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Arboricultural Survey & Impact Assessment (BS5837:2012)

Site

5 Lawn Road
London
NW3 2XS

Client

LBMV Architects

Date of Report:

4th May 2019

Report Reference:

AIA/MF/057/20

Report Prepared by:

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1.0 Introduction

1.1 This report has been commissioned by LBMV Architects to survey, assess and provide an Arboricultural Impact Assessment for the 5 x trees, 1 x shrub and 1 x group (T1-T7) sited at and within close proximity of proposed development works - 5 Lawn Road, NW3 2XS.

1.2 A site visit was conducted on 29th April 2020 to survey and assess the trees. The weather at the time of inspection was sunny and bright with warm temperatures and trees in early bud burst.

1.3 The tree survey, report and recommendations have been compiled for the 5 x trees, 1 x shrub and 1 x group (T1-T7) surveyed within the site and neighbouring properties as required:

- 5 Lawn Road - T1, T3, T6 & T7
- 6 Lawn Road - G2, S4 & T5

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.

1.4 The trees located within the site are shown in site plans T001-T003, *Appendix B*, and these correspond to the tree survey results table, *Appendix A*.

1.5 Photographs of the trees can also be found in *Appendix C*.

1.6 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 19 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 projects undertaken 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.

1.7 No additional documentation has been referred to relating to the tree or the building at this property for the compilation of this report.

2.0 Survey Details and Scope

2.1 The site survey included the 5 x trees, 1 x shrub and 1 x group (T1-T7) as shown in the survey, *Appendix A*, and also highlighted on the site plans, *Appendix B*.

2.2 The trees were surveyed from ground level from within the site. The diameter of the trunks have been measured using a DBH tape at 1.5m height where within the site and estimated for those off site. The height of the trees have been estimated.

2.3 The following information was recorded for the 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 (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)

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

2.5 Findings as shown within *Appendix A* and discussed within *Section 4* 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.

3.0 Survey Limitations

3.1 No soil excavations have been carried out.

3.2 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.

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

3.4 No invasive tools were used during this site survey.

3.5 It should be noted that vegetation including shrubs within this / the neighbouring sites have only been included in the survey and report where mature and large.

3.7 Where off site trees have been included within this survey, trunks have been estimated and full inspection of the bases of trees has not been possible.

4.0 Tree Survey Summary

4.1 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.

T5 & T7

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.

G2, T3, T4, T6

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.

T1

4.2 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.

4.3 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 an Arboricultural Method Statement (AMS) specific to the site and proposed scheme. and corroborating with all construction and landscape method statements as relevant.

5.0 Findings and Discussion:

Site Overview

5.1 There are 5 x trees, 1 x shrub and 1 x group (T1-T7) located within close proximity of the proposed development works. The trees surveyed are located within London Borough of Camden. And the following applies:

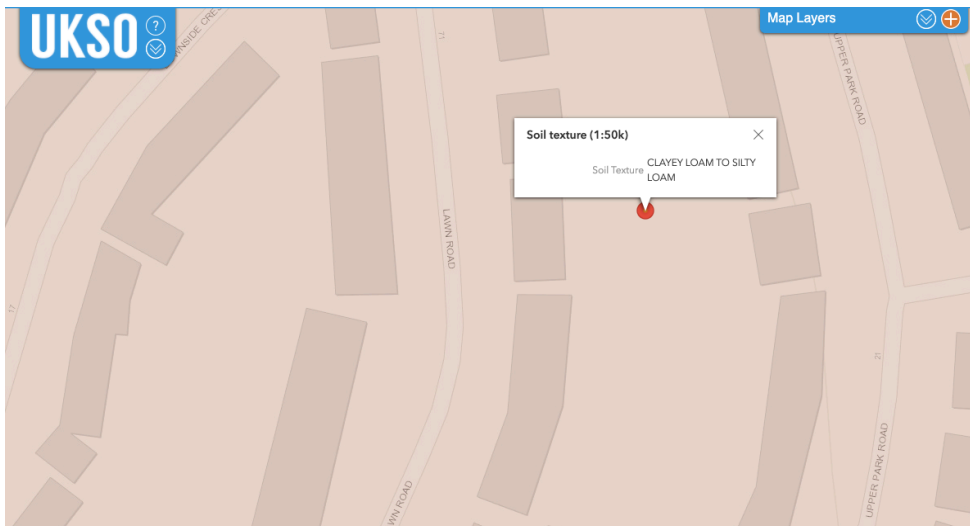
CONSERVATION AREA STATUS

Parkhill and Upper Park Conservation Area, LB Camden

TREE PRESERVATION ORDER (TPO) STATUS

Checks not made / not deemed relevant

5.2 The underlying soil to this area is classified as 'clayey to loam' within the UK Soil Observatory (www.ukso.org) - a medium to heavy soil mix:



Extract from Soil Observatory - 04/05/19 - www.ukso.org

5.3 The site comprises a semi-detached property with hard and soft landscapes to the front and soft landscapes to the rear.

5.4 For the purposes of this report, reference has been made to the following plans for the proposed development:

LBMV Architects
0079-A1000-EXISTING
0079-A2000-PROPOSED

5.5 The proposed development comprises general refurbishment works and a rear extension. The development has the potential to affect the trees in the following ways

- Loss of 1 x tree - 'U' category - unrelated to the development
- Amendment to building footprint at rear of property with development towards retained trees
- Compaction of the ground surrounding the trees during development and landscape process
- The use of and storage of materials and chemicals on site within close proximity of the trees
- The long-term impact of associated works of the proposed development

5.6 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 and where trees within the site are proposed for removal mitigation measures are assessed.

Tree Survey Notes in Relation to Development

Tree T1 - Cherry: 5 Lawn Road

5.7 Tree T1 is a mature to over-mature Cherry sited off site on the front western boundary with the public highway. The tree has the following main characteristics being rated as a 'U' category specimen (BS5837:2012):

- 50% of crown is dead and remains in situ.
- Climber clad to 4m height.
- Over-extended over public highway.
- Tree leaning on wall with direct damage associated to wall; possible supporting from wall. Splitting in main stem at 2.0m

5.8 Therefore the tree is rated as a 'U' category tree and is recommended for removal in order to remove the hazard which currently exists. The replacement of a small to medium sized tree would provide replacement canopy cover and wildlife attributes for this front garden location. Suitable species could be but are not limited to *Amelanchier arborea* 'Robin Hill' or *Crataegus prunifolia*.

Group G2: Mixed species shrubs: 6 Lawn Road

5.9 Group G2 comprises off site mature shrubs growing to the boundary of the site with key attributes as follows and being rated as 'C' category (BS5837:2012):

- Comprising Pittosporum / Eleagnus / Lilac
- Mature form
- Contained within No. 6 Lawn Road front garden

5.10 No protective measures are required due to no RPA being applicable and off site location without overhanging growth.

Tree T3 - Japanese maple: 5 Lawn Road

5.11 Tree T3 is a mature Japanese maple sited on the northern boundary - rear garden. The tree has the following main characteristics being rated as a 'C1' category specimen (BS5837:2012):

- Multi-stem form - ornamental
- Union at 2.0m sound.
- Over-extended to south
- Generally compact form

5.12 The Root Protection Area (RPA) for this tree - 1.4m RPA radius / 72.39m² area will not be affected by proposed development and general refurbishment works. However it is recommended that the following tree protection measures are carried out during development works:

- TREE PROTECTION FENCING
BS5837 or basal shuttering tree protection fencing is recommended to enclose the main stem of tree T3 for the entire development process / until final landscape works

Shrub S4 - Elder: 6 Lawn Road

5.13 Shrub S4, an Elder sited off site to the north - rear garden growing directly against the elevation of the building. The tree has the following main characteristics being rated as a 'C1' category specimen (BS5837:2012):

- off site to north
- large shrub
- overhanging southern crown to site of 0.5m at 5-7m height

5.14 The Root Protection Area (RPA) for this tree - 2.0m RPA radius / 12.57m² area will not be affected by proposed development, general refurbishment and final landscape works for the following reasons:

- shrub form with limited rooting mass
- boundary wall directly to south of tree retaining roots from No.5
- limited overhang (only within upper crown)

Therefore no protective measures are recommended for this large shrub / small tree within close proximity of rear building elevation.

