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

<u>Site</u>

12a Lancaster Grove London NW3 4NX

<u>Client</u>

LBMV Architects

Date of Report:

10th July 2020

Report Reference:

AIA/MF/090/20

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 & Method Statement for the 1 x tree (T1) sited at and within close proximity of proposed development works
12a Lancaster Grove, London, NW3 4NX.

1.2 A site visit was conducted on 2nd July 2020 to survey and assess the tree. The weather at the time of inspection was sunny and bright with warm temperatures and tree in full season growth.

1.3 The tree survey, report and recommendations have been compiled for the 1 x tree (T1) surveyed within the site. No further trees have been surveyed / are affected by the proposed development.

1.4 The details of the subject tree 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.

1.5 The tree located within the site is shown in site plans T001-T002, *Appendix B*, and these correspond to the tree survey results table, *Appendix A*.

1.6 Photographs of the tree can also be found in Appendix D.

1.7 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.

1.8 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 1 x tree (T1) as shown in the survey, *Appendix A*, and also highlighted on the site plans, *Appendix B*.

2.2 The tree has been surveyed from ground level from within the site. The diameter of the trunk has been measured using a DBH tape at 1.5m height where within the site and estimated for those off site. The height of the tree 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 (overmature)
- 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 T001 addressing areas where arboricultural solutions are required. The Tree Protection Plan (TPP) - drawing T002 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 tree 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 tree 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 not been included.

3.6 The survey has not been undertaken as a hazard assessment survey and should not be used to dispense with duty of care.

4.0 Tree Survey Summary

4.1 The tree has 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.

Τ1

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.

None

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.

None

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.

None

4.2 The tree has been surveyed taking into account condition, general health and form without the development process influencing the survey. In addition it has 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 Arboricultural Impact Assessment

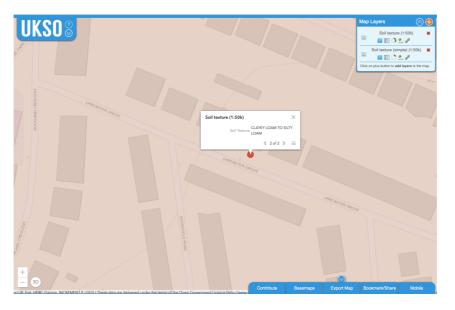
Site Overview

5.1 There is 1 x tree (T1) located within close proximity of the proposed development works. The tree surveyed are located within London Borough of Camden. And the following applies:

CONSERVATION AREA STATUS Belsize Park Conservation Area, LB Camden

TREE PRESERVATION ORDER (TPO) STATUS No evidence of TPO as per check made 10/07/20 https://planningrecords.camden.gov.uk/Northgate/PlanningExplorer/

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 front where the tree has been surveyed.

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

LBMV Architects 0077-A1000-EXISTING-REV01 0077-A2000-PROPOSED-REV01 5.5 The proposed development comprises general refurbishment works and external updates. The development which includes the retention of 1 x tree - 'A' category, has the potential to affect the trees in the following ways

- •Internal refurbishments
- •External front building updates including front entrance steps removal
- •General refurbishment works
- •Scaffold erection
- •Associated construction works

•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 tree 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 - Horse chestnut

5.7 Tree T1 is a mature Horse chestnut sited within the front garden The tree has the following main characteristics being rated as a 'A1' category specimen (BS5837:2012):

- Generally sound at base, growing against concrete cast in situ low edging
- Minor evidence of bleeding canker at 0.3-0.5m to south.
- Crown lifted to 6-7m with major branches removed / lifted and full occluding growth. Some areas of seepage from main stem where previous wounds existed.
- Generally light pruning history to main crown generally; selective lateral reduction to west at 7-12m height pruning from building elevation.
- 3 x stems developing from main union at 6m with utilities (electric) installed at this point.
- Low eastern lateral over-extended over lamppost showing decay on underside at 0.3-2.0m distance from main stem

5.8 In relation to existing hard landscape features and the property the following applies:

- At 2.5m distance to south formalisation of sloping topography is made from a retaining wall
- A 300mm downward level change from pavement to tree
- Front garden levels formalised within hard landscapes; possible minor increase in levels to south

5.9 The Root Protection Area (RPA) for this tree is as follows:

- 13.0m RPA radius
- 527.74 m2 area

As the footprint of the building shall not be amended the RPA will not be directly affected by proposed development.

