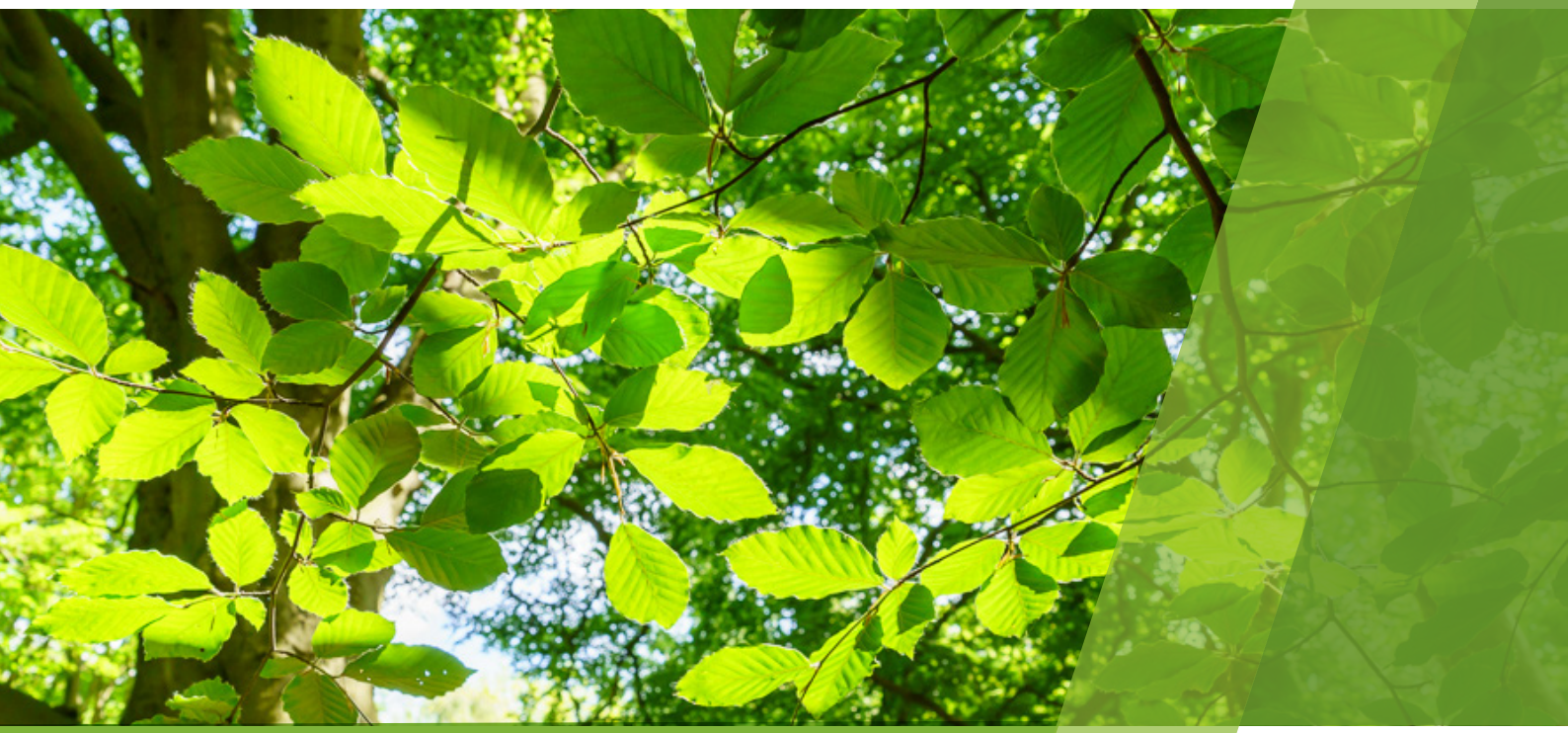
Greenwood



ARBORICULTURAL METHOD STATEMENT

LOCATION: 19 Wadham Gardens, Primrose Hill, London, NW3 3DN

CLIENT: Maria Razmanova

AUTHOR: Oliver Tong ND Arb TechArborA

DATE: 20th February 2025

REF: 20241128-154057568

VERSION: FINAL v2

Greenwood Environmental Ltd | 10749899 | GB328956949
New Derwent House, 69-73 Theobald's Road, London, WC1X 8TA
hello@greenwood-env.co.uk | +44 208 064 0870 | www.greenwood-env.co.uk

CONTENTS

APPENDIX

ANNEX

Version	Author	Date	Type
V2.0	Oliver Tong ND Arb TechArborA	20/02/2025	FINAL

1. Instruction

1.1 Greenwood Environmental Ltd has been commissioned by Maria Razmanova to prepare an Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP).

2. Terms of reference

2.1 This document follows in sequence from our Arboricultural Impact Assessment (**AIA ref. 20240219-172828623**) in accordance with The RIBA Plan of Work (RIBA Stage 3-4 'Developed and Technical design') and should be read in conjunction with eachother.

2.2 The AMS and TPP forms part of the Implementation and Aftercare phase (RIBA Stages 5-7) with the implementation of those measures once planning permission is granted, guided by Arboricultural Method Statements (RIBA Stage 4-5, 'Technical Design and Construction) and professional guidance where appropriate.