Tree T5 - Hawthorn: 6 Lawn Road

5.15 Tree T5 comprises an off site mature tree growing to the north of the rear garden with key attributes as follows and being rated as 'B' category (BS5837:2012)::

- Mature ornamental form
- Ivy clad to 5m
- Overhang to rear garden at 4-7m height

5.16 The tree shall remain unaffected by proposed development works. However it is recommended that the following tree protection measures are carried out during development works to ensure full protection:

- TREE PROTECTION FENCING

BS5837 or basal shuttering tree protection fencing is recommended to protect the root plate where encroaching within No.5 Lawn Rd for the entire development process / until final landscape works

Tree T6 - Whitebeam: 5 Lawn Road

5.17 Tree T5 is a semi-mature Whitebeam sited within the rear garden. The tree has the following main characteristics being rated as a 'C1' category specimen (BS5837:2012):

- Developing form
- Single stemmed
- Good condition

5.18 The Root Protection Area (RPA) for this tree - 2.0m RPA radius / 12.57m² area will not be affected by proposed development and general refurbishment works. However it is recommended that the following tree protection measures are carried out during development works to ensure full protection:

- TREE PROTECTION FENCING

BS5837 or basal shuttering tree protection fencing is recommended to enclose the main stem of tree T3 for the entire development process / until final landscape works

Tree T7 - Lime 5 Lawn Road

5.19 Tree T7 is a mature Lime sited within the rear garden. The tree has the following main characteristics being rated as a 'B1' category specimen (BS5837:2012):

- Lean to north west; growing from / against rear boundary wall
- Union at 5m - 3 x main stems develop
- Reduced crown last carried out 3-4 years ago
- Good amenity value

5.20 The Root Protection Area (RPA) for this tree - 7.6m RPA radius / 179.53m² area will not be affected by proposed development and general refurbishment works. However it is recommended due to the size and maturity of the tree that the following tree protection measures are carried out during development works to ensure full protection:

- TREE PROTECTION FENCING

BS5837 tree protection fencing is recommended to enclose the main stem of tree T7 for the entire development process / until final landscape works

6.0 Summary & Tree Protection

6.1 The proposed development and to the rear of 5 Lawn Road and refurbishment works requires tree protection measures for the following trees:

T3, T6 & T7 - 5 Lawn Road
T5 - 6 Lawn Road

These tree protection measures shall ensure that the development does not detrimentally impact trees surveyed.

6.2 In summary the arboricultural impact as highlighted within T003 (Tree Constraints Plan) require the following tree protection measures

- TREE WORKS - applicable for T4

Note for Tree T4 (Cherry) removal works these are unrelated to the development and are recommended in relation to hazard assessment and adherence to duty of care

- TREE PROTECTION FENCING - applicable for T3, T5, T6 & T7

Basal shuttering or BS5837 tree protection fencing is recommended to enclose the main stem of highlighted trees for the entire development process

6.3 For tree protection measures the tree protection specifications and notices required for adherence to protection are highlighted within *Appendix D & Appendix E*.

6.4 For loss of the 1 x tree, the impact upon canopy cover loss / amenity value is limited and required to dispense with duty of care. The replacement with an ornamental specimen such as *Amelanchier arborea* 'Robin Hill' or *Crataegus prunifolia* would provide a more appropriate planting within the front of property landscaped garden

7. Appendices

Appendix A

Tree Survey Schedule (BS5837:2012)

5 Lawn Road
London
NW3 2XS

Colour Key: BS5837: 2012 (see Section 2.6)

