

**Arboricultural Impact Assessment
Arboricultural Method Statement
Tree Protection Plan**

8 DRUID STOKE AVENUE, BRISTOL, BS9 1DD



On behalf of

Kathy Ashby

Prepared by

Alister Rankine BSc (Forestry); Tech Cert (Arbor A), ProfArborA
Arboricultural Consultant

February 2024

Version No	Checked by	Date
1.0	SR	05/02/2024

- **Proposed Development:**

- Demolition of existing detached garage and construction of a single detached dwelling to the rear of 8 Druid Stoke Avenue
- Construction of a new garage attached to 8 Druid Stoke Avenue

- **Number of Trees and Hedges on Site: 8**

- **Number of Trees to be Removed: 0**

- **Tree Protection:**

- Tree protection barrier
- Tree protection site notices
- Temporary ground protection
- Special engineering methods

1.0 Introduction

1.1 Brief

This report is prepared by Hillside Trees Ltd on behalf of Kathy Ashby

1.2 Purpose of the Report

1.2.0 This report is intended to accompany a planning application relating to proposed development at 8 Druid Stoke Avenue. This document has been produced to demonstrate that the implications of the proposed development in relation to the arboricultural and landscape value of the trees on the site have been fully considered during the detailed design process.

1.2.1 This report and the accompanying information is supplied in order to:

- Identify trees to be retained and requiring protection during the site preparation and construction phase of the project.
- Present information regarding the location of protective barriers (Construction Exclusion Zones) and temporary ground protection on a Tree Protection Plan.
- Identify special engineering measures
- Provide a Detailed Arboricultural Method Statement for the recommended works related to trees to be retained during and after the development.

1.3 Documents Provided to Hillside Trees Ltd.

- Ashby topo
- Ashby site proposed

1.4 Tree Survey Methodology

1.4.1 A tree survey was undertaken on 9th January 2024 by an Arboricultural Consultant of Hillside Trees Ltd.

1.4.2 The survey took place from ground level aided by the Visual Tree Assessment method (Mattheck and Breloer, 1994).

1.4.3 This survey is not a tree risk assessment but takes into account any observed structural defects of the trees in order to inform conclusions with regard to their retentive worth.

1.5 Data Collection

1.5.1 Data collected includes designated tree number, tree species, height, number of stems, stem diameter, crown clearance (height of periphery of crown spread above ground level), branch spread (to N, S, E and W), age class, physiological condition, useful life expectancy, tree structural condition, site notes (where this has a bearing on the present or future health or structural condition of the tree), and tree category.

1.6 Presentation of the Data Collected

1.6.1 Data collected regarding individual trees and hedges are presented in the Tree Schedule table in Appendix A in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. The tree schedule also gives scientific names for all trees mentioned in the report.

1.6.2 The data significant to the proposed site layout is also presented on the Tree Protection Plan Drawing Number 240202-8DSA-TPP-NB contained within the Detailed Arboricultural Method Statement (Appendix B).

1.6.3 All other relevant data are presented within the main body of this report.

1.6.4 Trees have been allocated an individual tree number. This tree number is used to identify individual trees and hedges throughout this report, within the Tree Schedule and on all plans presented in the appendices of this report.

2.0 Arboricultural Constraints

An assessment of the trees surveyed presented in the Tree Schedule table in Appendix A, is also considered in the main body of the report below.

A Tree Constraints Plan has been produced showing the root protection areas (RPAs) for the individual trees identified in the Tree Schedule (Appendix A). This represents the minimum area in m² which ideally should be left undisturbed around each tree were it to be retained. The RPA has been calculated in accordance with Section 4.6 of BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.

The Tree Constraints Plan also shows a representation of the crown spread of each tree measured in four cardinal directions.

The preparation of the Tree Constraints Plan described above has assisted in the design of the site layout through presenting the above and below ground constraints posed to the development of the site by the trees present.