2.3 In addition, this document is required to formally discharge **Planning Condition Number 6**, in relation to the following Planning Application:

- ***Application No: 2024/1265/P: Erection of a single-storey rear extension and rebuilding of the infi ll extension. Replacementof existing doors and windows, along with external landscaping upgrades, including a new bike store.***

3. Limitations

3.1 The content and presentation of this report are copyright of Greenwood Environmental Ltd and may not be copied or distributed to third parties not directly involved in the subject matter without the written consent of the author.

3.2 Greenwood Environmental Ltd.'s standard terms of business apply, which we provided along with our fee proposal, and further copies of which are available on request.

4. Methodology

4.1 Trees are a material consideration for Local Planning Authorities (LPAs), when determining planning applications, whether they are afforded the statutory protection of a Tree Preservation Order (TPO) or Conservation Area (CA) or not. British Standard BS 5837:2012 Trees in Relation to Design, Demolition and Construction sets out the principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and new developments.

4.2 The Standard recommends a sequence of activities (appendix a), that starts in the initial feasibility and design phase (RIBA Stage 2 'Concept Design'), with a survey to qualify and quantify the trees on site and establish the arboricultural constraints to development (above and below-ground), to inform the design in an iterative process, and continues with an assessment of the arboricultural impacts of the final design and measures to mitigate such impacts should they be negative.

4.3 Detailed technical specifications for mitigation and protection measures are devised in the design phase that follows (RIBA Stage 3-4 'Developed and Technical design'), and the sequence ends with the Implementation and Aftercare phase (RIBA Stages 5-7) with the implementation of those measures once planning permission is granted, guided by Arboricultural Method Statements (RIBA Stage 4-5, 'Technical Design and Construction) and professional guidance where appropriate.

5. Interpretation

5.1 An accessible copy of this AMS inc. Tree Protection Plan (TPP) must be kept on-site in a prominent location for the duration of the development.

5.2 Dimensions and positions of the approved tree protection will be drawn onto all plans used by site operatives.

5.3 All site workers are to be briefed on tree protection measures as part of all site inductions.

5.4 **Key Contacts**

Name	Role	Contact
Maria Razmanova	Applicant/Owner	mariarazmanova@gmail.com
Manea Kella LTD	Architects	info@maneakella.com
InteriorLAB	Building Contractor	info@interiorlab.co.uk
Constructure Ltd	Structural Engineer	office@constructure.co.uk
London Borough of Camden	Local Planning Authority	planning@camden.gov.uk
Greenwood Environmental	Arboricultural Consultants	hello@greenwood-env.co.uk

6. Sequence of events

6.1 **Before demolition and construction work starts (including bringing of plant and materials on site):**

- **A pre-commencement site meeting** shall be held prior to the commencement of any works associated with the proposed development. The meeting is required for the Local Planning Authority (LPA), the Arboricultural Consultant and construction personnel to agree all approved site processes. This meeting may be used to formally agree on site tree protection measures prior to the commencement of the development.

6.2 **Before construction work starts (including bringing of plant and materials onto site):**

- **Temporary Tree protection fencing** will be constructed in accordance with the recommendations in section 6.2.2 of BS5837:2012 before any construction has commenced. The fencing will be installed as shown on the draft tree protection plan (TPP).

- **Temporary Ground protection** will be installed in accordance with the recommendations in section 6.2.3.3 of BS5837:2012. Where existing hard surfaces are retained, these may be suitable as ground protection for pedestrian and vehicular traffic over RPAs, however its suitability to withstand the applied load should be assessed. All ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.

- **Temporary Trunk protection** will be installed to trees **T1; T2 London plan and T6 Bay laurel,** in accordance with the recommendations on pages 18-19 of Appendix D.

6.3 **During construction:**

- **Tree protection will not be moved or altered** without written consent from the Local Planning Authority's tree officer and the area within (Construction Exclusion Zone (CEZ) will be considered sacrosanct.

6.4 **Post-construction works and following removal of all plant and materials from site:**

- **Removal of tree protection** will only be permitted once all construction work is complete.

7. Tree work

7.1 Where works inc. root pruning are required to trees covered by a TPO or in a conservation area, written consent shall be obtained from the LPA prior to these works being undertaken.

7.2 All tree work must comply with British Standard 3998: 2010 'Recommendations for tree work'.

7.3 Should the requirement for additional tree works become apparent during the construction process, written consent shall be obtained from the LPA prior to these works being undertaken.

8. Site monitoring and arboricultural supervision

8.1 Site monitoring and supervision require in-person site visits and must be carried out at the following critical stages as a minimum to ensure compliance with the planning conditions, typically at:

1. **Pre-commencement site meeting (completed on 05.12.24).**
2. **Initial Implementation of Tree Protection.**
3. **During Excavation Works within RPAs**
4. **Post-construction Completion**

8.2 Results of any site monitoring or arboricultural supervision will be recorded and available for scrutiny by the LPA and developer. Any defects requiring remediation or rectification shall be notified to the site foreman/manager and the client.

8.3 Should any tree protection become damaged to impair its function, all works shall cease in the vicinity of the damage until it has been repaired.

8.4 Should damage occur to any of the retained trees for whatever reason, the damage should be reported to the site foreman/manager immediately. The site foreman/manager will then report to the arboricultural consultant to enable remediation to be implemented as necessary and agreed with the LPA.

9. Construction method statement

Construction operations in the vicinity of retained trees must be carried out with caution to prevent negative impacts:

9.1 Care must be taken when planning site operations involving wide or tall loads or plant vehicles with booms, jibs, and counterweights to ensure that they do not encounter retained trees.

