

Marcus Foster Arboricultural Design & Consultancy

BA (Hons) | NDArb | Techcert (AA) | MArborA

Arboricultural Survey Impact Assessment & Method Statement Report (BS5837:2012)

<u>Site</u>

Flat 2, 108 Greencroft Gardens London NW6 3PH

<u>Client</u>

Valerie Paisner

Date of Report:

May 2024

Report Reference:

AIA/MF/086/24

Report Prepared by:

Marcus Foster BA (Hons) NDArb. TechCert (AA) MArborA



Marcus Foster Arboricultural Design & Consultancy Tel: + 44 (0) 7812 024 070 <u>mail@marcus-foster.com</u> <u>www.marcus-foster.com</u>

Contents

- 1. Instructions
- 2. Introduction
- 3. Survey methodology
- 4. Survey Limitations
- 5. Tree Survey Summary
- 6. Arboricultural Impact Assessment
- 7. Arboricultural Method Statement
- 8. Communication Monitoring & Compliance
- 9. Tree Works Schedule

Appendices

- A: Tree Survey B: Tree Survey Plans: T001-T003 C: Tree Protection Notice
- D: References

1.0 Instructions

1.1 This report has been commissioned by Valerie Paisner to survey, assess and provide an Arboricultural Impact Assessment and Method Statement for the trees sited within close proximity of proposed development works at Flat 2, 108 Greencroft Gardens, London, NW6 3PH.

2.0 Introduction

2.1 A site visit was conducted on 26th April 2024 to survey and assess the trees. The weather at the time of inspection was mild and bright with trees in mid spring mode.

2.2 The tree survey, report and recommendations have been compiled for the 2 no. trees (T1-T2) surveyed within the site and neighbouring sites where relevant.

2.3 The details of the subject trees are set out in the tree survey table in *Appendix A*. The trees were surveyed on the date and time shown above and the tree survey assessment information for the tree describing size, condition and surroundings are found within this appendix.

2.4 The trees located within the site are shown in tree survey drawings T001-T003, Appendix B, and these correspond to the tree survey results table, Appendix A. Photographs of the trees can also be found in Appendix C.

2.5 This report and the opinions within it have been produced by Marcus Foster, a qualified arboriculturist and Professional Member of the Arboricultural Association with over 20 years experience and holding a National Diploma in Arboriculture, the Arboricultural Association's Technicians Certificate, Professional Tree Inspection Certificate (LANTRA) as well as a degree in History and Society. Work experience within the industry includes work as a Contracts Manager for an Arboricultural Association Approved Company, a Local Authority Tree Preservation Officer and an independent Arboricultural Consultant. As a consultant many of the projects undertaken by myself are in the inner London Boroughs of Islington, Hackney, Westminster, Camden, Southwark and RBKC, making Marcus Foster familiar with the most recent requirements of development and constraints on urban trees.

3.0 Survey Details and Scope

3.1 The site survey included the 2 no. trees (T1-T2) as shown in the survey, *Appendix A*, and also highlighted on the site plans, *Appendix B*.

3.2 The trees and hedges were surveyed from ground level from within their site location. The diameter of the trunks have been measured using a DBH tape at 1.5m height. The height of the trees have been estimated.

3.3 The following information was recorded for each tree and is shown in the Tree Schedule included in *Appendix A*:

- Number: an identity number which cross-references locations shown on the plan in Appendix A with the schedule in Appendix B.
- · Species: listed by common names
- Tree Height: height in metres (m)
- Tree Spread: spread in metres (m)
- Stem diameter: measured in millimetres (mm) and taken at 1.5m above ground level
- Age Class: Y (young); EM (early-mature); M (mature); OM (overmature)
- Vitality: G (good); F (fair); P (poor); D (dead)
- Structural Condition: G (good); F (fair); P (poor); D (dead)
- · General Condition Specific comments relating to each tree
- Estimated Remaining Contribution (years)
- BS5837 Category Grading
- Protection Distance m2 Area (where applicable BS5827: 2012)
- Protection Distance Radius (where applicable BS5827: 2012)

3.4 Information recorded in the tree survey, *Appendix A* is expanded in the report findings and preliminary recommendations have been made in *Section 5*.