5.10 However with general refurbishment works and associated construction activities the tree has the potential to be affected. The modified RPA has been applied as the RPA radius extends within the existing property footprint which extends significantly below the level of the tree and has been fully developed in the past. The modified RPA shows this extending surrounding the building footprint and into the public highway to a greater extent which level ground associated with the level of the tree exists.

5.11 Taking account of above factors and 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 as outlined within the Tree Protection Plan (TPP) and Arboricultural Method Statement (AMS) - Section 6:

- TREE PROTECTION FENCING

BS5837 tree protection fencing is recommended to enclose the main stem of tree T1 for the entire development process / until final landscape works as shown within drawing T002 - TPP

- RETENTION OF EXISTING HARD LANDSCAPES

The retention of existing hard landscapes where the front garden is not a Construction Exclusion Zone (CEZ) is required

- TREE WORKS

The lifting of the crown to ensure no damage from delivery of materials and development site activities does not occur - as included within Schedule of Works. Additionally any works

<u>Summary</u>

5.12 The proposed development works to 12a Lancaster Grove and refurbishment works requires tree protection measures for the following trees:

Tree T1

The tree protection measures highlighted above and included within *Section 6* of this report shall ensure that the development does not detrimentally impact tree T1 surveyed.

5.13 In summary the arboricultural impact as highlighted within T001 (Tree Constraints Plan) require the following tree protection measures

ADHERENCE TO SECTION 6 - AMS

Tree T1 shall be protected by tree protection measures set out within Section 6 and the TPP - drawing T002

TREE PROTECTION FENCING

BS5837 tree protection fencing is recommended to enclose the main stem of tree T1 for the entire development process / until final landscape works as shown within drawing T002 - TPP

- RETENTION OF EXISTING HARD LANDSCAPES

The retention of existing hard landscapes where the front garden is not a Construction Exclusion Zone (CEZ) is required

- TREE WORKS

The lifting of the crown to ensure no damage from delivery of materials and development site activities does not occur - as included within Schedule of Works. Additionally any works

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

6.0 Arboricultural Method Statement

6.1 The following tree protection measures require close adherence AT ALL TIMES. The measures are outlined within Tree Protection Plan (TPP) - T002.

6.2 Tree Works

6.2.1 Tree works for tree T1 should be undertaken prior to commencement of any development works. These works as included within *Appendix C - Tree Works Schedule* shall require a Section 211 Notification for Tree Works in a Conservation Area.

6.3 Tree Protection Fencing

6.3.1 Protection of the trees highlighted for retention must be implemented as explained below and as specified within the TPP (T002):

To provide Construction Exclusion Zone (CEZ) at front of property for tree T1 for area defined within TPP

6.3.2 These measures must remain for the entire construction process in order to provide a comprehensive barrier from the trees

- •The areas surrounding the trees must be surrounded by protective fencing as outlined in TPP T002 (Appendix B)
- •The protective fencing used must be suitable for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained trees.
- •This barrier must remain rigid and complete during the entire construction process. Protection is not required surrounding the whole tree as the remainder of the root plate will remain unaffected by virtue of being located within the neighbouring properties
- •The type of fencing used must be that as described in the current British Standard 5837: 2012 'Recommendations for trees in relation to construction' or hoarding where specified. This consists of a scaffold framework as outlined in the British Standard, comprising a vertical and horizontal framework, well braced to resist impacts, with the vertical tubes spaced at a maximum of 3m. A weldmesh panel should be securely fixed with wire or scaffold clamps to the framework. The specifications of this fencing have been outlined in Appendix E along with an example of basal shuttering which would also be suitable for this location.

•Once this Exclusion Zone has been protected by fencing all weather notices as included in *Appendix E* must be put onto the barrier warning that the area is a construction exclusion zone.

- •No heavy plant should come into contact with any part of the canopies of the trees.
- •No building materials or chemicals are stored within the tree protection zone as indicated on the Tree Protection Plan.

6.3.3 The site notice as included in *Appendix E* summarising the above information must be visible at all times for employees working within the site.

6.4 Ground Protection for accessible areas within RPA's

6.4.1 The existing hard landscapes must be retained at all times. Any amendment to this tree protection measure for alterations to specification as highlighted above shall require written notification to the London Borough of Camden tree officer.