9.2 Any transit or traverse of plant such as described above will be conducted under the supervision of a banksman, to ensure adequate clearance is maintained.

9.3 Many building materials are toxic to trees. Excess cement, cement washings, wastewater, diesel fuel and even clean water in excess can kill or seriously damage trees. Any spillage run-off should be controlled so that they do not contaminate the RPAs.

9.4 Changes (increases or decreases) in ground levels within the RPA will kill roots and harm the tree. Any changes in soil levels around trees during demolition, construction or landscaping must be approved in advance by the LPA's tree officer.

9.5 Fire, either deliberate or accidental, is harmful to trees. If fires are proposed, they must not be carried out within 10m of the outer crown (drip line).

9.6 Trenches for services (electricity, gas, water etc.) can damage tree roots. Service runs must be routed to avoid the RPA of any retained tree.

9.7 Where scaffolding is required, it must be erected outside of RPAs. However, where it is essential for scaffolding to be erected within RPAs, temporary ground protection must also be installed beneath all scaffolding in accordance with the recommendations in section 6.2.3.3 of BS5837:2012 and remain in place until the scaffolding is removed. No ground excavation is to be carried out for the soleplates. Pruning should be kept to a minimum; this can be achieved by designing scaffolding to avoid branches or tying back branches where necessary. Where pruning is unavoidable it must be carried out by an arborist in accordance with British Standard 3998: 2010 'Recommendations for tree work' and if required permission must first be sought from the local planning authority.

10. Excavation within root protection areas (RPAs)

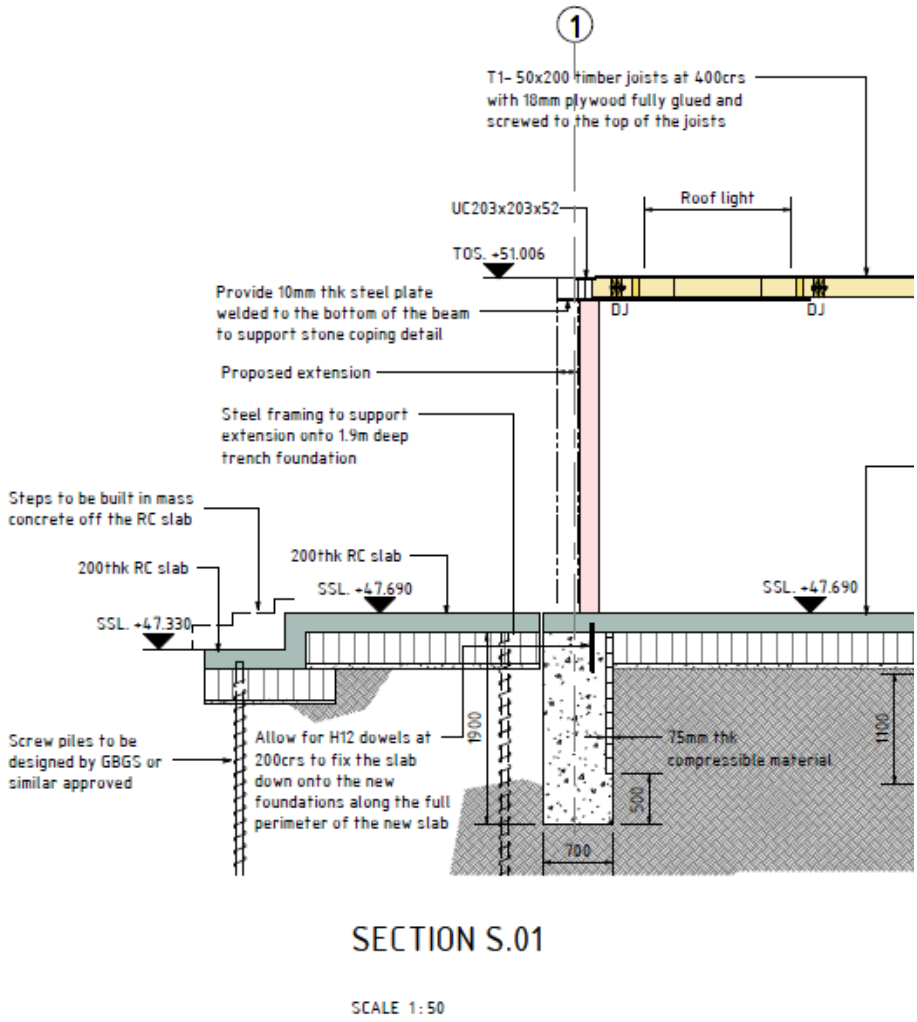
10.1 Any excavation required within RPAs must be carried out carefully using spades, forks and trowels, taking care not to damage the bark and wood of any roots. All soil removal must be undertaken with care to minimise the disturbance of roots beyond the immediate area of excavation. Where possible, flexible clumps of smaller roots, including fibrous roots, must be retained if they can be displaced temporarily or permanently beyond the excavation without damage. If digging by hand, a fork should be used to loosen the soil and help locate any substantial roots. Once roots have been located, the trowel should be used to clear the soil away from them without damaging the bark.

