

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

**15 RAVENSWOOD ROAD, REDLAND,
BRISTOL, BS6 6BN**



On behalf of

Rob & Kirsti Beat

Prepared by

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

December 2023

Version No	Checked by	Date
1.0	SR	01/12/2023

Proposed Development:
Erection of garden room

Trees to be retained: 3

Trees to be removed: 0

Tree Protection:

- Individual tree protection
- Temporary ground protection

1.0 Introduction

1.1 Brief

This report is prepared by Hillside Trees Ltd on behalf of Rob & Kirsti Beat.

1.2 Purpose of the Report

1.2.0 This report is intended to accompany a planning application relating to proposed development at 15 Ravenswood Road, Redland, Bristol, BS6 6BN. 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 an individual tree protective barrier and temporary ground protection on a Tree Protection Plan.
- 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.

- Robin Designs Ltd. Drawing No.23-552-100 – Proposed Layout

1.4 Tree Survey Methodology

1.4.1 A tree survey was undertaken on 22nd November 2023 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 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 231130-15RR-TPP-SD 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 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.

An Arboricultural Impact Assessment 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 Arboricultural Impact Assessment Plan also shows a representation of the crown spread of each tree measured in four cardinal directions.

A search of Bristol City Council's online mapping service on 30th November 2023 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 the site is located within the Cotham and Redland Conservation Area

2.1 Trees Identified for Retention and Removal

The proposed development involves the erection of a detached garden room

The following on site trees will be retained:

Tree no	Common name	Total
T1	Rowan	1
T2	Bay laurel	1
T3	Pittosporum	1
Total number retained		3

No trees will be removed.

2.2 Trees Outside Site Boundary

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

3.0 Tree Protection

The trees to be retained on site during and after development as listed in Section 2.1 will require both above and below ground protection.

Above ground protection will involve remedial tree surgery works and individual tree protection. These works are presented in the Tree Schedule table (Appendix A) and Appendix I and Appendix II of the Detailed Arboricultural Method Statement.

Below ground protection measures based on the RPA's presented in the Arboricultural Impact Assessment Plan will involve the use of temporary ground protection 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.

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Individual tree protection and temporary ground protection are illustrated in the Tree Protection Plan contained within the Detailed Arboricultural Method Statement.

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)

Tree Work Recommendations (BS3998), British Standards Institution, London (2010)

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

15 Ravenswood road, Redland, Bristol

Clients:

Rob & Kirsti Beat

Surveyor:

Alister Rankine

Date of Survey:

22nd November 2023



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.	Immediate Recommendations	BS Category
T1	S	Rowan	<i>Sorbus aucuparia</i>	7	160	1	1.92	2	2	2	2	2	M	F	20-40	Fair		C1
T2	S	Bay laurel	<i>Laurus nobilis</i>	5	365	3	4.37	2	2	2	2	2	M	G	20-40	Good		C1
T3	S	Pittosporum	<i>Pittosporum tenuifolium</i>	8	309	4	3.71	2	3	2	3	2	M	G	20-40	Good	Crown lift to 3m	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

**15 RAVENSWOOD ROAD, REDLAND,
BRISTOL, BS6 6BN**



On behalf of

Rob & Kirsti Beat

Prepared by

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

December 2023

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

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This Method Statement Comprises:

- 1. Method Statement Document**
- 2. Appendices:**
 - I. Schedule of Tree Works**
 - II. Individual Tree Protection Specification**
 - III. Temporary Ground Protection**
- 3. Tree Protection Plan (231130-15RR-TPP-SD)**

THESE DOCUMENTS ARE TO BE KEPT TOGETHER

Full Site Address:

15 Ravenswood Road, Redland, Bristol, BS6 6BN

Proposed Development:

Erection of garden room

Contacts:

Clients:

Rob & Kirsti Beat

Project Manager (for the client):

Robin Godfrey

Robin Designs Ltd

Telephone: 07738293940

Email: info@robindesigns.co.uk

Contractor / Builder:

To be confirmed

Site Manager:

To be confirmed

Arboricultural Officer:

Matthew Bennett
Arboricultural Officer
Bristol City Council

Tel: 0117 9223728

Email: matthew.bennett@bristol.gov.uk

Project Arboriculturalist:

Alister Rankine
Hillside Trees Ltd.