-  Category A
-  Category B
-  Category C
-  Category U

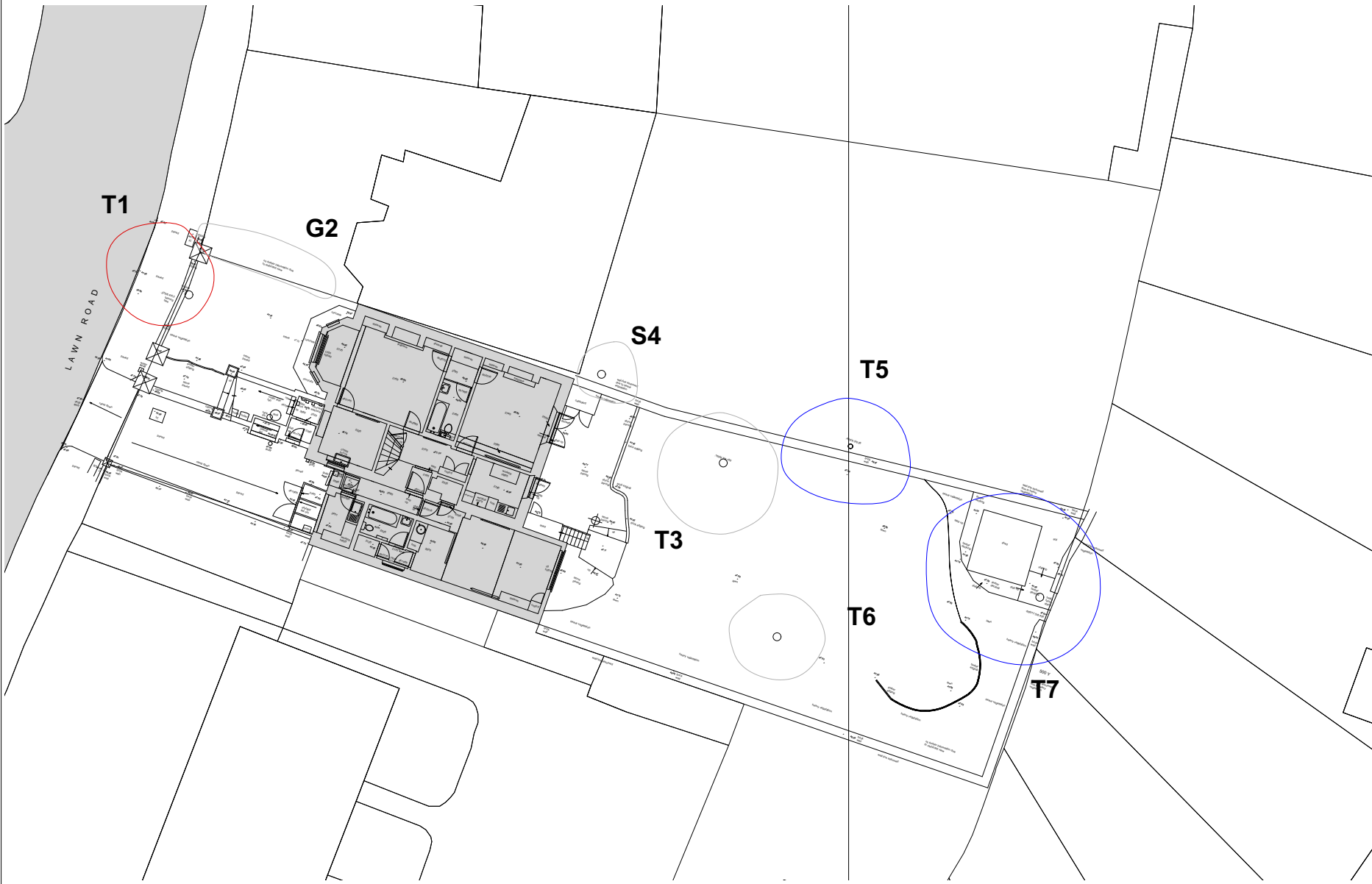
MARCUS FOSTER - ARBORICULTURAL DESIGN & CONSULTANCY
BS5837:2012 Tree Survey Schedule - 29/04/20
5 Lawn Road, London, NW3

Tree No	Species	Height (m)	DBH (mm)	Spread (m)	Age	Structural Condition	Vitality	BS5837 (2012) Rating	Remaining Contribution (years)	Comments / Structural Condition	Root Protection Area (RPA) m2	Root Protection Area (RPA) Radius
T1	Cherry	7	450	N:5 E: 2 S: 1 W:1	OM	P	P	U	Less than 5 years	50% of crown is dead and remains in situ. Climber clad to 4m height. Over-extended over public highway. Tree leaning on wall with direct damage associated to wall; possible supporting from wall. Splitting in main stem at 2.0m	-	-
G2	Mixed Species Shrubs: Pittosporum / Eleagnus / Lilac	5	m/s 100	N: 2 E: 4 S: 2 W:4	M	G	G	C1	10 years +	Off site; multi-stem grouping growing to boundary line	-	-
T3	Japanese maple	6	m/s 140	N: 1 E: 4 S: 3 W:3	M	G	G	C1	10 years +	Multi-stem form - ornamental. Union at 2.0m sound. Over-extended to south. Generally compact form	6.16	1.4
S4	Elder	8	m/s 200 (e)	N: 3 E: 3 S: 2 W:2	M	G	G	C1	10 years +	Off site to north; large shrub ; overhang to site of 0.5m at 5-7m height	12.57	2.0
T5	Hawthorn	8	m/s 300 (e)	N: 5 E: 4 S: 4 W:4	M	G	G	B1	20 years +	Off site to south; ivy clad with mature ornamental form	28.28	3.0
T6	Whitebeam	9	160	N: 3 E: 2 S: 2 W:2	SM	G	G	C1	10 years +	Developing single stemmed form	11.58	1.9
T7	Lime	18	630	N:5 E: 6 S: 6 W:5	M	G	G	B1	20 years +	Lean to north west; growing from / against rear boundary wall. Union at 5m - 3 x main stems develop. Reduced crown last carried out 3-4 years ago	179.58	7.6