6.5 Storage of Construction site related materials, plant and spoil

6.5.1 A designated storage area has not been highlighted within the Tree Protection Plan drawing (TPP). This must be located outside of the Construction Exclusion Zone.

6.5.2 Any site storage outside of this area and within the RPA is not permitted on soft landscape ground.

6.6 Installation of Utility Services

6.6.1 For implementation of the scheme where updates to utility services are proposed within the RPA of retained trees tree protection measures will be required and the layout and specification will have to be agreed with London Borough of Camden.

6.6.2 If for any reason installation of utility services within the RPA of this trees is required, the consulting arboriculturist and Local Authority must be notified prior to any ground tree protection / fencing and barrier removal and the following details adhered to:

- Trenching for the installation of underground services severs any tree roots present and can have a detrimental impact on the structural integrity of affected trees. When services are required to pass through a RPA, detailed plans showing proposed routes should be drawn up in conjunction with the consulting arboriculturist to avoid long term health and anchorage problems for retained trees
- The preferable method for trenching is to use a 'Air Spade' or similar to remove soil with compressed air, therefore minimising damage to roots in the process

6.6.3 Further reference can be made to National Joint Utilities Group (Volume 4, Issue 2) for guidance but any works within the RPA of retained trees must be approved by both the consulting arboriculturist and Local Authority tree officer.

6.7 **Fires**

6.7.1 There should UNDER NO CIRCUMSTANCES be fires within this site.

6.8 **Communication, Monitoring and Compliance**

6.8.1 In ensuring that tree protections specifications as highlighted within this method statement 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.

6.8.2 The key individuals appointed for advising and complying with Tree Protection specifications must adhere to the following at all times:

- Relevant parties / key individuals must be advised of any changes in personnel or contractor during the development process.

- Relevant parties / key individuals must be responsible for relaying information regarding tree protection within work force where applicable

6.8.3 Once the Tree Protection Fencing has been installed and for the remainder of the development until the final stage as highlighted in Section 3: Sequence of Events, it 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.

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

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

LONDON BOROUGH OF CAMDEN - TREE OFFICER

Name - Arboricultural Services Telephone - 020 7974 5939 Contact - Nick.Bell@camden.gov.uk

CONSULTING ARBORICULTURIST

Name - Marcus Foster Arboricultural Design & Consultancy Telephone - 07812024070 Contact - Marcus Foster Email - mail@marcus-foster.com

7. Appendices

Appendix A

Tree Survey Schedule (BS5837:2012)

12a Lancaster Grove London NW3 4NX

Colour Key: BS5837: 2012 (see Section 2.6)