Telephone: 01761 233244

Email: alister@hillsidetrees.co.uk

Works Requiring Tree Protection / Works:

Development Operations	Tree Number	Type of Protection / Works	Reference
Site Traffic	T1, T2	Remedial tree works (T1 only) Individual tree protection (T1 only) Temporary ground protection	Appendix I Appendix II Appendix III
General Construction	T1, T2	Individual tree protection (T1 only) Temporary ground protection Screw pile foundations	Appendix II Appendix III Section 4

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. Carry out tree surgery (See Appendix I)

- a. All tree surgery works will be carried out carefully using sharp, clean loppers or secateurs

2. Install individual tree protection

- a. Individual tree protection will be installed in the location shown on the Tree Protection Plan
- b. There will be no movement of the individual tree protection

3. 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.

4. Erection of Garden Room

- a. The erection of the proposed garden room will have a minor potential impact on the RPA of T1. Screw pile foundations will be used to minimise impact.

5. Installation of services

- a. Installation of services will not impact on the RPA's of the retained trees

6. Removal of individual tree protection and ground protection

- a. Individual tree protection and ground protection will only be removed once all works associated with the development have been completed. These include:
 - Erection and fitting out of the new garden room
 - Installation of services

General Precautions

1. 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.
2. The Project Arboriculturalist will visit the site to inspect and assess the circumstances and make any appropriate recommendations. The Local Planning Authority Senior 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.
3. A record of any emergency incidents and works shall be maintained by the Project Arboriculturalist.
4. Incidents which may merit such contingency plans include:
 - Accidental / unauthorised damage to the limbs, roots or trunk of trees

This Method Statement has Been Informed by the Following Information

- Arboricultural Site Survey carried out by Hillside Trees Ltd on 22nd November 2023
- Robin Designs Ltd. Drawing No.23-552-100 – Proposed Layout
- BS5837: 2012 ‘Trees in relation to design, demolition and construction – Recommendations’