3.5 Findings as shown within *Appendix A* and assessed within *Section 5* are also highlighted within *Appendix B* which incorporates the Tree Constraints Plan (TCP) - drawing T002 addressing areas where arboricultural solutions are required. The Tree Protection Plan (TPP) - drawing T003 provides outline tree protection measures.

4.0 Survey Limitations

4.1 No soil excavations have been carried out.

4.2 This report only considers the trees and conditions at the time of inspection. As the inspection was only visual no guarantee can be given concerning the condition of the wood at present in any of the trees inspected and furthermore that no future problems or deficiencies may arise.

4.3 The survey has been undertaken as a survey of the trees without prior influence of the development and implicating factors.

4.4 No invasive tools were used during this site survey.

4.5 It should be noted that vegetation including shrubs within this / the neighbouring sites have not been included in the survey as none were within close or relevant proximity .

4.6 The survey has been undertaken from within the site only.

4.7 No additional documentation unrelated to the property or development has been referred to for the trees or the property for the compilation of this report.

5.0 Tree Survey Summary

5.1 The trees have been surveyed in accordance with BS5837: 2012 'Recommendations for trees in relation to construction' (BS5837: 2012) and have been rated as follows:

Category 'A' trees

Trees of high quality with an estimated remaining life expectancy of at least 40 years. Trees have been categorised as 'A' trees for one of the following reasons:

- Mainly arboricultural qualities
- Mainly landscape qualities
- Mainly cultural values including conservation

Within the Site Plan (Appendix B) those trees rated as 'A' category trees have a **green** outline as denoted within the site plan key / survey.

N/A

Category 'B' trees

Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. Trees have been categorised as 'B' trees for one of the following reasons

- Mainly arboricultural qualities
- Mainly landscape qualities
- Mainly cultural values including conservation

Within the Site Plan (Appendix B) those trees rated as 'B' category trees have a **blue** outline as denoted within the site plan key.

T1, T2

Category 'C' trees

Trees of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm. Trees have been categorised as 'C' trees for one of the following reasons

- Arboricultural qualities unremarkable trees of very limited merit
- Mainly landscape qualities
- Trees with no material conservation or cultural value

Within the Site Plan (Appendix B) those trees rated as 'C' category trees have a **grey** outline as denoted within the site plan key.

N/A

Category 'U' trees

Trees 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. Within the Site Plan (Appendix B) those trees rated as 'U' category trees have a **red** outline as denoted within the site plan key.

N/A

5.2 The trees have been surveyed taking into account condition, general health and form without the development process influencing the survey. In addition they have also been surveyed taking account of amenity value that is offered in relation to both the landscape and surrounding buildings and streetscape. This report outlines the impact that the proposed development will have on the overall treescape and landscape; it provides recommendations to ensure that long-term amenity value for the area is retained.

5.3 The report has been written with close reference to the British Standard Guidance, British Standard 5837: 2012 'Recommendations for trees in relation to construction' (BS5837: 2012), which addresses the juxtaposition between trees and structures. The Arboricultural Impact Assessment highlights areas where the trees will require protection which should be addressed within the Arboricultural Method Statement (AMS) and/or Tree Protection Plan (TPP) specific to the site and proposed scheme, and corroborating with all construction and landscape method statements as relevant.

5.4 The report specifies precautions which shall be taken when working close to retained trees. Important terms include:

Root Protection Area (RPA)

The area defined as requiring protection from development from retained trees within BS5837 (2012). Using a calculation provided within BS5837 a radius distance is provided based on a measurement of the main stem taken at 1.5m height.

Construction Exclusion Zone (CEZ)

This is the RPA where no construction activity should occur and damage is prevented by either installing fencing to restrict access or installing ground protection that allows limited access above the ground, while protecting the rooting environment below.

Due to site constraints and the encroaching nature of development for an area within the RPA outside the CEZ where works are proposed, works must be carried out with care to minimise any impact on the tree rooting environment.

Tree Protection Plan (TPP)

The document which defines the extent and methodology of tree protection for the entire development process. This should be referred to AT ALL TIMES by the principal contractor and shall ensure safe protection of all retained trees on site.

