such work is unavoidable, only hand tools or low-impact techniques such as air spades shall be used to expose soil, ensuring roots remain undamaged.

5.2 Removal of Hard Surfaces Within Construction Exclusion Zones (CEZs)

- 5.2.1** The dismantling or removal of existing hard surfaces (e.g., paving slabs, tarmac, brickwork, or walls) within CEZs shall be undertaken with care to protect the underlying root system. The use of heavy machinery within these zones is prohibited due to the risk of soil compaction and root injury.
- 5.2.2** Where surface breaking is required, pneumatic drills or small hydraulic breakers may be employed. Where mechanical assistance is necessary, a mini-excavator may be used provided its operating reach does not pass beneath the canopy spread of retained trees.
- 5.2.3** Exposed roots must be immediately covered with topsoil, damp hessian, or sharp sand to prevent desiccation during works.

5.3 Service Installation Within RPAs

- 5.3.1** Service routes (e.g., water, gas, electricity, drainage) must be designed to avoid RPAs wherever practicable. If installation within an RPA is unavoidable, trenching shall be carried out by hand or using an air spade to minimise disturbance.
- 5.3.2** Roots with a diameter exceeding 25 mm must not be severed without the direction of the project arboriculturist. Roots of smaller diameter should be pruned back cleanly with a sharp tool to minimise the potential for infection or decay.

5.4 Installing New Hard Surfaces Within RPAs

- 5.4.1** The construction of hard surfaces within RPAs shall follow a 'no-dig' approach, with the new surface laid above the existing soil grade rather than excavated into it.
- 5.4.2** The surface should be constructed from porous materials that permit the infiltration of air and water to the underlying root system, in line with the recommendations of BS 5837:2012.

5.5 Fencing in RPAs

- 5.5.1** When installing fence posts within RPAs, the holes must be dug by hand, and if significant roots are encountered, the post locations should be adjusted. If small roots are found, sharp, clean cuts should be made. Special care is needed to ensure that wet cement does not come into contact with tree roots.

5.6 Landscaping within RPAs

- 5.6.1** Landscaping work within CEZs requires careful planning to prevent tree damage. Protective fencing should remain in place as long as possible, and where removed, clear markings should be made to delineate the protected zone. Any digging or soil preparation within CEZs must be done by hand, and any topsoil additions should be limited to no more than 100 mm in depth.

5.7 Examples of a Cellular Confinement System

Figure 8 Cellular Confinement System - Transition detail (Ramp)

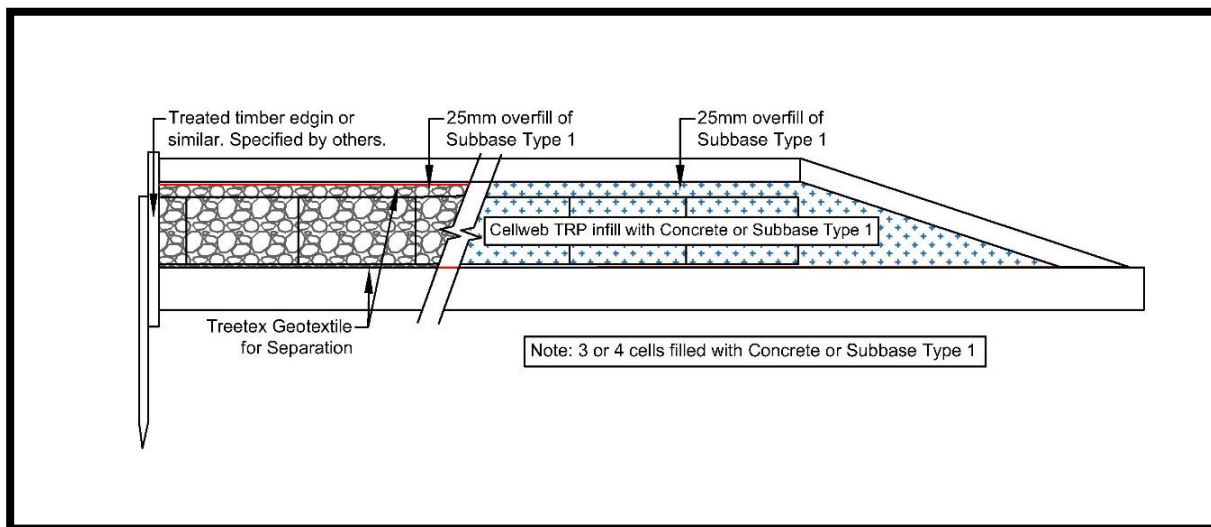


Figure 9 Cellular Confinement System - Transition detail (Flat)