Appendix B

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

5 Lawn Road
London
NW3 2XS



KEY

	CATEGORY A
	CATEGORY B
	CATEGORY C
	CATEGORY U
	RPA
	SHADING ARC

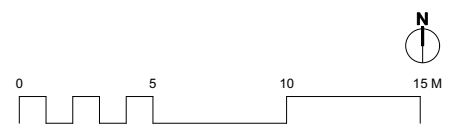
BS5837 (2012) Tree Survey Notes

1. In accordance with BS5837(2012) this drawing is a colour coded schedule and should not be read in black and white
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3. This drawing should be read in conjunction with all other relevant drawings and specifications
4. Marcus Foster Arboricultural Design & Consultancy accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided
5. Off site trees have been plotted based on site visit survey and locations are not based upon topographical survey

NOTE: Tree survey locations based on previous undertaken topographical surveys for design issue and additional GIS mapping has not been undertaken for the purposes of this survey

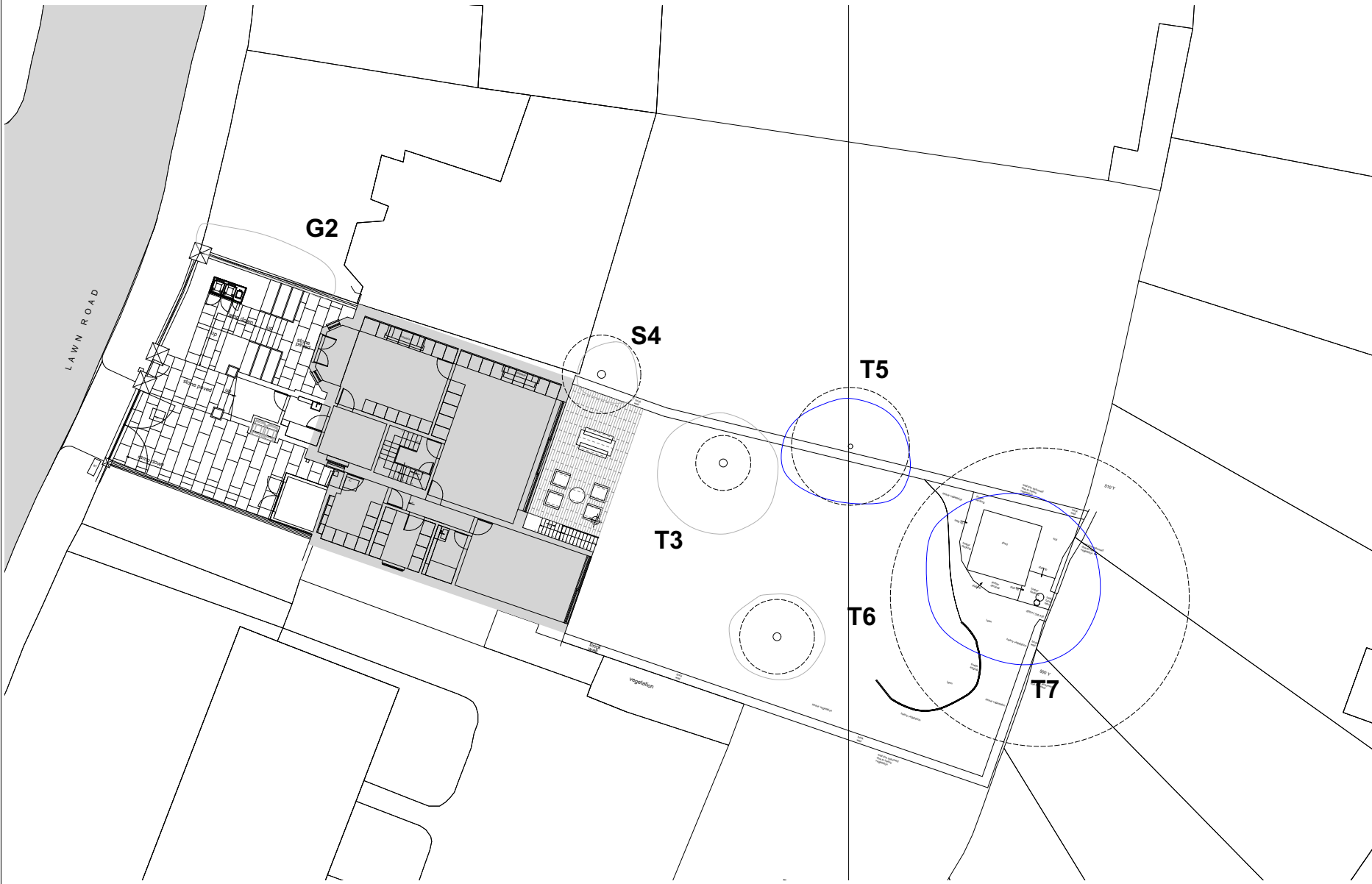
Rev.	Date	Checked
J	04.05.2019	MF
ISSUED FOR INFORMATION		