Precautionary Area

An area where works must be undertaken with direct consultation with methodology as specified within the AMS report and / or scheme of Arboricultural supervision

6.0 Arboricultural Impact Assessment

Site Overview

6.1 The 2 no. trees (T1-T2) are located within Flat 2, 108 Greencroft Gardens, London, NW6 3PH and adjoining properties which is within the London Borough of Camden. The following statutory checks have been made for the site:

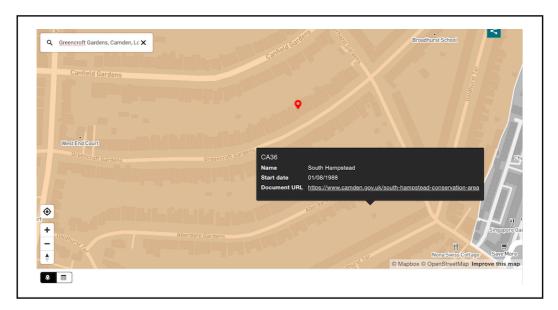
CONSERVATION AREA STATUS South Hampstead Conservation Area , London Borough of Camden

TREE PRESERVATION ORDER (TPO) STATUS TPO protection check has not been undertaken. BS5837 does not draw any distinction between trees subject to statutory protection, such as a Tree Preservation Order, and those trees without. This is principally because a detailed planning consent overrides any TPO protection

6.2 The trees are sited as follows:

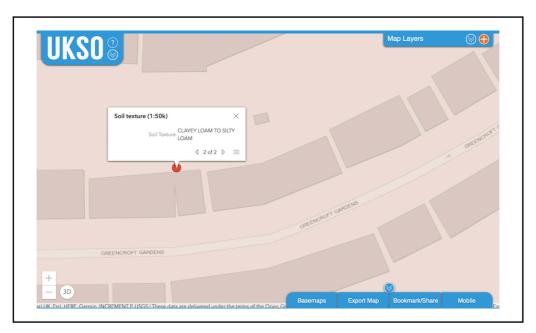
Tree T1 - 106 Greencroft Gardens Tree T2 - Flat 2, 108 Greencroft Gardens

6.3 Extracted maps confirms site location and absence of statutory protection:



Extract from: https://opendata.camden.gov.uk/People-Places/Camden-Conservation-Areas-Map/d2m6-mjue

AIA/MF/086/24: AIA+AMS BS5837:2012 Tree Report Site: Flat 2, 108 Greencroft Gardens, London, NW6 3PH Prepared for: Valerie Paisner Date: May 2024 6.4 The underlying soil to this area is classified as 'clayey loam to silty loam' within the UK Soil Observatory (www.ukso.org) - a medium to heavy soil mix. The presence of a clay element within the soil is significant in terms of both tree protection and foundation design. Clay soils can experience substantial volume changes when vegetation extracts moisture from the ground and they are also prone to compaction when wet; therefore with potential for volumetric change in the soil post development.



6.5 The soil profile is confirmed as below:

EXTRACT FROM: https://mapapops2.bgs.ac.uk/ukso/home.html

6.6 Any foundations should also be designed in accordance with the recommendations contained within NHBC Chapter 4.2 (National House Building Council, 2010) and should account for the possibility of both subsidence and heave from relative soil conditions which are recommended to be researched specifically to the site.

6.7 For the purposes of this report, reference has been made to the following plans for the proposed development which comprises the proposal for general refurbishment works and a rear extension (infill) to existing extension, with associated final landscapes.

Drawing and Planning GREGA_P001_Existing_Ground Floor GREGA_P101_Proposed_Ground Floor 6.8 The summary of arboricultural impact which shall be assessed is as follows:

•General development / construction works within close proximity of retained trees

•Retention of all trees

•Selective ground works in accordance with tree protection measures within the RPA of retained trees

•Potential compaction and damage of the retained trees in relation to the development and landscape process

•Potential damage to canopies of the retained trees surrounding the site during development and landscape process

•The use of and storage of materials and chemicals on site within close proximity of the trees