10.2 Any exposed roots that require removal will be cut cleanly with a sharp saw or secateurs/loppers 10-20cm behind the final face of the excavation. Roots temporarily exposed must be protected from direct sunlight, drying out and extremes of temperature by appropriate covering, such as damp hessian cloth. Roots greater than 25mm in diameter should be retained where possible. Roots 25-100mm in diameter should only be cut in exceptional circumstances. Roots greater than 100mm in diameter should only be cut after consultation with an arborist.

10.3 Any excavation within RPAs will be carried out under arboricultural supervision.

11. Construction of specialist engineered patio foundation within root protection area (RPA) of tree T4 Lime

11.1 The design of the foundation for the raised patio with the RPA of tree **T4 Lime** is a mini screw pile and floating slab design which limits any ground disturbance required and allows for unimpeded soil water infiltration and gaseous exchange to be maintained within the RPA of the tree.



SECTION S.01

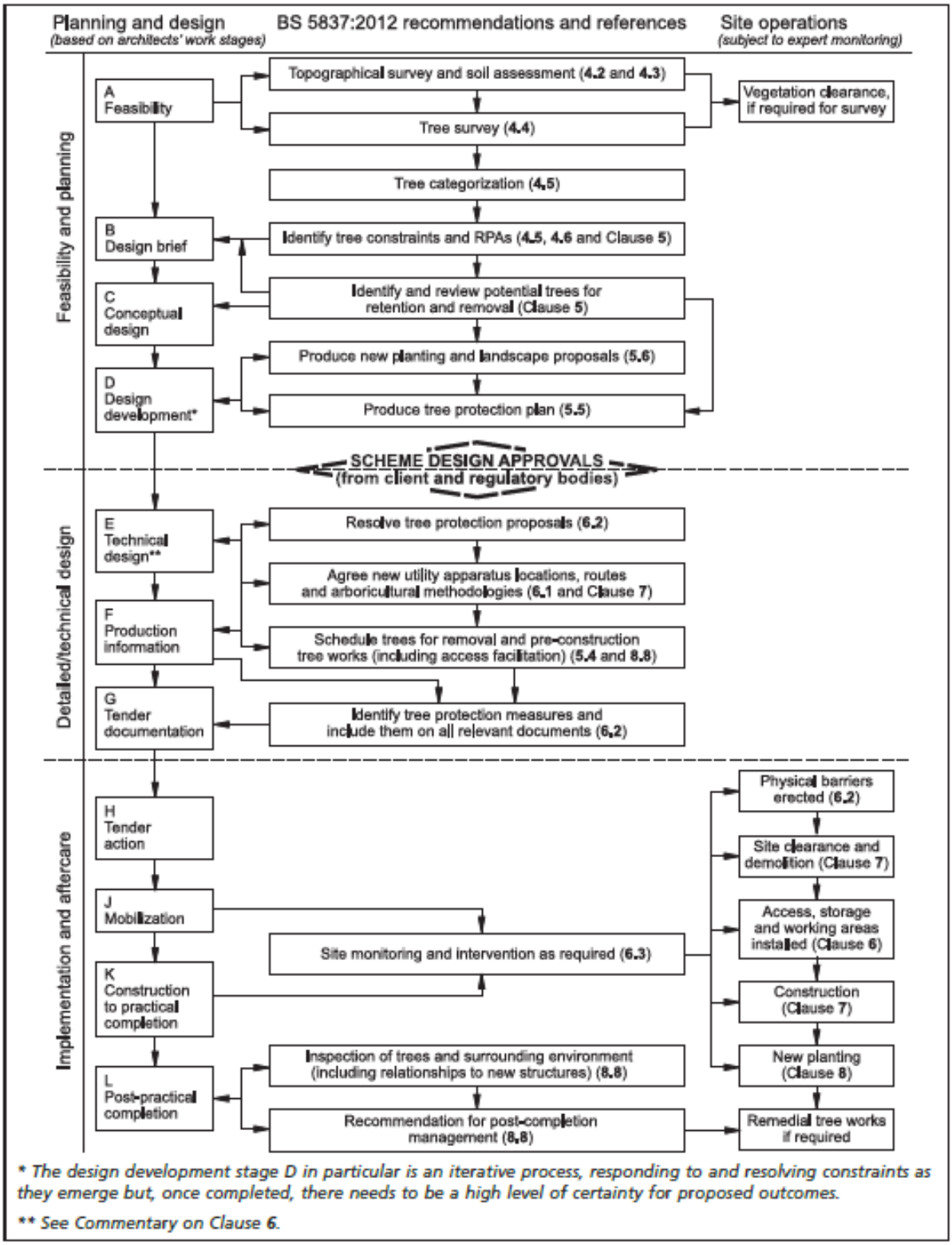
SCALE 1:50

Image 1. Extract from proposed sections drawing showing foundation detail

Appendix A

BS 5837:2012 FIGURE 1

Figure 1 **The design and construction process and tree care**



** The design development stage D in particular is an iterative process, responding to and resolving constraints as they emerge but, once completed, there needs to be a high level of certainty for proposed outcomes.*