A search of Bristol City Council's online mapping service on 2nd February 2024 to enquire if any of the trees within the site are subject to Tree Preservation Orders or if the site falls within a Conservation Area confirmed that no part of the site relating to trees is currently under statutory control.

2.1 Trees Identified for Retention and Removal

The proposed development involves demolition of existing detached garage and construction of a single detached dwelling to the rear of 8 Druid Stoke Avenue and construction of a new garage attached to 8 Druid Stoke Avenue

All on site trees and hedges will be retained

2.2 Trees Outside Site Boundary

There are no trees outside the site boundary which are affected within the current proposals.

3.0 Tree Protection

The trees to be retained on site during and after development will require protection.

Protection measures based on the RPA's presented in the Arboricultural Impact Assessment Plan, will involve the erection of tree protection barriers as discussed in the Detailed Arboricultural Method Statement (Appendix B). Where the proposed site layout requires the breaching of these ideal areas, measures are recommended in order to minimise the damage to the roots and the root environment of the tree in question. Such measures acknowledge the fact that the extent, distribution and actual position of roots of a tree within the RPA are not known.

REFERENCES

Mattheck, C. and Breloer, H. (1995). *The Body Language of Trees: A handbook for failure analysis. Research for Amenity Trees 4*. HMSO, London, 240pp.

STANDARDS PUBLICATIONS

Trees in relation to design, demolition and construction – Recommendations (BS5837), British Standards Institution, London (2012)

Appendix A

Tree Schedule

Table 1 Cascade Chart taken from BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.

Appendix A - Tree Schedule

8 Druid Stoke Avenue, Bristol, BS9 1DD

Client:

Kathy Ashby

Surveyor:

Alister Rankine

Date of Survey:

9th January 2024



Tree Number	Single or Group	Common Name	Scientific Name	Height (m)	Calculated Stem Diameter (mm)	Number of Stems	Root Protection Area (Radius, m)	Crown Clearance (m)	N - Radius (m)	S - Radius (m)	E - Radius (m)	W - Radius (m)	Age Class	Physiological Condition	ULE (Years)	Tree Structural Condition and Site Notes.	BS Category
T1	S	Beech	<i>Fagus sylvatica</i>	13	775	4	9.30	3	5	5	4	5	M	G	40+	Good	B1/2
T2	S	Box	<i>Buxus sempervirens</i>	5	192	3	2.31	0	2	1	1	1	M	P	10-20	poor	C1
T3	S	Norway maple	<i>Acer platanoides</i>	8	190	1	2.28	4	3	2	2	2	SM	F	40+	Fair	C1
T4	S	Holm oak	<i>Quercus ilex</i>	9	200	1	2.40	4	2	2	2	2	M	F	40+	Fair	C1
T5	S	Yew	<i>Taxus baccata</i>	8	321	4	3.85	4	3	3	3	3	M	F	40+	Fair	C1
H6		Cherry laurel	<i>Prunus laurocerasus</i>	3	80	1	0.96	0	1	1	1	1	M	F	20-40	Fair	C1
H7		Cherry laurel	<i>Prunus laurocerasus</i>	3	80	1	0.96	0	1	1	1	1	M	F	20-40	Fair	C1
H8		Cherry laurel, Spotted laurel	<i>Prunus laurocerasus, Aucuba japonica</i>	1	80	1	0.96	0	1	1	1	1	M	P	10-20	Fair	C1

Table 1 – Cascade chart for tree quality assessment

TREES FOR REMOVAL				
Category and definition	Criteria			Identification on plan
<p>Category U Those in such condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years</p>	<ul style="list-style-type: none"> • Trees that have a serious, irremedial, 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 show signs of significant, immediate, and irreversible overall decline • Trees infected by pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing other trees of better quality <p><i>NOTE Category U trees can have existing potential conservation value which might be desirable to preserve; see 4.5.7</i></p>			<p>DARK RED</p> <p>RGB code 127-000-000 AutoCAD 246</p>
TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	Criteria - Subcategories			Identification on plan
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
<p>Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years</p>	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)	<p>LIGHT GREEN</p> <p>RGB code: 000-255-000 AutoCAD 90</p>
<p>Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years</p>	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant 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	<p>MID BLUE</p> <p>RGB code: 000-000-255 AutoCAD 170</p>
<p>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 150mm</p>	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	<p>GREY</p> <p>RGB code: 091-091-091 AutoCAD 252</p>

