

## Marcus Foster Arboricultural Design & Consultancy

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## <u>Arboricultural Method Statement</u> (BS5837: 2012)

Site details:

6 Belsize Avenue London NW3 4AU

Client details:

Hartley's Projects Ltd

Date of Report:

8th March 2018

Report Reference:

AMS/MF/025/18

Report Prepared by:

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### 1. Introduction

1.1 This report has been commissioned to provide an Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) for 6 Belsize Avenue, London, NW3 4AU. This report provides this information required to implement arboricultural solutions for the development with principles that are approved and enforced by the local planning authority.

1.2 It should be noted that this is a site specific Arboricultural Method Statement produced solely for the physical protection of those trees identified on the plan (Tree T1) within the report and is not relevant to any other site or situation.

1.3 This report and the opinions within it have been produced by Marcus Foster, a qualified Arboriculturist holding a National Diploma in Arboriculture, and the Arboricultural Association's Technicians Certificate as well as a degree in History. 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.

1.4 No additional documentation has been referred to relating to the tree, T1 or the site at this property for the compilation of this report.

1.5 The Arboricultural Method Statement (AMS) must be made available to all contractors and operatives on the site during the construction process so that they fully understand the importance of the measures set out for tree protection.

### 2. Summary

2.1 This document will give site specific instructions to protect tree T1 within close proximity of the development. The methods are set out in a logical and coherent sequence for ease of understanding and implementation. The operations that are required in order to ensure comprehensive tree protection are:

- Implementation of Tree Protection Fencing and exclusion signage to BS5837:2012 standard as specified within this report
- Ground protection where required techniques to avoid compaction, disturbance or contamination of the root environment
- Ground works, excavations and utility services where within close / proximity to retained tree T1
- General tree care measures and awareness
- Site monitoring as deemed appropriate only
- Tree Works where appropriate

2.2 The Tree Protection Plan provides accurate locations of protective barriers and ground protection where applicable.

2.3 This document and the associated Tree Protection Plan must be endorsed by planning conditions, agreement or obligation as appropriate.

### **3. Sequence of Events**

3.1 The following sequences are governed by operational constraints and are subject to change. The consulting arboriculturist must be noted of any changes to this schedule prior to implementation where trees / tree protection measures as exiting are likely to be affected.

### Prior to commencement of construction site activities

- a) Tree protection measures installed as specified within Tree Protection Plan
- b) Site to be inspected by consulting arboriculturist if deemed appropriate

### Development Stage

c) The local authority arboriculturist will have free access to the site and forward any recommendations directly to the consulting arboriculturist

### Final Development Stage

- d) For dismantling Tree Protection Fencing a minimum of seven days notice will be given to the Local Authority prior to the works.
- e) All final landscape works to the front driveway within the RPA should closely adhere to guidelines within this AMS should the hard landscape surface require alterations within the RPA of tree T1
- f) Any hard landscaping works / repair works to the public highway once the protective fencing has been removed within the RPA of tree T1 will require prior permission from the Local Authority

### 4. Tree Survey Summary

4.1 Tree T1, a mature Bay tree T1 is sited at the front of the property and has the following key attributes:

4.1.1 Generally structurally sound with accentuated buttress roots and exposed initial anchorage roots evenly spread on all sides at base with 1x minor decay pocket on south west side; water collection within

4.1.2 A straight main stem leading to a compact and cyclically reduced crown with even and rounded canopy height and spread; the uniformity and tightly pruned form suggests that the tree is pruned on an annual basis with the works last being carried out within the past 6 months / post 2017 growing season

4.2 The tree is rated as a 'B.1' category specimen (BS58337:2012) with good condition and prominent location providing visual amenity. The tree requires protection from the following development related / construction site activities within close proximity taking account of the recommended 4.3m RPA radius distance:

4.2.1 Access pathway for all development access within 0.5m of main stem and directly adjacent to accentuated buttresses

4.2.2 Storage area directly surrounding main stem / southern RPA of tree T1

4.2.3 Implementation of steps to the south of the tree within front garden area at the following dimensions / extent at closest points to achieve 720mm level change at furthest point within RPA:

- Implementation of 180mm riser @ 1600mm distance from T1
- Implementation of further 180mm riser @ 2200mm distance from T1 total level change 360mm
- Implementation of further 180mm riser @ 3200mm distance from T1 total level change 540mm
- Implementation of further 180mm riser @ 4000mm distance from T1 total level change 720mm

4.2.4 Implementation of bin storage area within 1.6m of main stem

### 5. Construction Site Activities within the Root Protection Area of Tree <u>T1 - Protective measures</u>

4.1 This report provides arboricultural solutions to ensure that damage is not caused to the root plate, main stem or canopy of tree T1 which would result in a detrimental effect on both the health and structural integrity of the tree. These are as follows:

- Protection of main stem incorporating root plate exposed from soft landscape front garden
- Protection of canopy from associated construction site activities (by process of pruning works)
- Protection of root plate within RPA from storage of materials / chemicals
- Protection of root plate within RPA from implementation of final landscaping works / level changes to front access

4.2 The main protective areas / measures highlighted above are clearly specified within the *Tree Protection Plan - T001/TPP* and these should be adhered to at all times during the construction process

<u>4.3 Protection of main stem incorporating root plate exposed from soft landscape front garden</u>

4.3.1 Protection of the main stem of tree T1 should be implemented as explained below. These measures should remain for the entire construction process in order to provide a comprehensive barrier from the tree.

- The recommended tree protection fencing surrounding the tree will enclose the main stem as highlighted in TPP (T002)

- The protective fencing used should be suitable for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained tree - basal shuttering is recommended as shown by example within *Appendix D* 

- This barrier should remain rigid and complete during the entire construction process.

- Once this Exclusion Zone has been protected by fencing all weather notices as included in *Appendix C* should 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 lower - mid – upper canopy of the tree which has been made possible from pruning works (cyclical management works providing dual purpose)

### 4.4 Protection of canopy from associated construction site activities

4.4.1 Tree T1 has been pruned previously approximately 6-9 months ago. It is recommended that additional crown lifting works are implemented prior to the commencement of development works to ensure clearance of the eastern canopy is provided from the main access for construction site activities.

4.4.2 If further pruning is required during the construction process this should be only undertaken with prior permission of the Local Authority.

### 4.5 Protection of root plate within RPA from storage of materials / chemicals

4.5.1 For the existing front garden within the majority of the RPA of tree T1 which will be exposed (not within the Construction Exclusion Zone) to development site access and general site storage, ground protection is recommended as follows for the area as highlighted within TPP (T002):

- Front garden area to be retained as currently exists with ground protection in the form of continuous plywood ground protection (minimum 5mm depth plywood.

- There must not be storage of spoil or chemicals within this area

4.5.2 Any alterations to the existing surface or driveway surface prior to final landscaping works (where required) should be confirmed in writing with the Local Authority and where within the RPA of tree T1 will require close adherence to arboricultural guidance as deemed appropriate.

4.5.3 The storage of materials and chemicals is recommended within the proposed development site / property where feasible in accordance within construction methodology. Where this is not possible, storage on the front garden general storage is permissible due to the significant existing hard landscape and ground protection as highlighted above.

### <u>4.6 Implementation of external front of property steps / final landscape works</u> to front of property within RPA of tree T1

4.6.1 For implementation of front of property level changes and final landscape works, the below tree root protective measures should apply. The ground disturbance area for excavation of steps to the south east of the tree towards the property is minimal but continuous for width of steps and therefore the following working methodology must be applied:

. Hand digging to be carried out WITHOUT severance of larger tree roots: the severance of any tree roots encountered larger than 2.5cm (25mm) in diameter MUST NOT occur without prior consultation with

the Local Authority Tree Officer or appointed Arboricultural Consultant

. If at any point it is deemed not possible to continue with excavations without having to damage very significant tree roots, the Local Authority Tree Officer and / or the appointed Arboricultural Consultant must be contacted.