*** See Commentary on Clause 6.*

Appendix B

TREE ASSESSMENT SCHEDULE

Tree ID	Common Name	Stem Diameter [mm]	Tree Height [m]	(N) Branch Spread [m]	(S) Branch Spread [m]	(E) Branch Spread [m]	(W) Branch Spread [m]	Physiological Condition	Structural Condition	Height of Canopy Above Ground Level [m]	Height of First Significant Branch [m]	Direction of First Significant Branch	Comments	Estimated Remaining Life Expectancy	Quality Category	Quality Sub-Category	Root Protection Area [m]
T1	London plane	900	17	5	4	5	4	Fair	Fair	4	5	SW	Street tree, managed by pollarding	Long (>40 years)	A	2	11
T2	London plane	1000	17	5	4	4	5	Fair	Fair	5	5	NE	Street tree, historically managed by pollarding	Long (>40 years)	A	2	12
T3	Japanese maple	86	4	1	2	2	2	Good	Fair	2.5	0.3	W		Short (10 to 20 years)	C	2	1
T4	Lime species	600	16	5	6	5.5	3	Good	Fair	3	2	W	Located 10m from existing rear elevation, canopy historically reduced, included bark main trunk union at 1.5-2.5m	Medium (20 to 40 years)	B	1	7.2
T5	Strawberry tree	342	6	4	5	2	4.5	Good	Good	3	1.8	NW	Multi stemmed, located 6m from existing rear elevation	Medium (20 to 40 years)	B	2	4.1
T6	Bay laurel	210	7	2	2.5	2.5	3	Good	Good	0.1	2	S		Short (10 to 20 years)	C	1	2.5
G1	Hybrid black poplar	900	25	See plan	See plan	See plan	See plan	Fair	Poor	0.5	N/A	N/A	Line of boundary trees, historically heavily crown reduced/pollarded, good habitat value	Medium (20 to 40 years)	B	2,3	N/A

Key

No.: This number identifies the trees and corresponds with the provided plans. Trees are prefixed: T (trees); G (groups) and H (hedges).

Species: The common name is given for each tree.

Stem Diameter (Ø): Taken with a diameter measuring tape at 1.5m above ground level as per Figure C1 of BS5837:2012 and recorded in millimetres. Where access has prevented direct measurement of a tree's trunk diameter, the value is estimated.

Height: Measured with a laser clinometer in metres.

Crown Clearance: Distance between the lowest point of the crown and ground level, measured with a laser clinometer in metres.

Radial Crown Spread: Measured with a laser clinometer in metres and given at cardinal compass points. Where access has prevented direct measurement, the value is estimated.

Life Stage: This refers to the age of the individual tree relating to the average life expectancy of each species in a similar environment:

- Y (Young): Recently planted or establishing tree that could be transplanted without specialist equipment i.e., up to 12-14cm stem girth.
- SM (Semi mature): An established tree but one which has not reached its potential ultimate height and has significant growth potential.
- EM (Early mature): A tree reaching its ultimate potential height, whose growth rate is slowing down but will increase in stem diameter and crown spread and has a safe useful life expectancy.
- M (Mature): A mature specimen with limited potential for any significant increase in size but with a reasonable safe useful life expectancy.
- LM (Late mature): A senescent specimen with a limited safe useful life expectancy. Possibly also containing sufficient structural defects with attendant safety and/or duty of care implications.
- V (Veteran): Veteran trees are trees which have features of ancientness but at a younger age. These features include missing branches, hollow trunks and habitat features.
- A (Ancient): An ancient tree is a tree which is remarkably old for its species, which can vary dramatically depending on the species. All ancient trees are also veterans.

Physiology: Overall physiological condition of tree: Good; Fair; Poor; Dead

Structure: Overall structural condition of tree: Good; Fair; Poor; Hazardous

Estimated Remaining Life Expectancy: is the life expectancy of the tree modified first by its age, health, condition, safety, and location (to give safe life expectancy), then by economics, effects on better trees and sustained amenity:

- <10 years
- 10+
- 20+
- 40+

Quality Category: See BS5837:2012 TABLE 1

Appendix C

BS 5837:2012 TABLE 1

Table 1	**Cascade chart for tree quality assessment**			
Category and definition	**Criteria (including subcategories where appropriate)**			**Identification on plan**
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• 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 *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*			
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
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)	
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	
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	