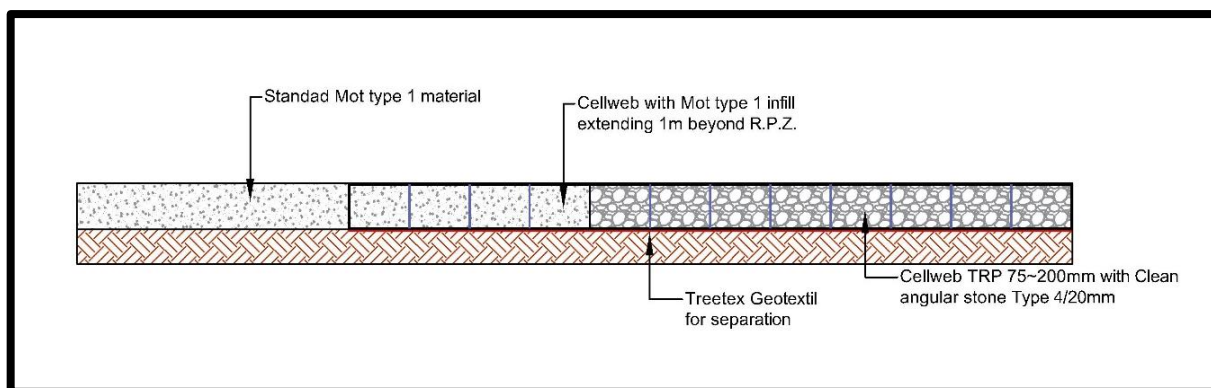


Figure 10 Cellular Confinement System - Kerb Edging

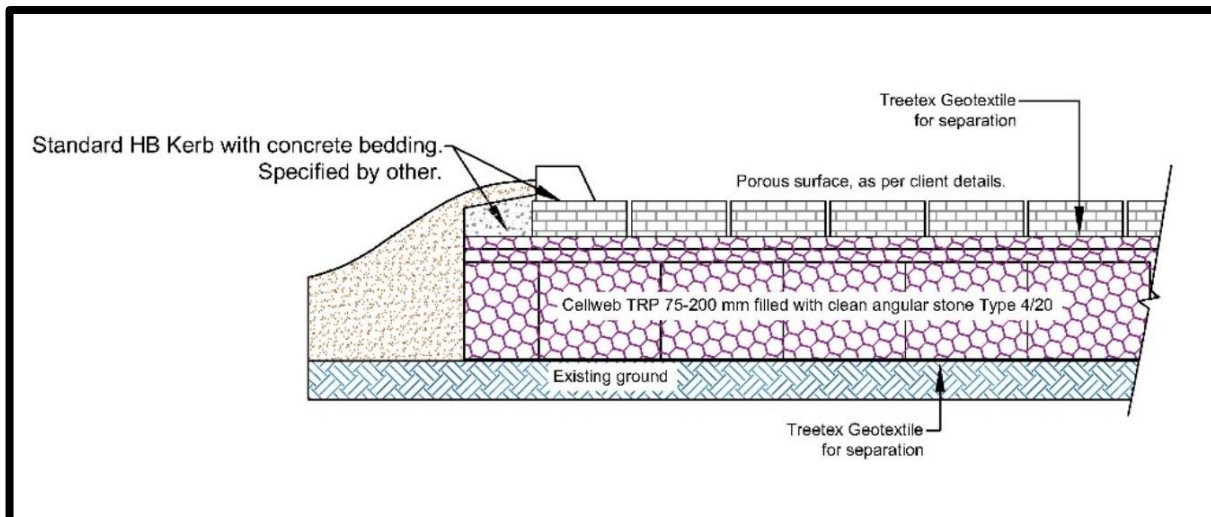


Figure 11 Cellular Confinement System - Timber Edging

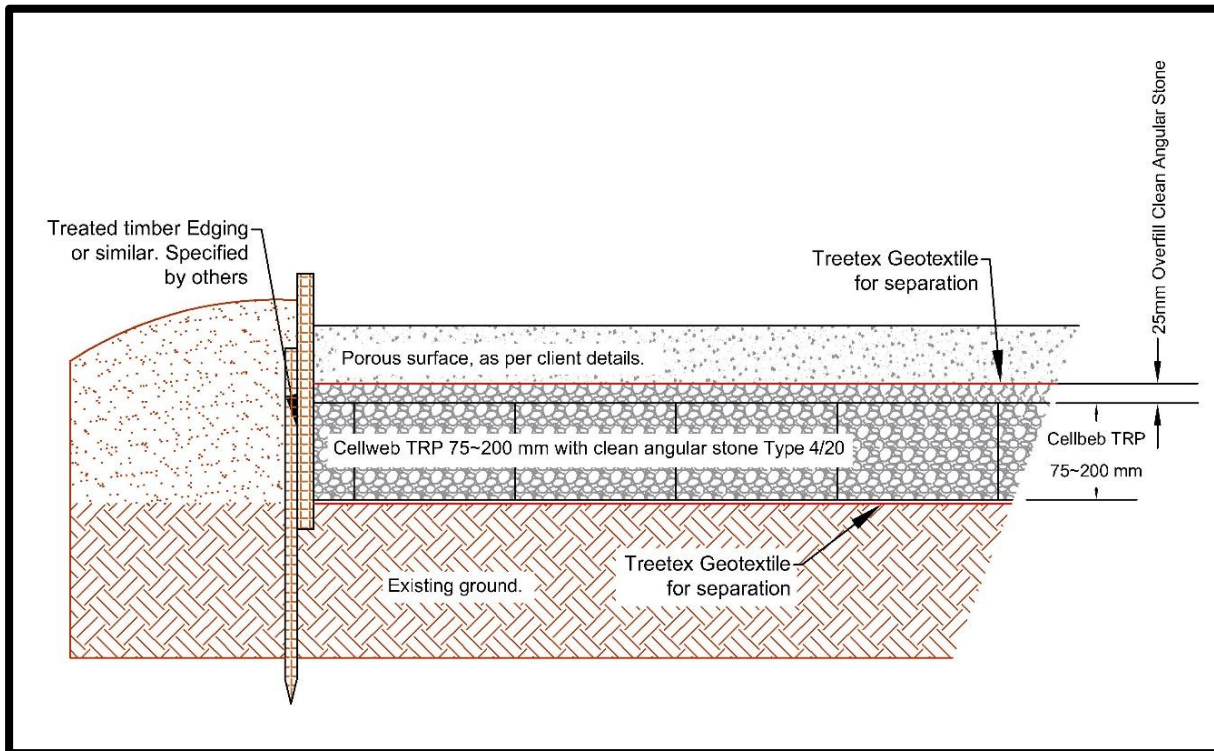


Figure 12 Examples of Cellweb filling with angular stone



Appendix 7: Report Caveats, Tree Protection and References

1.0 Guidance on Tree Preservation Orders and Conservation Areas

- 1.1.1** This appendix provides general guidance on the primary forms of statutory tree protection in the UK: Tree Preservation Orders (TPOs) and Conservation Areas. The information contained within our report does not override the legal duties of the tree owner.
- 1.1.2** It is the tree owner's responsibility to ascertain the legal status of any trees before authorising or undertaking work. We recommend contacting the Local Planning Authority (LPA) to confirm if trees on your property are subject to any restrictions. Canopy IQ can assist with this process and any subsequent applications or notifications if required.

1.2 Tree Preservation Orders (TPOs)

- 1.2.1** A **Tree Preservation Order (TPO)** is a legal order made by an LPA to protect specific trees, groups of trees, or woodlands in the interests of public amenity. A TPO makes it a criminal offence to carry out any of the following works without the LPA's formal consent:
-  Cutting down
 -  Topping
 -  Lopping
 -  Uprooting
 -  Wilful damage
 -  Wilful destruction
- 1.2.2** **Applying for Consent** An application must be submitted to the LPA to obtain consent for proposed works to a protected tree. The LPA typically has up to eight weeks to issue a decision. Consent may be granted with conditions, or it may be refused.
- 1.2.3** **Exemptions** There are some exemptions from the need to apply for consent. For instance, work may be undertaken without consent if a tree is dead or has become dangerous. However, it is strongly advised to provide the LPA with at least five working days' written notice of any proposed work on a dead or dangerous tree, except in a genuine emergency.

- 1.2.4 Penalties** Contravention of a TPO is a criminal offence and can lead to significant fines. If a tree is destroyed or removed without consent, the landowner is also under a duty to plant a replacement tree.