Appendix B

Detailed Arboricultural Method Statement

Arboricultural Method Statement

Tree Protection Plan

8 DRUID STOKE AVENUE, BRISTOL, BS9 1DD



On behalf of

Kathy Ashby

Prepared by

Alister Rankine BSc (Forestry); Tech Cert (Arbor A), ProfArborA
Arboricultural Consultant

February 2024

Arboricultural Method Statement

INTRODUCTION

*The purpose of this document is to give a step by step guide to protecting trees on this site. It is vital that all members of the team are familiar with it so that they not only understand **why** trees need protecting but also **how** they are to be protected and their own role in protecting them.*

THE IMPORTANCE OF TREES

- Trees play a crucial role in the fight against climate change. One mature tree can absorb in the region of 1 tonne of carbon during its lifetime – the world needs all the trees it can get
- Trees are an important wildlife habitat, for example many insects and birds rely on them for food and shelter
- Trees are an integral part of human habitat. People like trees for their landscape value and for their shading and sheltering properties

WHAT WILL CAUSE DAMAGE TO A TREE?

- Wounds to the trunk or limbs of a tree can let in pathogens which could go on to infect and eventually even kill a tree
- Removal of branches decreases the number of leaves a tree has. Leaves are vital to the tree for manufacture of the energy they need through photosynthesis
- Compaction of the soil around a tree will damage its roots making it unable to absorb water or oxygen which can result in the tree's death. The extent of the roots are shown on the Tree Protection Plan in the document below as Root Protection Areas or RPA's

HOW YOU AND YOUR TEAM CAN PREVENT DAMAGE TO TREES

- Ensure all members of the team read this document before work starts
- Follow the instructions given, don't cut corners
- Take pride in protecting trees – treated well they will outlive you and continue to give benefit for years to come

Planning permission for this project depends on this method statement being followed. Dealing with breaches of condition is far harder, more time consuming and costly than following the instructions. Failure to comply could even result in prosecution.

THE PROJECT ARBORICULTURALIST IS ON HAND TO HELP. IF IN DOUBT, PLEASE RING FOR ADVICE. 01761 233244

Hillside Trees Ltd.

2 Hillside, Bowden Hill, Chilcompton, Radstock, BA3 4EN
Tel: 01761 233244 E: enquiries@hillsidetrees.co.uk

Directors: A Rankine BSc (Forestry), Tech Cert (Arbor A), *ProfArborA*, S J Rankine BSc (Hons), Dip Arb L4, *TechArborA*

Registered in England No. 07175569

Registered Office: Broadway House, Third Avenue, Westfield Industrial Estate, Radstock. BA3 4XD

This Method Statement Comprises:

- 1. Method Statement Document**
- 2. Appendices:**
 - I. Schedule of Tree Works**
 - II. Tree Protection Site Notice**
 - III. Temporary Ground Protection**
- 3. Tree Protection Plan (240202-8DSA-TPP-NB)**

THESE DOCUMENTS ARE TO BE KEPT TOGETHER**Full Site Address:**

8 Druid Stoke Avenue
Bristol
BS9 1DD

Proposed Development:

The proposed development involves demolition of existing detached garage and construction of a single detached dwelling to the rear of 8 Druid Stoke Avenue and construction of a new garage attached to 8 Druid Stoke Avenue

Contacts:**Client:**

Kathy Ashby

Project Manager (for the client):

Your Design Bristol

Telephone: 0117 329 1818

Email: studio@yourdesignbristol.co.uk

Contractor / Builder:

To be confirmed

Site Manager:

To be confirmed

Arboricultural Officer:

Matthew Bennett
Bristol City Council

[REDACTED]
[REDACTED]

Project Arboriculturalist:

Alister Rankine
Hillside Trees Ltd.