•Impact of development upon trees via future occupancy

6.9 The trees and the impact from the proposed development are evaluated within this section to determine overall arboricultural impact from the proposed development. Where trees are retained the Root Protection Area (RPA) for each tree is evaluated in relation to proposed development works. The following is assessed within this section:

(i) Where tree protection measures are deemed appropriate these are highlighted

(ii) No mitigation for tree loss is required as no trees are proposed for removal

Arboricultural Impact Assessment

6.10 The trees sited adjacent to the subject site are of the following species:

Prunus pissardii (Purple plum) *Pyrus communis* (Pear)

6.11 The main attributes of the trees are as follows:

(i) Tree T1, Purple plum - 'B' category. Off site. Over extended leaders develop to south thereafter likely suppressed from previous existing tree. Overhanging crown of 1-1.5m branch lengths at 2-7m height. 1.4m height boundary wall between tree and subject site. 2.5m clearance of crown from proposed line of extension.

(ii) Tree T2 - Pear - 'B' category. Tree leans to south west. Rear garden location at distance from development

6.12 Summary photographs of the trees are shown below with full findings within the Tree Survey Schedule - *Appendix A:*



Tree T2 viewed to north



Tree T1 viewed to north

6.13 To the rear of the property where rear extension with any associated final landscape works are proposed the potential impacts for individual trees are as follows:

(i) Construction site storage / infrastructure including storage of materials, chemicals, site welfare within the site generally

(ii) Future occupancy of extension structure within close proximity of retained trees

6.14 For the development there is no incursion to the RPA of retained trees for the development process. Additionally the crowns shall not be impacted due to location, managed form / limited overhang to site.

6.15 In relation to future occupancy it is clear that the proposed extension shall not be detrimentally impacted by the shading of those trees retained due to historic existence of trees and the dwelling and minor extent of extension to rear of property.

6.16 Protection of all trees highlighted for retention is justified based on the following:

- (i) No RPA incursion for retained trees
- (ii) Application of tree protection measures incorporating
 - Tree protection for CEZ
 - Off site location for tree T1 affording further protection including for crowns
 - Ground protection applicable for access to development area

6.17 The following tree protection measures shall be applied as specified within Section 7, AMS and the TPP which shall mitigate against any potential damage ensuring all trees remain protected:

(i) GROUND PROTECTION

Ground protection for RPA area exposed to construction works shall be implemented as shown within the AMS & TPP

(ii) PROTECTION FROM SITE STORAGE, INFRASTRUCTURE & WELFARE

Site storage, mixing of chemicals and site welfare shall be sited outside of the RPA of retained trees

Summary of Arboricultural Impact

6.18 The proposed development shall not impact the trees other than with the possibility to do so during the development. Tree protection measures and mitigation for the implementation of development are as follows:

Tree Protection applicable to the following trees: T1, T2

Mitigation applicable for the removal of the following trees: N/A

The tree protection measures shall ensure that the development does not detrimentally impact the amenity value and canopy cover of the site including those trees neighbouring the site.

6.19 In summary the arboricultural impact as outlined within drawing T003 - Tree Protection Plan (TPP) shall require the following tree protection measures

- (i) GROUND PROTECTION
- (ii) PROTECTION FROM SITE STORAGE, INFRASTRUCTURE & WELFARE

7.0 Arboricultural Method Statement

7.1 The following tree protection measures require close adherence AT ALL TIMES as outlined within this report. The measures are outlined within Tree Protection Plan (TPP) - drawing T003.

7.2 Tree Works

7.2.1 No tree Works are required as confirmed within Section 9 - Tree Works Schedule

7.3 Tree Protection Fencing

7.3.1 Protection of the trees highlighted for retention shall not require fencing due to off site location and retention of existing boundary feature / location of T2. The all weather notices as included in *Appendix C* must be applied to the boundary line against T1 to confirm that the tree is sited within Construction Exclusion Zones.