Appendix D

TREE PROTECTION SPECIFICATION

Figure 3 **Examples of above-ground stabilizing systems**

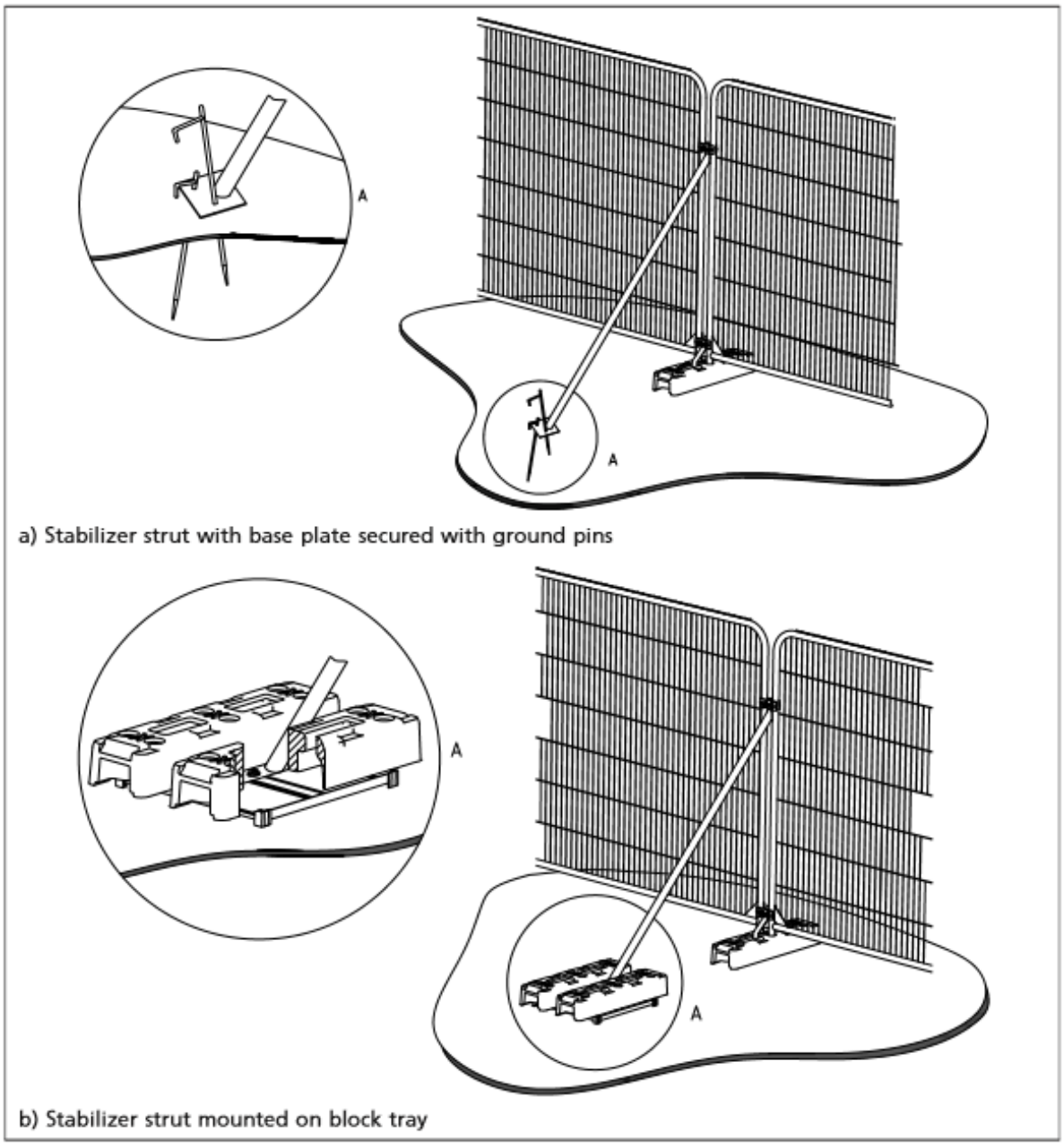


Figure 1. Image reproduced with permission from BSI

Figure 2. Example of all-weather sign to be attached to protective fencing at 3 metre spacings

Temporary Ground Protection

New temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.

Ground protection might comprise one of the following:

a) for pedestrian movements only, a single thickness of scaffold boards placed 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. 100 mm depth of woodchip), laid onto a geotextile membrane;

b) 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. 150 mm depth of woodchip), laid onto a geotextile membrane.

c) 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.

Figure 3. Example of propriety inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane, suitable for pedestrian-operated plant up to a gross weight of 2 t

Trunk Protecta®

Tree Trunk Protection

Spec Text

- 1.2m/1.8m Trunk Protecta® by Green Grid Systems for temporary tree trunk protection

The Green Grid Systems Trunk Protecta is designed for use on trees at roadside site entrances, or on trees located near roadways with passing traffic. These are areas where it is not possible to fence of the tree, or where ground protection and vehicles are present in the root protection area.

Features

- Easy-to-install
- Abrasion and accidental damage protection
- Wraps around the trunk at ground level, protecting the first 1.2m of the trunk.
- Higher level protection achieved using a 1.8m variant, or by stacking units
- Prevents wounds and tear injuries that could allow disease and decay to enter the tree.

The protecta is made from waterproof canvas to prevent the unit from holding water and starting rot. The canvas is hi-vis orange and banded with two stripes of reflective tape to ensure it is highly visible, even in low light situations. The protecta can be used on trees with a diameter (DBH) between 100-160cm, quick release straps enable to the protecta to be tightened for the smaller trees, and multiple protecta's can be used for trees larger than 160cm.

Trunk Protecta®

Tree Trunk Protection

Model:	**TP-1.2**
Height:	1200mm
Length:	1.9m
Weight:	16kg
Trees up to circumference:	1.6m
Colour:	Hi-vis Orange

Model:	**TP-1.8**
Height:	1800mm
Length:	1.9m
Weight:	22kg
Trees up to circumference:	1.6m
Colour:	Hi-vis Orange