1.3 Trees in Conservation Areas

- 1.3.1 A Conservation Area** is an area of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance. Trees often make a significant contribution to the character of these areas and are therefore afforded protection.
- 1.3.2 How are Trees Protected?** Within a Conservation Area, it is a criminal offence to carry out work on any tree with a stem diameter greater than 75 mm, when measured at 1.5 metres from ground level, without first notifying the LPA.
- 1.3.3 The Notification Process** Anyone proposing to carry out work on a tree in a Conservation Area must give the LPA six weeks' written notice of their intention. This is often referred to as a 'Section 211 notice'. This provides the LPA with an opportunity to consider whether the tree should be protected by a TPO.
- 1.3.4** During the six-week period, the LPA can respond in one of two ways:
-  **Issue a new TPO:** If the LPA considers the tree to have significant amenity value, it may make a TPO to provide long-term protection. If this occurs, a formal application for consent will be required for any future works.
 -  **Take no action:** The LPA may decide not to make a TPO. In this case, once the six-week period has expired, the proposed work can be carried out.
- 1.3.5 Exemptions and Penalties** The exemptions and penalties for carrying out unauthorised work on trees within a Conservation Area are broadly the same as those for TPOs.

1.4 Summary and Important Advice

- 1.4.1** Before authorising any tree work, it is essential to contact the Local Planning Authority to confirm whether the trees are subject to a TPO or are located within a Conservation Area.
- 1.4.2** This simple check ensures that all work is conducted lawfully and avoids the risk of prosecution and substantial penalties. The legal status of trees can change, and this information should always be verified directly with the relevant council department.
- 1.4.3** Disclaimer: This guidance is for informational purposes only and does not constitute legal advice. It is a summary of complex regulations. Canopy IQ accepts no liability for any loss or damage arising from reliance on this

information without first confirming the legal status of the trees with the appropriate Local Planning Authority.

2.0 Report Caveats

2.1 Scope of the Survey

- 2.1.1** This report addresses only the arboricultural aspects of the site and is based on the observed condition of trees at the time of inspection. Trees are living, dynamic organisms and their health and structural integrity can change over time due to environmental conditions, pests, diseases, or mechanical damage. Regular reassessment is therefore recommended to identify any changes that could affect stability or safety.

2.2 Hedges and Dense Vegetation

- 2.2.1** Certain vegetation types, particularly dense hedgerows and unmanaged thickets, may comprise multiple species that are difficult to identify during a single site visit, especially outside the growing season. Where such limitations occur, they will be recorded in the tree survey schedule.

2.3 Maintenance of Vegetation

- 2.3.1** It is the responsibility of the client or site manager to ensure that any vegetation within or adjacent to the construction zone is appropriately assessed and maintained in accordance with current building and health & safety guidelines. A pre-commencement walkover inspection is advised to confirm that vegetation is suitably managed before works begin.

2.4 Arboricultural Involvement

- 2.4.1** An appropriately qualified arboricultural consultant should remain engaged throughout the development process to monitor the condition of retained trees, ensure protective measures are maintained, and advise on mitigation where necessary. Any amendments to the approved development design should be reviewed for potential arboricultural impacts before implementation.

2.5 Report Validity

- 2.5.1** This report is valid for a period of 12 months from the date of inspection. After this time, a further site visit is recommended to verify the continued accuracy of the findings and recommendations.

2.6 Copyright

- 2.6.1** © Canopy IQ Ltd 2026 All rights in this report are reserved. The content is intended for the exclusive use of the addressee and their agents for the specific site and purpose stated.
- 2.6.2** Where this report is submitted to a Local Planning Authority or other statutory body in connection with a planning or regulatory application, Canopy IQ Ltd grants that Authority and any relevant statutory consultees a non-exclusive, irrevocable, royalty free licence to use, reproduce and store this report and its accompanying drawings and plans for all reasonable purposes connected with the application, including consultation, decision making, enforcement, appeals and making the document available for public inspection.

3.0 References

- ✚ BS5837:2012 - Trees in Relation to Design, Demolition, and Construction – Recommendations.
- ✚ BS3998:2010 - Tree Work – Recommendations.
- ✚ Planning Practice Guidance - Tree Preservation Orders and Trees in Conservation Areas (gov.uk, 2014).
- ✚ The Party Wall etc. Act 1996: Explanatory Booklet (Department for Levelling Up, Housing and Communities).
- ✚ National Joint Utilities Group (NJUG): Volume 4, Issue 1 - Guidelines for the Planning, Installation, and Maintenance of Utility Apparatus in Proximity to Trees (2007).
- ✚ Lonsdale, D. (2013). Principles of Tree Hazard Assessment and Management. The Stationery Office.
- ✚ Mattheck, C., & Breloer, H. (1994). The Body Language of Trees. The Stationery Office.
- ✚ Schwarze, F. W. M. R., Engels, J., & Mattheck, C. (2012). Fungal Strategies of Wood Decay in Trees. Springer.
- ✚ British Geological Survey - Soilscape Viewer (landis.org.uk).