JOB TITLE	5 LAWN ROAD LONDON NW3	CLIENT	LBMV ARCHITECTS
DWG TITLE	EXISTING TREE SURVEY		
SCALE	1:100 @ A1	DATE	MAY 2020
JOB NO	AIA/MF/057/20	DWG NO	T001



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KEY

	CATEGORY A
	CATEGORY B
	CATEGORY C
	CATEGORY U
	RPA
	SHADING ARC

BS5837 (2012) Tree Survey Notes

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Rev.	Date	Checked
1	04.05.2019	MF

JOB TITLE: 5 LAWN ROAD LONDON NW3 CLIENT: LBMV ARCHITECTS

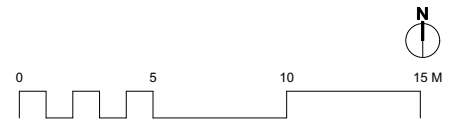
DWG TITLE: TREE CONSTRAINTS PLAN

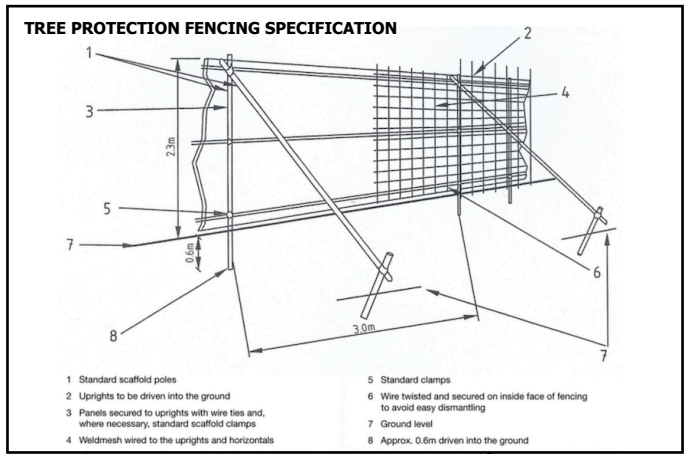
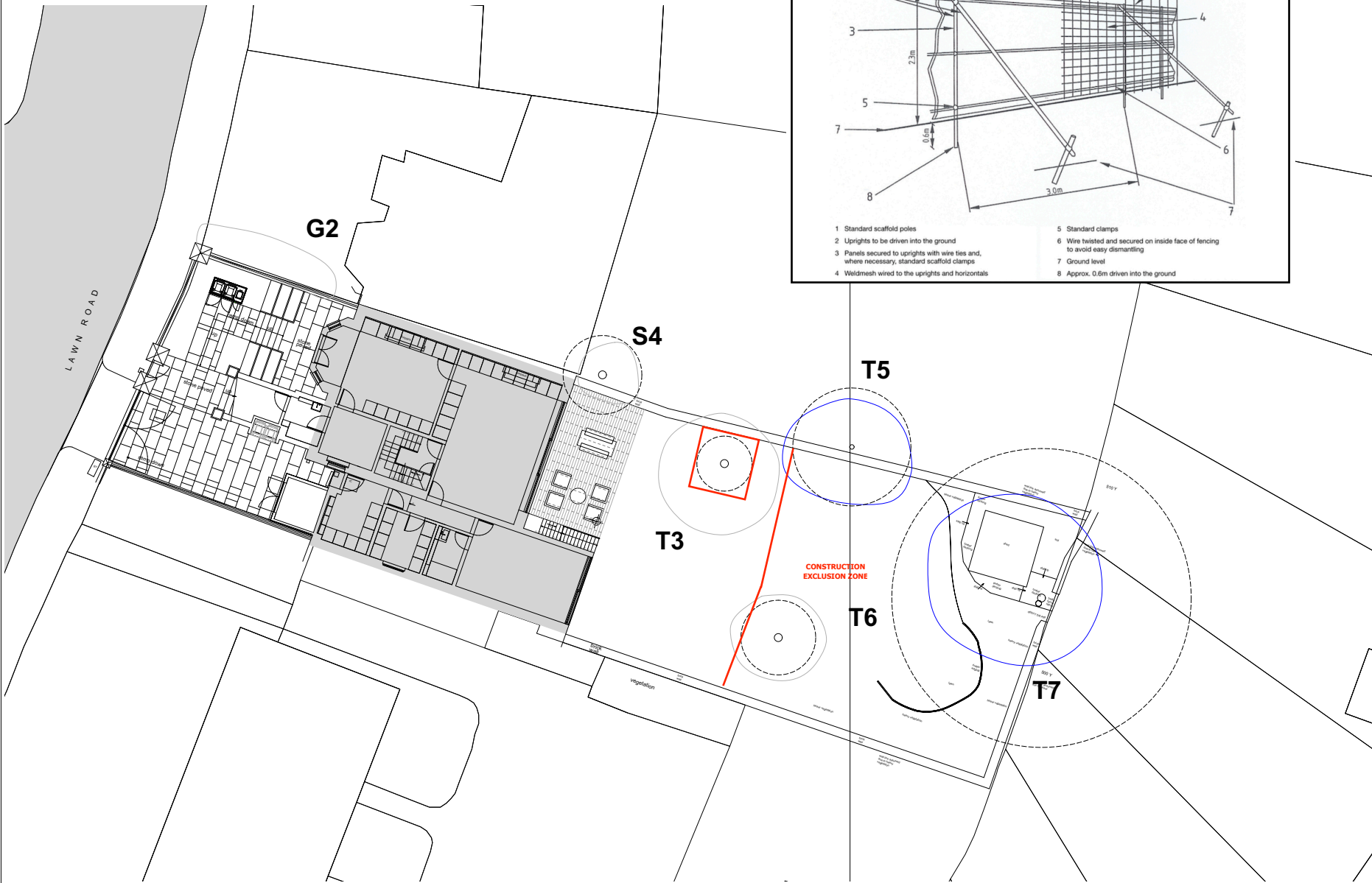
SCALE: 1:100 @ A1 DATE: MAY 2020

JOB NO: AIA/MF/057/20 DWG NO: T002

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KEY

	CATEGORY A
	CATEGORY B
	CATEGORY C
	CATEGORY U
	RPA
	SHADING ARC

- BS5837 (2012) Tree Survey Notes**
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TREE PROTECTION KEY	
	BS5837 SPECIFICATION FENCING



NOTE: Tree survey locations based on previous undertaken topographical surveys for design issue and additional GIS mapping has not been undertaken for the purposes of this survey

Revisions			
Rev.	Date	Issued For Information	Checked
1	04.05.2019	ISSUED FOR INFORMATION	MF

JOB TITLE	5 LAWN ROAD LONDON NW3	CLIENT	LBMV ARCHITECTS
DWG TITLE	TREE PROTECTION KEY		
SCALE	1:100 @ A1	DATE	MAY 2020
JOB NO	AIA/MF/057/20	DWG NO.	T003

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Appendix C

Site Photographs for:

5 Lawn Road
London
NW3 2XS

* *Taken 29th April 2020 (PM)*
* *- MFoster*



Tree T1 & G2 as viewed in a north easterly direction from the public highway



Tree T1 & G2 as viewed in a north easterly direction from the upper ground floor level



Trees T3 & T5 as viewed in a westerly direction - rear garden



Tree T5, as viewed in a northerly direction - rear garden of No.6 Lawn Road



Shrub S4, as viewed in a northerly direction - rear garden of No.6 Lawn Road



Tree T6 as viewed in a south westerly direction



Tree T7 as viewed in an easterly direction - rear of property on rear boundary with 9 Upper Park Road, London, NW3



Significant deadwood within crown of tree T1 overhanging front garden / public highway

Appendix D:
Tree Protection Notice

Generic Tree Protection Notice
(BS5837: 2012):

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

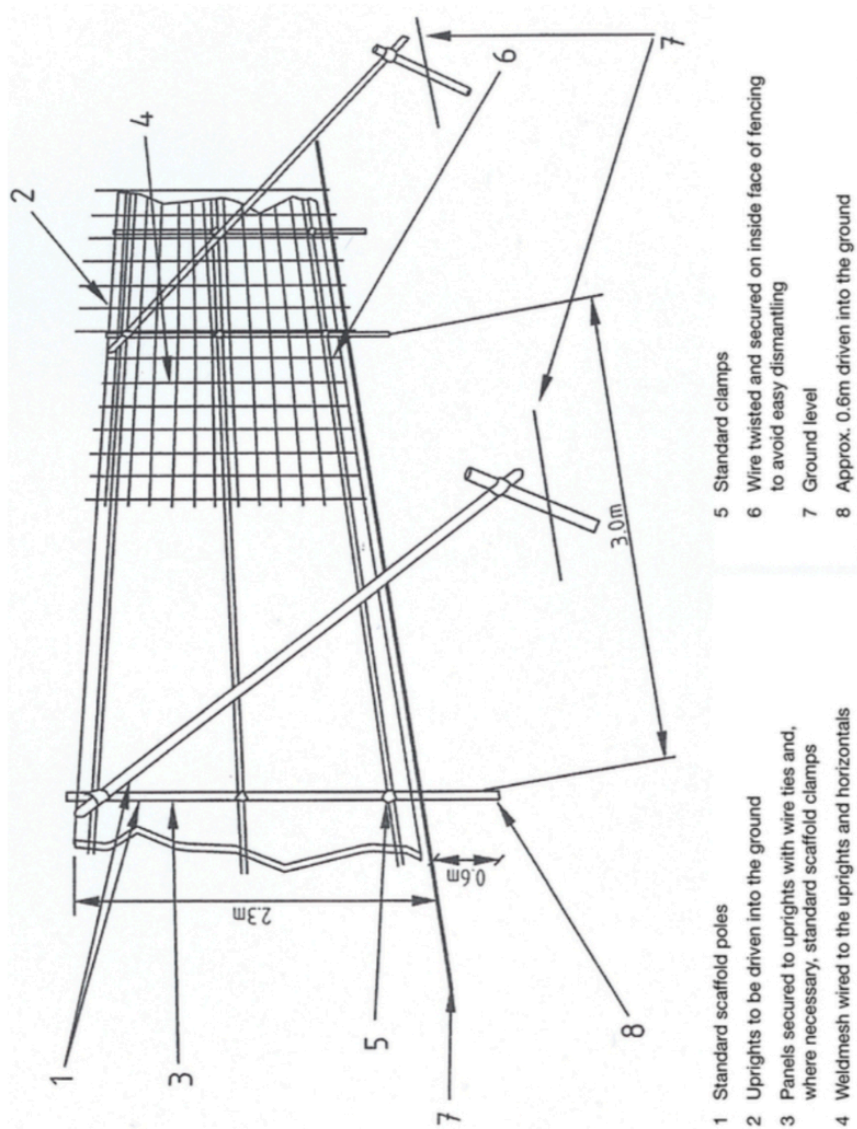


Appendix E

Tree Protection Fencing Specifications

Tree Protection Fencing as outlined in BS5837 (2012)
Specifications

BS5837:2012 (Diagram 2)



Appendix F: References

1. BS5837: British Standard: Trees in relation to 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 Ill Health in Trees, Strouts, R. and Winter, (TSO, 1994)
6. NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Issue 2), (November 2007)