Appendix E

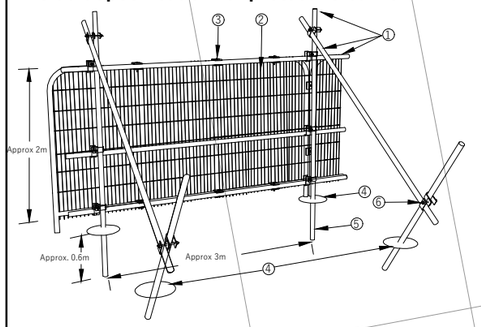
SITE MONITORING RECORDING TABLE

Date	Purpose	Attendees	Notes

Annex 1

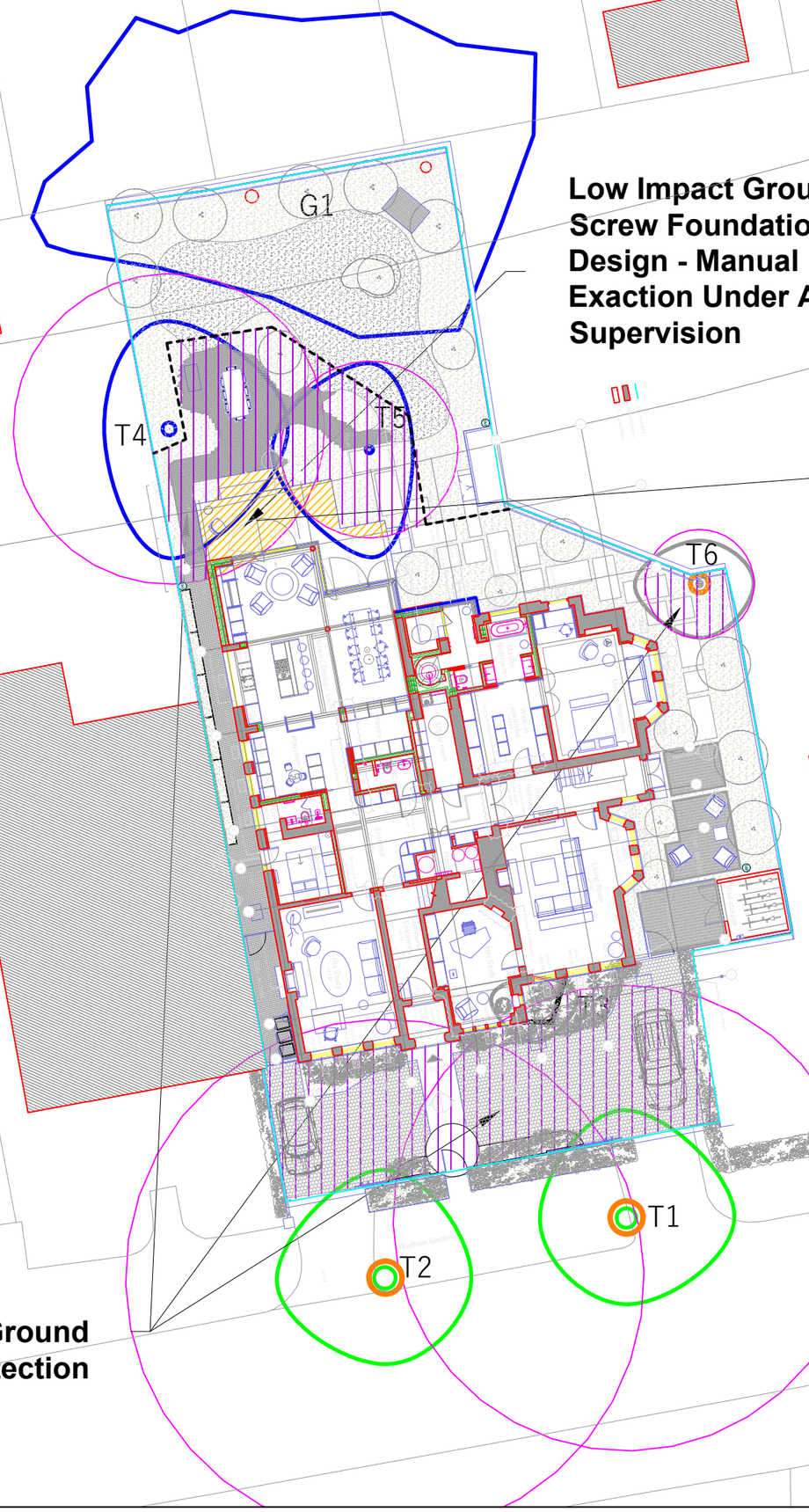
TREE PROTECTION PLAN

Default specification for protective barrier

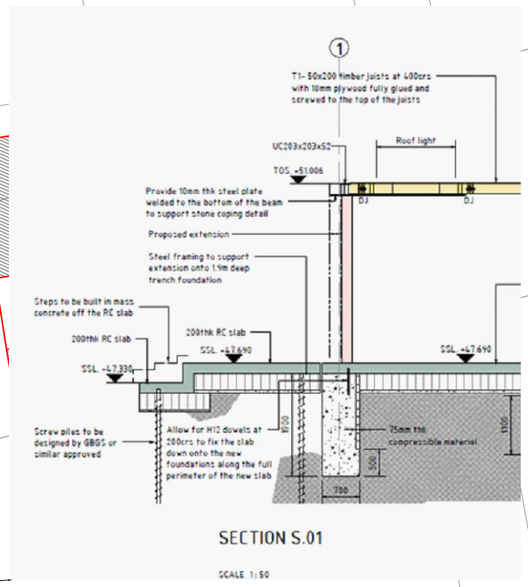


① Standard scaffold poles
② Heavy gauge 2m tall galvanised tube and welded mesh infill panels
③ Panels secured to uprights and cross-members with wire ties
④ Ground level
⑤ Uprights driven into the ground until secure (minimum depth 0.6m)
⑥ Standard scaffold clamps

Example Tree Protective Fencing Sign:



Low Impact Ground Screw Foundation Design - Manual Exaction Under Arb Supervision



SECTION S.01

SCALE 1:50

Temporary Ground Protection

Trunk Protecta® Tree Trunk Protection:

BS 5837: 2012 - Tree Plan Key

	Cat A Tree
	Cat B Tree
	Cat C Tree
	Root Protection Area (RPA)
	Temporary Trunk Protection Trunk Protecta®
	Temporary Protective Fencing
	Low Impact Ground Screw Foundation Design - Manual Exaction Under Arb Supervision
	Landscaping Carried out by Hand Under Arb Supervision & Temporary Ground Protection

This drawing has been produced in colour, a monochrome copy should not be relied upon.