Appendix I

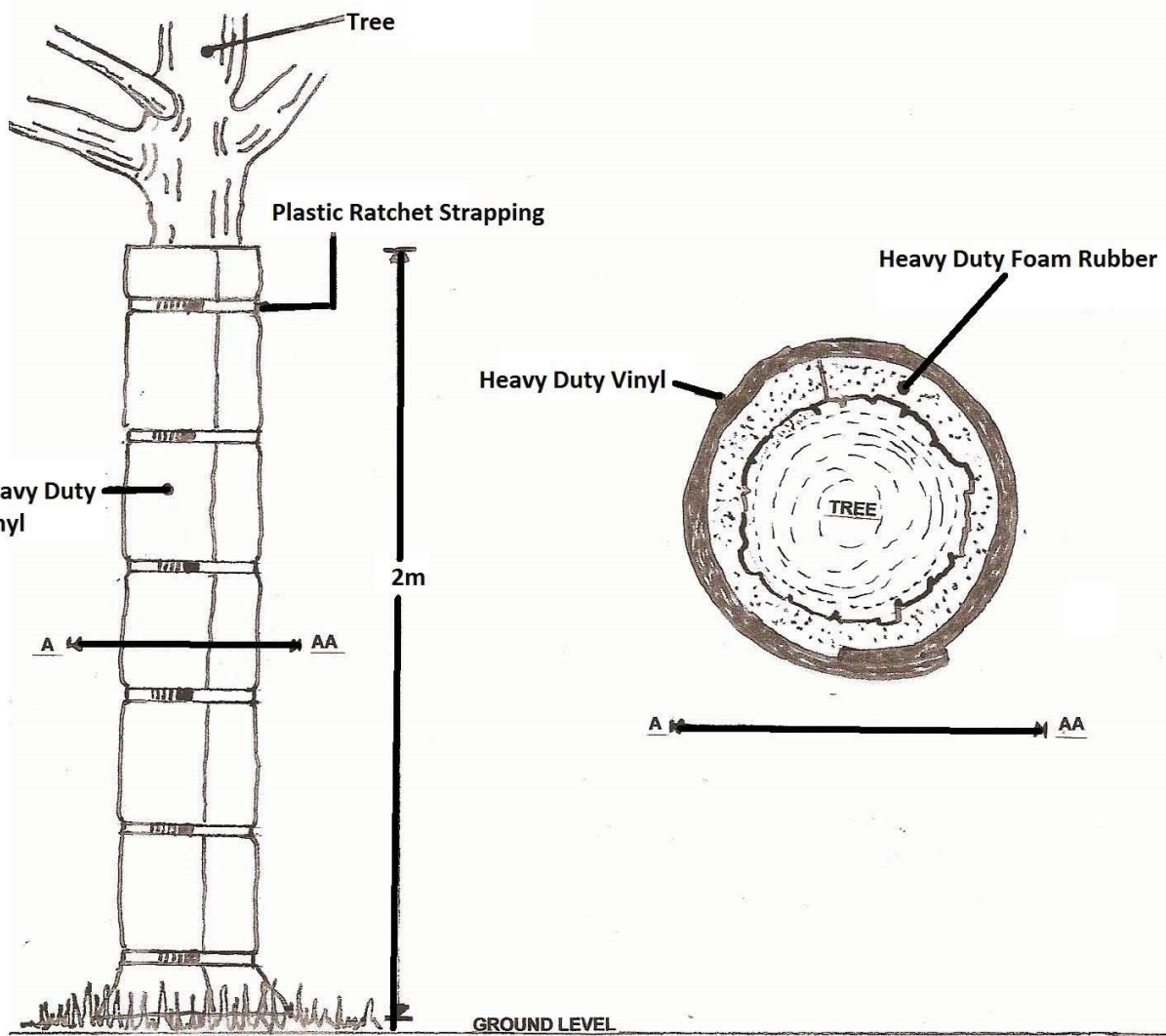
Schedule of Tree Works

Tree Number	Work Specification
T1	Removal of minor branches on west side up to 3m

All tree surgery works will be carried out carefully using sharp, clean loppers or secateurs

Appendix II

Specification for Individual Tree Protection



 **Hillside Trees Ltd.**
Arboricultural Consultancy

SPECIFICATION FOR TREE PROTECTION CLADDING

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.

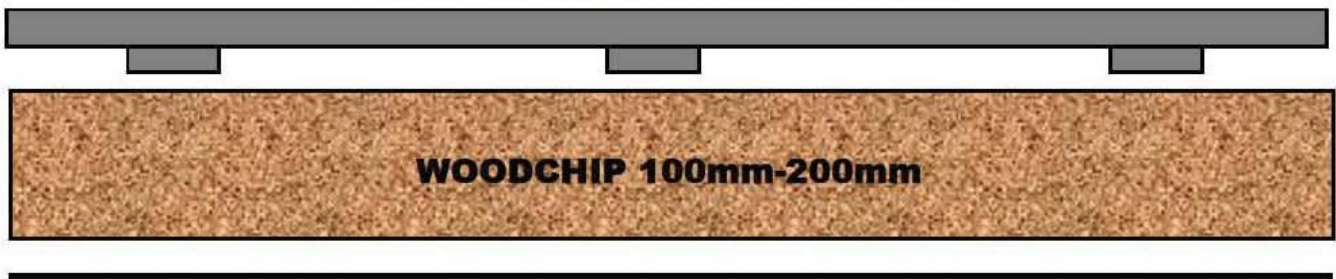
The objective is to minimize soil compaction