7.4 Ground Protection

7.4.1 Within the RPA ground protection must be applied with the following fully adhered to:

- Implementation of 75mm bark mulch layer overlapped with minimum 15mm plyboard surface or load bearing ground protection boards to provide ground protection for development process
- No storage of spoil within this area
- No storage of chemicals within this area

7.3.2 Where applied, ground protection shall be removed for final landscape works within the RPA of retained trees.

7.5 Storage of Construction site related materials, plant and spoil / Site Welfare & Site Office

7.5.1 A designated storage area / site welfare & office must be set out at precommencement stage which is located outside of the RPA of retained trees and within existing hard standing. Strict adherence to this area must be made to this area and any amendment would require written consent from the tree officer. 7.5.2 Site welfare and the site office must be set out at pre-commencement stage which is located outside of the RPA of retained trees. Strict adherence to this area must be made to this area and any amendment would require written consent from the tree officer.

7.6 Final Landscape Works

7.6.1 For final landscaping works the following must apply where carried out within the RPA of retained trees

- No reduction in levels of the underlying soil surface will occur during final landscaping works within the RPA of retained trees
- Close adherence with detailed root protections specifications as outlined within this report for installation of pergola and shed
- No compaction of soils for establishing level base

7.6.2 No soakaway shall be sited within the RPA of retained trees.

7.7 Installation of utility services

7.7.1 The installation and/or amendment of utility services shall not be required due to existing building and minor extent of extension. Where utility updates are required - with the permission of the Local authority only - these shall be carried out via air spading or similar non intrusive technique

7.7.2 Air spade techniques must be operated by qualified contractors with all work and findings documented. Air spades utilise a two-tool air compressor and hand-held lance to dislodge soil, using highly pressurised jets of air. This allows trenches to be excavated without causing the significant root damage associated with the use of conventional digging techniques such as, spade or excavator buckets. Example imagery is shown below:



Example imagery of air spade use for implementing utilities beneath root plate (existing)

7.7.3 Reputable companies providing this service include as follows (list not exhaustive):

https://www.ruskins.co.uk/airspade http://www.dfclark.co.uk/bionomique-service/air-spade-investigation-and-remediation/

8.0 <u>Communication, Monitoring and Compliance</u>

8.1 In ensuring that all Tree Protections Specifications as highlighted within this AMS are closely adhered to at all times, it is important to set out for the long term of the development, communication details for key individuals and tasks that require monitoring.

8.2 For all tree protection measures these must be considered as sacrosanct and should not be removed or altered without prior written consent from the Local Authority tree officer and/or consulting arboriculturist.

8.3 The local authority arboriculturist will have free access to the site and forward any concerns / recommendations directly to the consulting arboriculturist.

8.4 The following individuals and organisations are central to the delivery of the scheme in relation to the tree protection measures it requires:

CONSULTING ARBORICULTURIST

Name - Marcus Foster MArborA Telephone - 07812024070 Contact - Marcus Foster Email - mail@marcus-foster.com

LONDON BOROUGH OF CAMDEN - TREE OFFICER

Name - Arboricultural Services - London Borough of Camden Telephone - 020 7974 5939 Contact - Nick Bell - Tree Officer Email - nick.bell@camden.gov.uk

9.0 Tree Works Schedule

9.1 Any tree work shall be carried out to BS 3998; 2010 Recommendations for Tree Work.

9.2 Tree works to be undertaken at pre-commencement stage.

TREE WORKS SCHEDULE: Flat 2, 108 Greencroft Gardens, London, NW6 3PH								
Tree No.	Common Name	BS5837 Category	Tree Works	Reasons for works				
T1	Purple plum	В	No action required	/				
T2	Pear	С	No action required	/				

NOTE: Wildlife & Habitat Protection Guidelines

The tree work specifications included within this report do not provide an exemption from the requirements to comply with the Wildlife and Countryside Act 1981, the Habitats Regulations 1994 and the Countryside and Rights of Way Act 2000, or any acts offering protection to wildlife. Of particular note is the protection offered to bats, birds and their nests, whilst being built or in use. It must be noted that failure to comply with the Acts may result in a criminal prosecution.