N

Site:
19 Wadham Gardens, Primrose Hill, London, NW3 3DN

Client:
Maria Razmanova

Job:
20241128-154057568

Drawing Title:
TREE PROTECTION PLAN

Greenwood ENVIRONMENTAL
Tel: 020 8064 0870
hello@greenwood-env.co.uk

Greenwood Environmental Ltd has been provided with a plan for this site, however as they do not always show the position of all trees and additional features, any missing trees or additional features have been positioned as accurately as possible and should therefore not be taken as exact but as a fair representation of their position on-site.

Date: 20/02/2025	Drawn by: OT
Scale: 1:250@A3	CAD File: 20240219-172826623 - TPP Rev A.dwg

Drawing Number: 20241128-154057568
Rev. B

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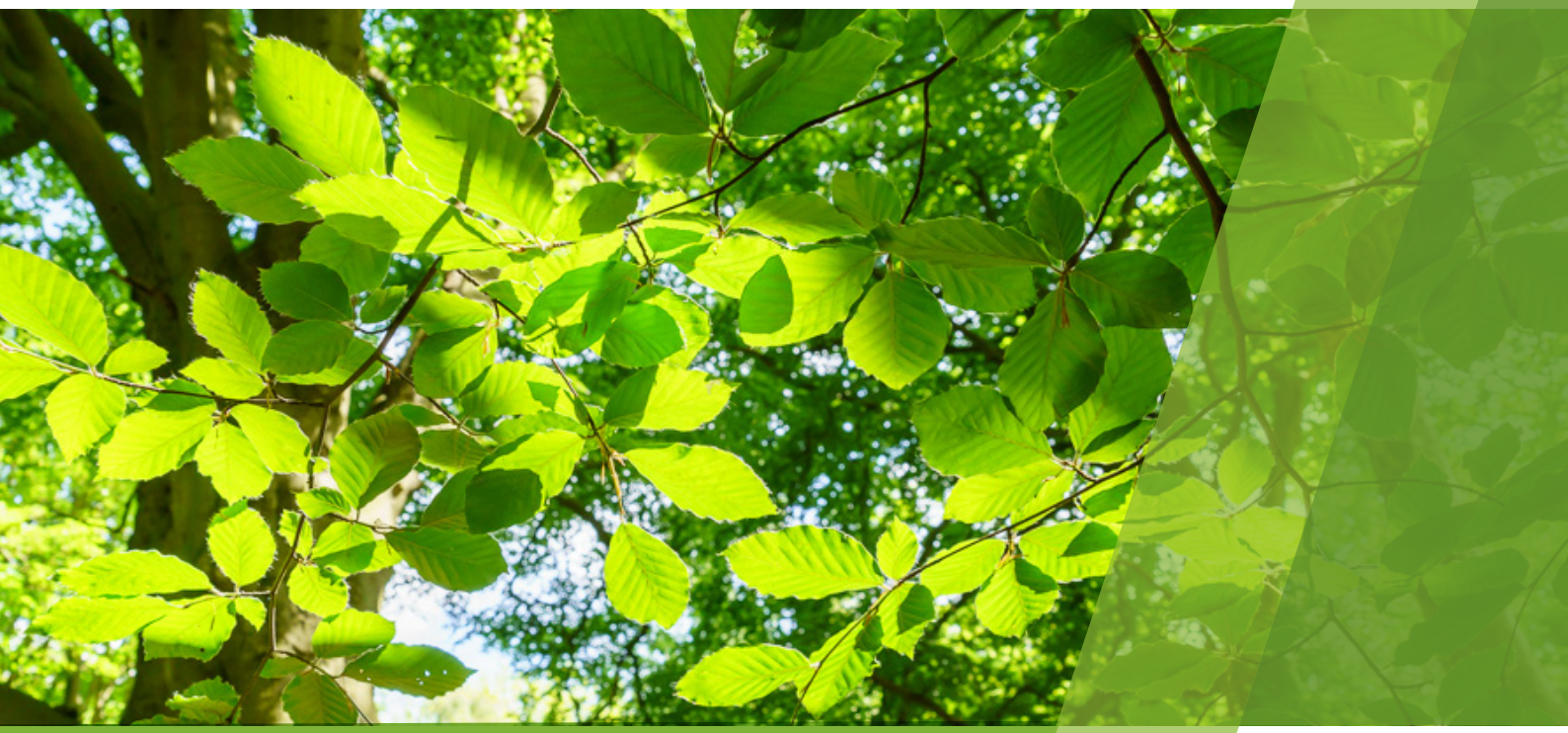

Greenwood Environmental Ltd | 10749899 | GB328956949
New Derwent House, 69-73 Theobald's Road, London, WC1X 8TA
hello@greenwood-env.co.uk | +44 208 064 0870 | www.greenwood-env.co.uk