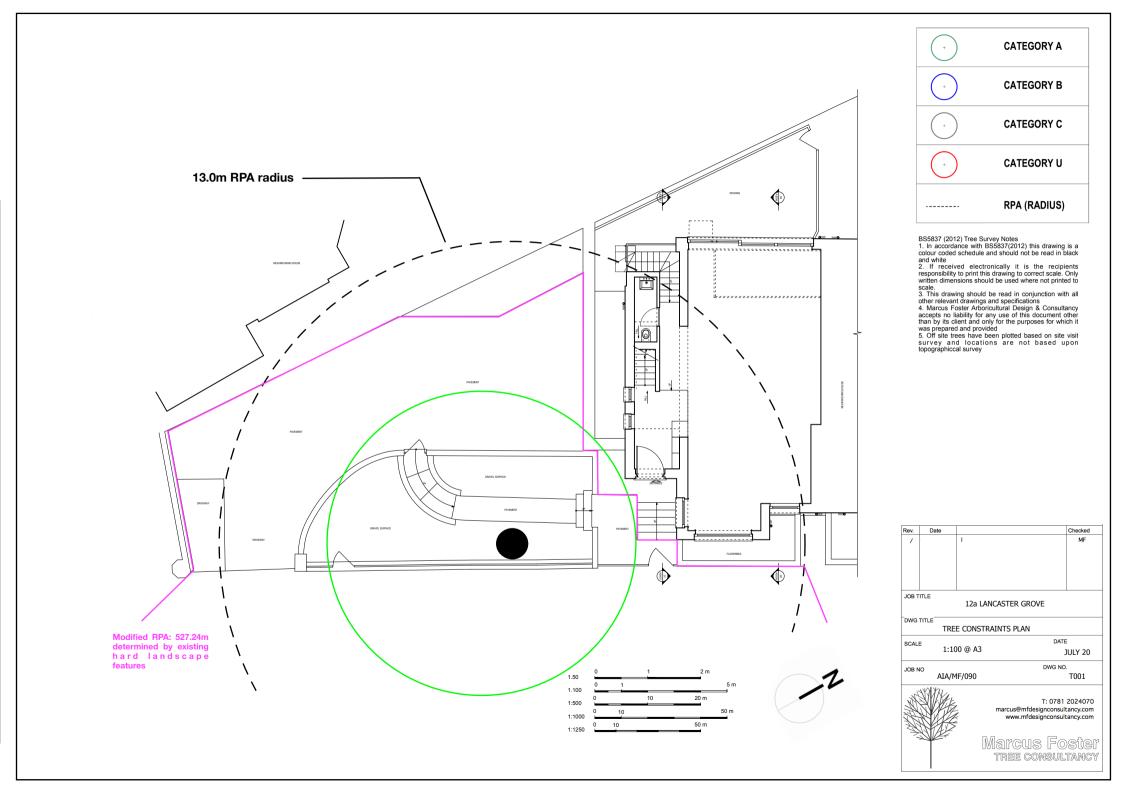
MARCUS FOSTER - ARBORICULTURAL DESIGN & CONSULTANCY BS5837:2012 Tree Survey Schedule - 02/07/20: 12a Lancaster Grove London, NW3 4NX

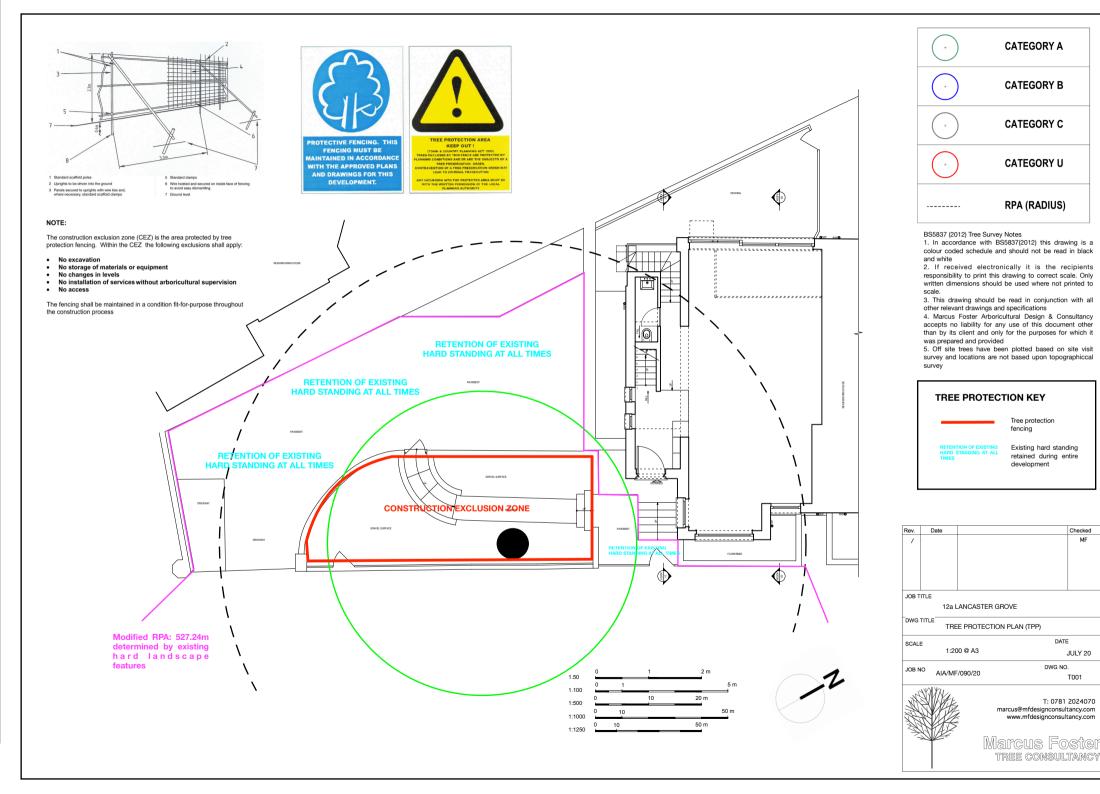
Tree N	o Species	Height (m)	DBH (mm)	Spread (m)	Age	Structural Condition	Vigour	BS5837 (2012) Rating	Remaining Contribution (years)	Height of first branch (m)	Height of canopy (m)	Comments / Structural Condition	Root Protection Area (RPA) m2	Root Protection Area (RPA) Radius
T1	Horse chestnut	17	1080	N: 7 E: 7 S: 9 W:7	М	G	G	A1	40 years +	7.0	2.0	Generally sound at base, growing against concrete cast in situ low edging. Minor evidence of bleeding canker at 0.3-0.5m to south. Crown lifted to 6-7m with major branches removed / lifted and full occluding growth. Light pruning history to main crown generally; selective lateral reduction to west at 7-12m height - pruning from building elevation 3 x stems developing from main union at 6m with utilities (electric) installed at this point. Some areas of seepage from main stem where previous wounds existed. Low eaten lateral over-extended over lamppost - showing decay on underside at 0.3-2.0m distance from main stem	527.74	13.0