Appendices

Appendix A

Tree Survey Schedule (BS5837:2012)

Flat 2, 108 Greencroft Gardens, London, NW6 3PH

Colour Key: BS5837: 2012 (see Section 3.6)



<u>KEY</u>

- Number: an identity number which cross-references locations shown on the plan in Appendix A with the schedule in Appendix B.
- Species: listed by common names
- Tree Height: height in metres (m)
- Tree Spread: spread in metres (m)
- Stem diameter: measured in millimetres (mm) and taken at 1.5m above ground level (e) denotes estimate due to limited access and/ or off site location
- Age Class: Y (young); EM (early-mature); M (mature); OM (over-mature)
- Vigour: G (good); F (fair); P (poor); D (dead)
- Structural Condition: G (good); F (fair); P (poor); D (dead)
- · General Condition Specific comments relating to each tree
- Estimated Remaining Contribution (years)
- BS5837 Category Grading
- Protection Distance m2 Area (where applicable BS5827: 2012)
- Protection Distance Radius (where applicable BS5827: 2012)

BS5837:2012 TREE SURVEY
SITE: Flat 2, 108 Greencroft Gardens, London, NW6 3PH
DATE: 26th April 2024

Tree No	Species	Height (m)	DBH (mm)	Spread (m) N/E/S/W	Age	Structural Condition	Vitality	BS5837 (2012) Rating	Remaining Contribution (years)	Comments / Structural Condition	First branch height (m)	First canopy height (m)	Root Protection Area (RPA) m2	Root Protection Area (RPA) Radius (m)
T1	Purple plum	7	400 (e)	3 5 6 2	м	F	G	B1	20 years +	Off site to east. Straight main stem to 2m height. Over extended leaders develop to south thereafter likely suppressed from previous existing tree. Overhanging crown of 1-1.5m branch lengths at 2-7m height 1.4m height boundary wall between tree and subject site. 2.5m clearance of crown from proposed line of extension.	3	2	72.39	4.8
Т2	Pear	8	380	4 2 4 4	м	G	G	B1	20 years +	Tree leans to south west. Rear garden location at distance from development	4	3	65.33	4.6

AIA/MF/086/24: AIA+AMS BS5837:2012 Tree Report Site: Flat 2, 108 Greencroft Gardens, London, NW6 3PH Prepared for: Valerie Paisner Date: April 2024