[REDACTED]
[REDACTED]

Works Requiring Tree Protection / Works:

Development Operations	Tree Numbers	Type of Protection / Works	Reference
Construction of garage for No 8	T1 – T5	Tree protection barrier	Appendix II
		Tree protection site notices	Appendix III
		Temporary ground protection (T1 only)	Section 7
	Special engineering methods (T1 only)	Appendix I	
	H8	Facilitation pruning	

Sequencing of Operations:

The tree protection measures appropriate for the site operations below, if required by the Local Planning Authority will be monitored by the Project Arboriculturalist.

It will be the responsibility of the Project Manager and / or the Site Manager to inform the Project Arboriculturalist if site visits and reports are required and to arrange them accordingly.

Please note: If the Project Manager and / or the Site Manager fails to inform the Project Arboriculturalist when site monitoring is required and the schedule of monitoring visits is not followed, it will not be possible to issue a Certificate of Compliance at the end of the project.

1. Pre-commencement site meeting

- a. The Appointed Contractor will co-ordinate with the Project Arboriculturalist to discuss and agree the site operations programme and tree protection.

2. Demolition of existing garage

- a. Demolition of the existing garage will not require any tree protection

3. Construction of the new dwelling

- a. Construction of the new dwelling will not require any tree protection

Construction of new garage for No. 8

4. Carry out facilitation pruning (See Appendix I)

- a. If necessary H8 will be cut back to allow access

5. Install tree protection barrier

- a. A tree protection barrier will be installed in the location shown on the Tree Protection Plan
- b. The area between the tree protection barrier and the trees will be a construction exclusion zone (CEZ)
- c. The tree protection barrier will be 'Heras' weldmesh panels secured in robust bases and tightly clamped.
- d. Site Notices will be securely fixed to the tree protection barrier panels (Appendix II)

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- e. There will be no movement of the tree protection barrier unless it is overseen by the Project Arboriculturalist
- f. No activity is planned to take place within the CEZ; however, any work that does take place within the CEZ will require approval of the Local Planning Authority and will be overseen and approved by the Project Arboriculturalist.

6. Installation of temporary ground protection

- a. Temporary ground protection will be installed in the location indicated on the Tree Protection Plan.
- b. Ground protection will consist of scaffold boards or heavy duty chip board placed on top of a compression-resistant layer (e.g. 100mm depth woodchip) laid on to a geo-textile membrane.

7. Construction of new garage

- a. Construction of the new garage will be done using screw piles or pile and beam foundations to minimise the chance of damage to the roots of T1. Final specification to be supplied by the construction engineer

8. Installation of services

- a. Installation of services will not require access to the CEZ

9. Removal of tree protection barrier and ground protection

- a. The tree protection barrier and ground protection will only be removed once all works associated with the new garage have been completed. These include:
 - Construction and fitting out of the garage
 - Installation of services

General Precautions

1. Any welfare facilities and site storage compound will be positioned outside the CEZ. The location will be agreed between the Site Manager and the Project Arboriculturalist prior to commencement of the project.
2. No materials that are likely to have an adverse effect on tree health will be stored or discharged within 10 metres of the trunk of a tree that is to be retained. Such materials include:
 - Oil
 - Bitumen
 - Cement
3. No fires will be lit unless the site of the fire is agreed with the Project Arboriculturalist.
4. Concrete will not be mixed or transported over unprotected ground, within 10 metres of the trunk of any tree.
5. In the event of unforeseen incidents occurring that may adversely affect or threaten the welfare or security of the trees, the Site Manager shall inform the Project Arboriculturalist at the earliest opportunity and not more than one working day following the incident.
6. The Project Arboriculturalist will visit the site to inspect and assess the circumstances and make any appropriate recommendations. The Local Planning Authority Arboricultural Officer will be informed by the Project Arboriculturalist of such incidents and recommendations will be submitted for approval by the Local Planning Authority, initially verbally, and then in writing.
7. A record of any emergency incidents and works shall be maintained by the Project Arboriculturalist.
8. Incidents which may merit such contingency plans include:
 - Accidental / unauthorised damage to the limbs, roots or trunk of trees
 - The spillage of chemicals within or adjacent to a Root Protection Area
 - The discharge of toxins / waste within or adjacent to a Root Protection Area

-
- The un-scheduled breaching of a tree protective barrier or Construction Exclusion Zone.