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.*

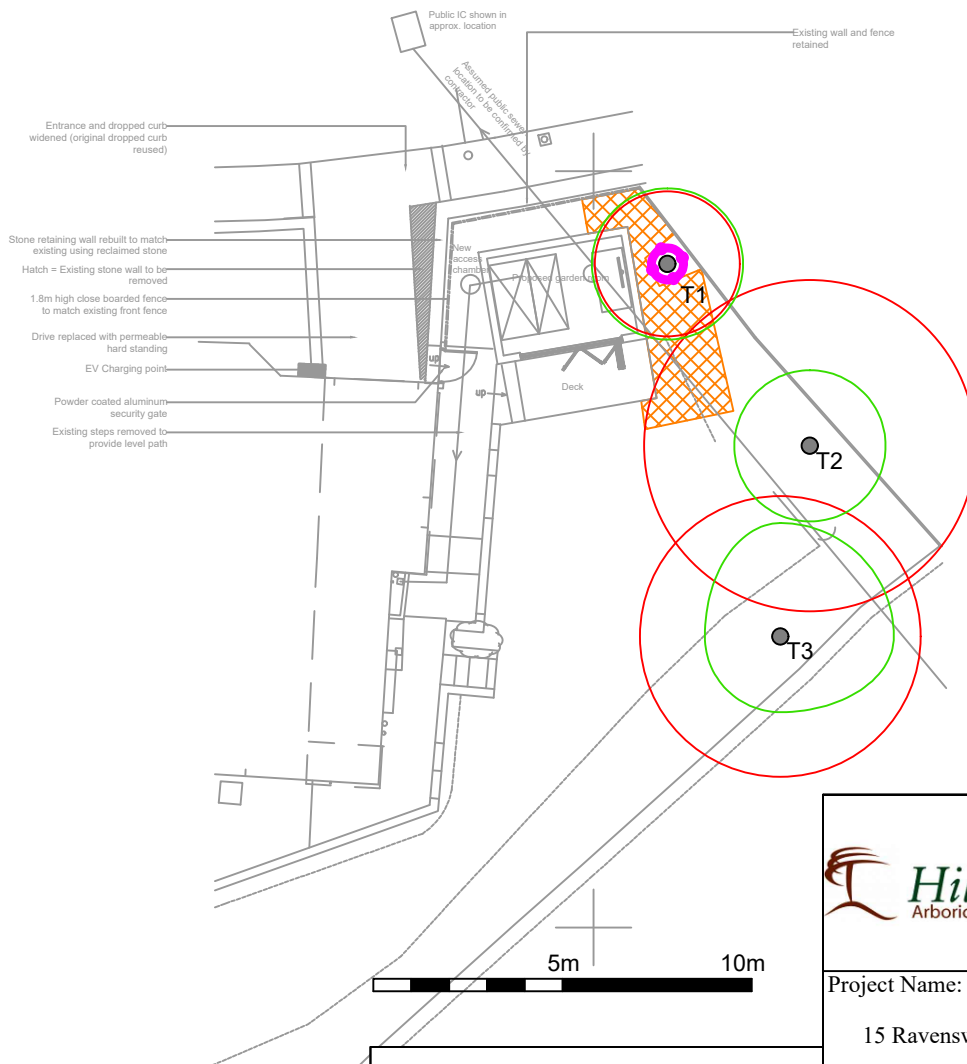
WOODEN BOARDING/TRACK-WAY



GEOTEXTILE MEMBRANE

Tree Protection Plan

Drawing No: 231130-15RR-TPP-SD



Entrance and dropped curb widened (original dropped curb reused)

Stone retaining wall rebuilt to match existing using reclaimed stone

Hatch - Existing stone wall to be removed

1.8m high close boarded fence to match existing front fence

Drive replaced with permeable hard standing

EV Charging point

Powder coated aluminum security gate

Existing steps removed to provide level path

Public IC shown in approx. location

Planned public steps for access to the railway

Existing wall and fence retained

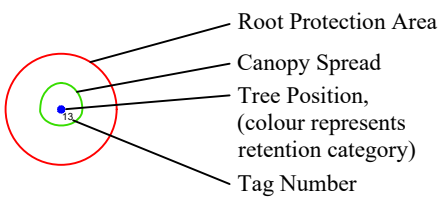
New access (shambles)

Permeable garden path

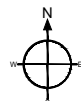
Deck

5m 10m

Symbol Guide



BS5837:2012 - Tree Category



Project Name:
15 Ravenswood Road, Redland, Bristol

Drawing Title:
Tree Protection Plan

Drawing Number:
231130-15RR-TPP-SD

Client:
Rob and Kirsti Beat

Agent:
-

Date:
November 2023

Scale:
1:200 at A4