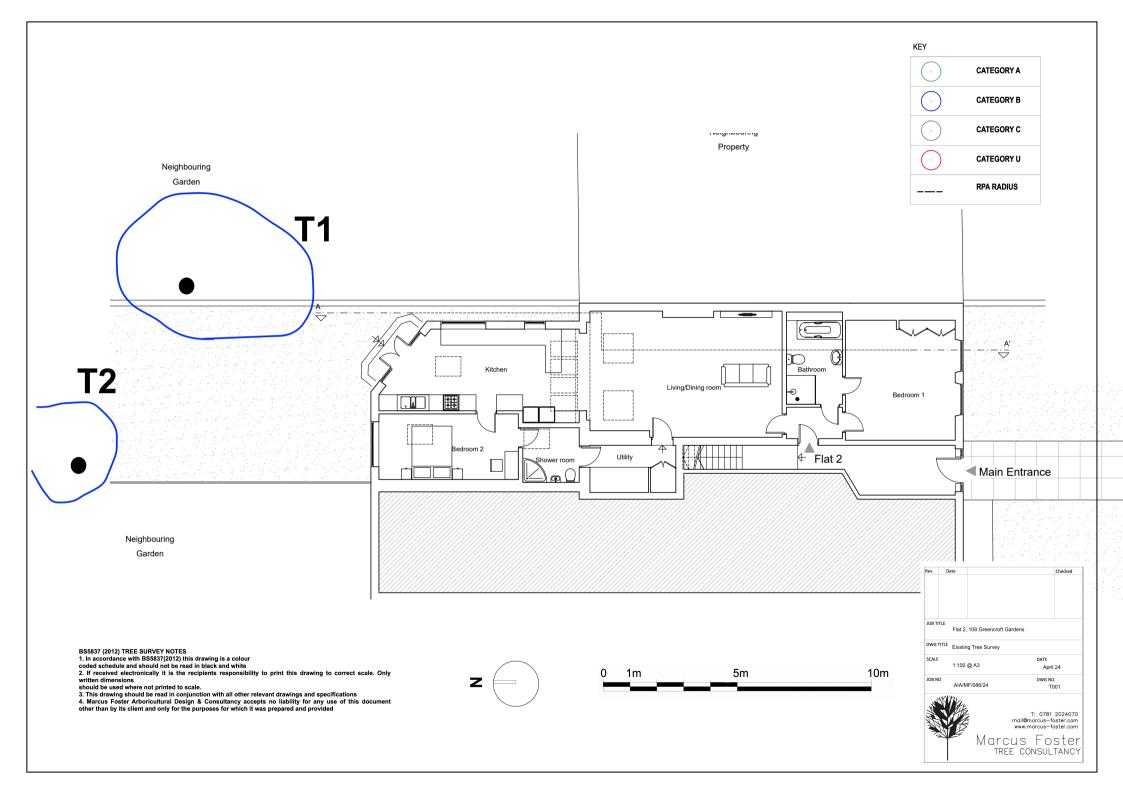
Appendix B

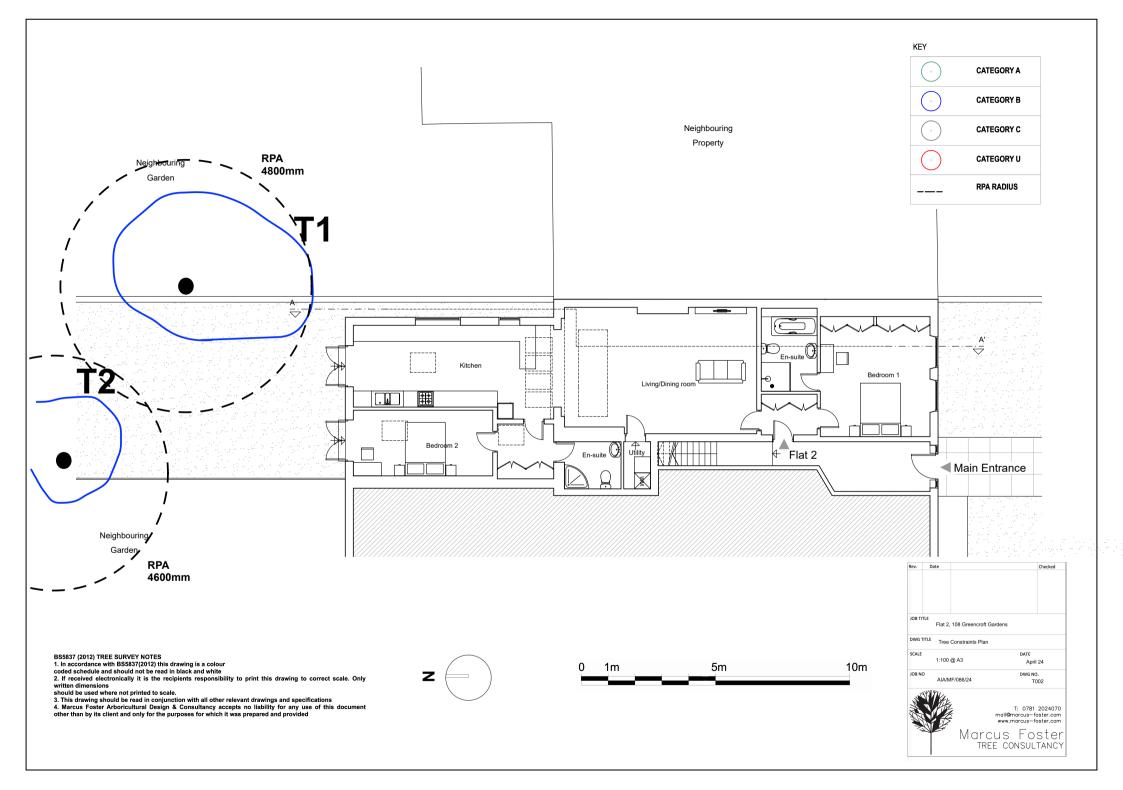
Existing Tree Survey (T001) Tree Constraints Plan (T002) Tree Protection Plan (T003) (BS5837:2012)