This Method Statement has Been Informed by the Following Information

- Arboricultural Site Survey carried out by Hillside Trees Ltd on 9th January 2024
- Ashby topo
- Ashby site proposed
- BS5837: 2012 ‘Trees in relation to design, demolition and construction – Recommendations’

Appendix I

Schedule of Tree Works

Tree Number	Work Specification
H8	Trim back on north side to allow access if necessary

Appendix II

Tree Protection Site Notice



**PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



**TREE PROTECTION AREA
KEEP OUT !**

**(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A
TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY
LEAD TO CRIMINAL PROSECUTION**

**ANY INCURSION INTO THE PROTECTED AREA MUST BE
WITH THE WRITTEN PERMISSION OF THE LOCAL
PLANNING AUTHORITY**

Appendix III

Temporary Ground Protection

Temporary Ground Protection Method and Specification

BS5837 recognizes that incursions in to the construction inclusion zones will be required at times during some developments.

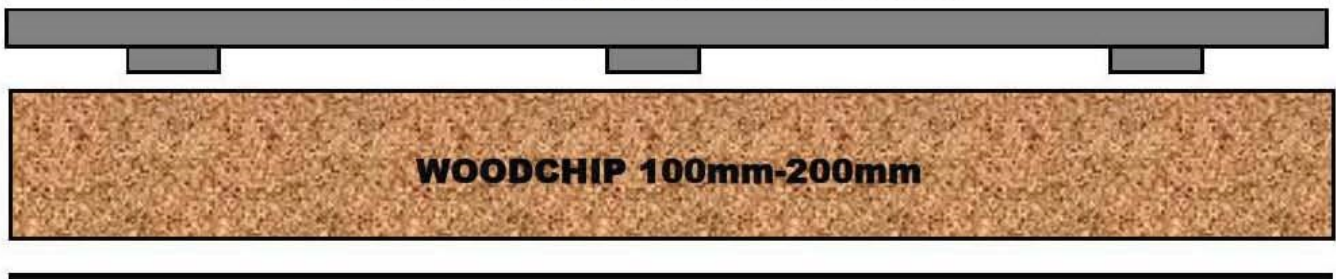
The objective is to minimize soil compaction

Example 1 - *for pedestrian movements only, a single thickness of scaffold boards places either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g.) 100mm depth of woodchip), laid on to a geotextile membrane.*

Example 2 - *For pedestrian-operated plant up to a gross weight of 2 t, proprietary inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150mm depth of woodchip), laid onto a geotextile membrane;*