Appendix B

Tree Constraints Plan (T001) *Tree Protection Plan* (T003) (BS5837:2012)

> 12a Lancaster Grove London NW3 4NX





<u>Appendix C</u> <u>Tree Works Schedule</u>

SCHEDULE NOTES

BS 3998: Tree Work Recommendations 2010

Any tree work must be carried out to standards set out within BS 3998; 2010 Recommendations for Tree Work.

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.

TREE WORKS SCHEDULE

12a Lancaster Grove, London, NW3

Tree No.	Common Name	BS5837 Category	Tree Works
Τ1	Horse chestnut	A	Prune growth towards building to west to give 1.5m clearance by pruning 1.5m branch lengths Crown lift to 6m Reduce over-extended eastern lateral by branch lengths of up to 2.5m to ensure crown is lifted and reduce end weighting Remove major deadwood

Appendix D

Site Photographs for:

12a Lancaster Grove London NW3 4NX

* Taken 2nd July 2020 (PM) - MFoster



Tree T1 as viewed in a westerly direction from public highway



Tree T1 as viewed in north westerly direction showing proximity to front boundary / railings



Tree T1 as viewed in southerly direction showing low canopy growth



Main stem of tree T1 within front garden showing external steps to west of tree



Base of tree within soft landscape / pea shingle aggregate



Main stem of tree T1 within front garden as viewed in a northerly direction

AIA/MF/090/20 Site: 12a Lancaster Grove, London, NW3 4NX Prepared for: LBMV Architects Date:July 2020

Appendix E: Tree Protection Notice

Generic Tree Protection Notice (BS5837: 2012):

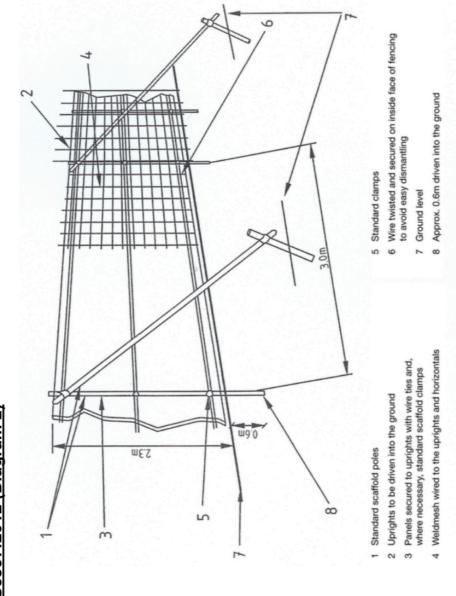
Notice to be clearly shown on site where fencing constructed AT ALL TIMES

AlA/MF/090/20 Site: 12a Lancaster Grove, London, NW3 4NX Prepared for: LBMV Architects Date:July 2020



<u>Appendix F</u> <u>Tree Protection Fencing Specifications</u>

Tree Protection Fencing as outlined in BS5837 (2012) Specifications



BS5837:2012 (Diagram 2)

Appendix G: 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 III 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)