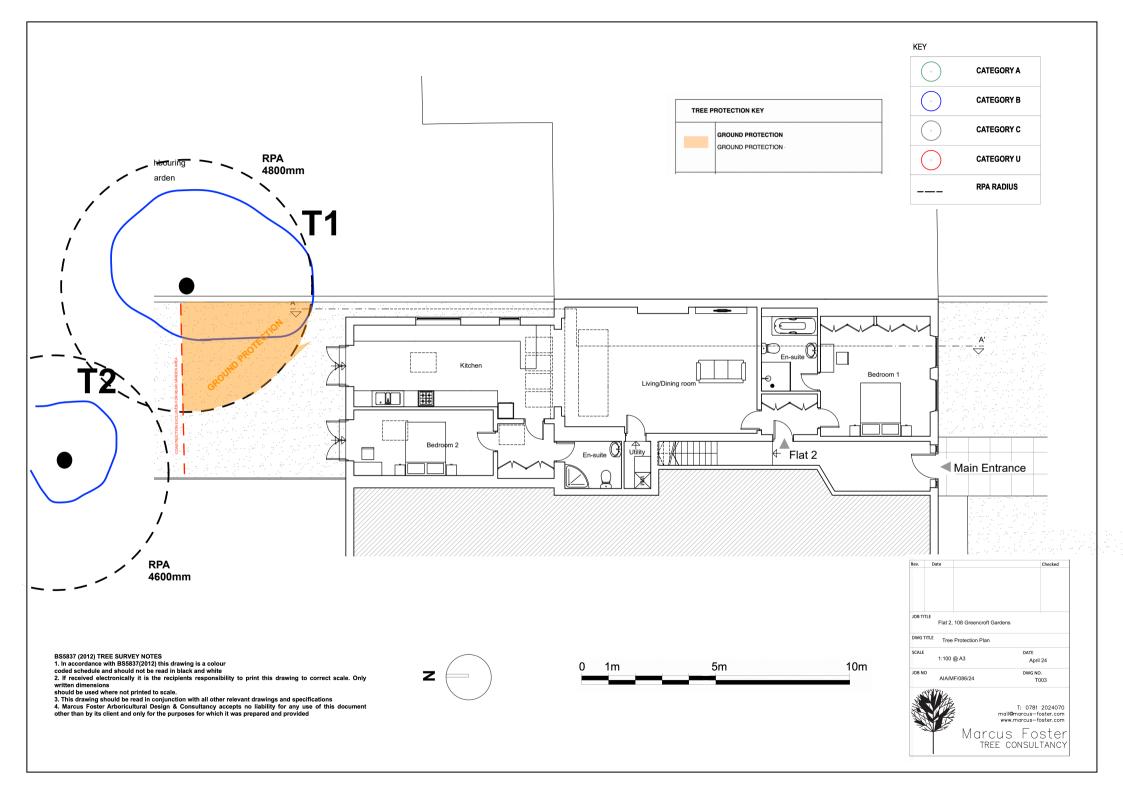
Flat 2, 108 Greencroft Gardens, London, NW6 3PH

Colour Key: BS5837: 2012 (see Section 3.6)









Appendix C: Tree Protection Notice

Generic Tree Protection Notice (BS5837: 2012):

Notice to be clearly shown on site where fencing constructed AT ALL TIMES



AIA/MF/086/24: AIA+AMS BS5837:2012 Tree Report Site: Flat 2, 108 Greencroft Gardens, London, NW6 3PH Prepared for: Valerie Paisner Date: May 2024

Appendix D:References

- 1. BS5837: British Standard: Trees in relation to design, demolition and construction Recommendations, British Standard (2012)
- 2. Principles of Tree Hazard Assessment and Management, Lonsdale, D. (Department for Transport, Local Government and the Regions, 1999)
- 3. The Body Language of Trees, Mattheck, C. and Breloer, H. (HMSO, 1994)
- 4. Trees in Britain, Philips, R. (Pan Books, 1978).
- 5. Diagnosis of III Health in Trees, Strouts, R. and Winter, (TSO, 1994)
- 6. National Planning Policy Framework February 2023 Ministry of Housing, Communities and Local Government
- 7. NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Issue 2), (November 2007)

PREPARED BY MARCUS FOSTER MArborA END OF REPORT _ Page 25/25