Example 3 - *For wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.*

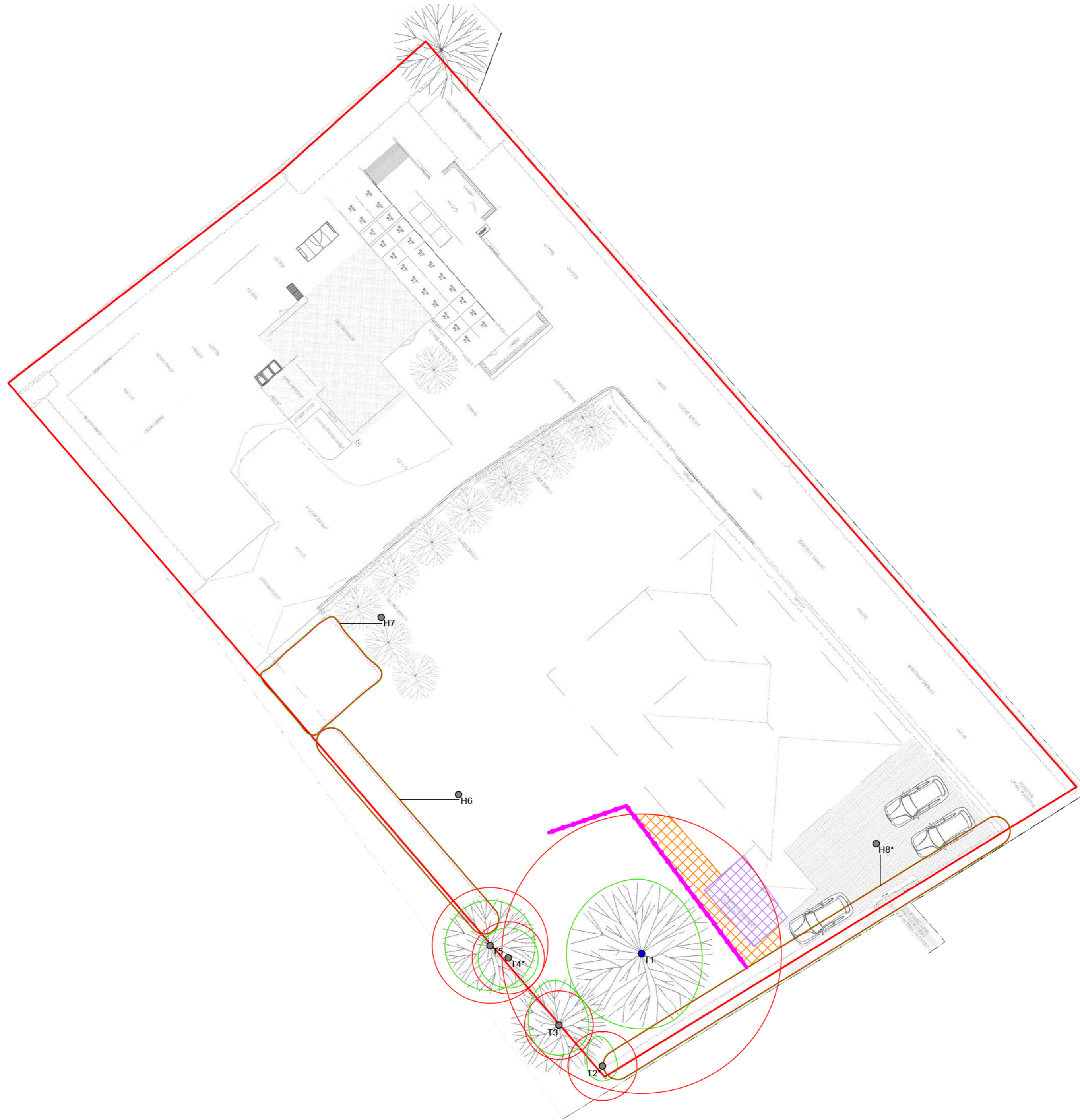
WOODEN BOARDING/TRACK-WAY



GEOTEXTILE MEMBRANE

Tree Protection Plan

Drawing No: 240202-8DSA-TPP-NB



Symbol Guide

- Root Protection Area
- Canopy Spread
- Tree Position, (colour represents retention category)
- Tag Number

BS5837:2012 - Tree Category

Category A Trees High Quality	Category C Trees Low Quality
Category B Trees Moderate Quality	Category U Trees Poor Quality/Remove
Line of Protective Barrier	Special Engineering Methods
Temporary Ground Protection	

NOTE: Tree/group numbers marked with an * have approximate locations.



Project Name:	8 Druid Stoke Avenue, Bristol
Drawing Title:	Tree Protection Plan
Drawing Number:	240202-8DSA-TPP-NB
Client:	Kathy Ashby
Agent:	-
Date:	February 2024
Scale:	1:200 @ A2