4.6.2 For implementing final boundary treatments incorporating the bin storage the protective measures as above should also be applied at all times. If at any point it is deemed not possible to continue with excavations without having to damage very significant tree roots, the Local Authority Tree Officer and / or the appointed Arboricultural Consultant must be contacted.

4.6.3 For all soft landscaping works within the RPA of tree T1 where feasible no level changes should occur and if required for addition of soil a maximum level change of 50mm should be applied

### 6. Installation of Utility Services

6.1 No additional utility services are proposed within the RPA of tree T1. However, If for any reason installation of utility services within the Root Protection Area of trees within the site 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 Tree Protection Area, detailed plans showing proposed routes should be drawn up in conjunction with the consulting arboriculturist to avoid long term health and anchorage problems for related 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

6.2 Further reference can be made to National Joint Utilities Group (Volume 4, Issue 2) for guidance but any approach must be approved by both the consulting arboriculturist and Local Authority tree officer.

### 7. Communication, Monitoring and Compliance

7.1 In ensuring that all 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.

7.2 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 deemed applicable / relevant

7.3 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* above, 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.

7.4 Any concerns / recommendations should be forwarded directly to the consulting arboriculturist.

### 8. Arboricultural Supervision Schedule

8.1 The appointment of an arboricultural consultant will be required within the construction management of the development to carry out all arboricultural supervision for the scheme. In addition to attending site, *Site Meeting Notes* will be prepared to provide a summary of site conditions, therefore highlighting any potential problems or solutions required in order to ensure close adherence to the AMS is provided at all times.

8.2 This will ensure that Tree Protection is implemented as specified within this report therefore avoiding significant tree root damage or compaction of tree roots. The following is recommended:

### Before & During Land Preparation:

- Approval of any utility service routes approved that infringe within the RPA

- Approval of Site Storage Area
- Approval of Root Protection Areas (where fencing not implemented)
- Approval of Tree Protection Fencing positioning

# 1 x Site Visit (additional required if protection not correctly implemented); to be documented and findings submitted in writing to the Local Authority Tree Officer within 5 days of site visit

### Implementation of front steps / level changes within RPA of tree T1:

- Monitoring of tree protection / condition

- Monitoring of land use

- Monitoring construction methods and storage areas in relation to trees

# 1 x Site Visit at key stage of development; to be documented and findings submitted in writing to the Local Authority Tree Officer within 5 days of site visit

### 9. Tree Works Schedule

9.1 Any tree work should be carried out to BS 3998; 2010 'Tree Work – Recommendations' and to standards set within the Arboricultural Association's 'Standard Form of Contract and Specifications for Tree Work' by a qualified arboriculturist.

T1: Bay Laurel

Crown lift by a further 1m to allow for clearance / access for development site not including the removal of branches in excess of 50mm dimeter

9.2 Tree works as specified above must be carried out prior to the commencement of any development works

## 9. Appendices

## Appendix A

## Tree survey (BS5837:2012) March 2018

6 Belsize Avenue London NW3 4AU

Colour Key: BS5837: 2012 (see Section 2.6)



6 Belsize Avenue London, NW3 BS 5837: 2012 Tree Schedule 05/03/18												
Tree No	Species	Ht (m)	DBH. (mm)	Sprd (m)	Age	Visual Cond.	Phys. Cond.	Comments / Structural condition	Management Recommends.	Estimated Remaining (years)	BS 5837 Rating	RPA Distance - Radius (m)
T1	Bay Laurel	9	360	N: 2 E: 2 S: 2 W:2	М	G	G	Accentuated buttress roots at base expanding within surrounding hardscape. 1 x decay pocket to south west at base; minor. Straight main stem to crown break at 2.5m, sound union and compact cyclically reduced canopy even on all sides.	Crown lift by a further 1.0m not including the removal of branches over 50mm diameter	20 years +	B.1	4.3

## Appendix B

## T001 Existing Site Plan

## T002 Tree Protection Plan (TPP)

6 Belsize Avenue London NW3 4AU

Colour Key: BS5837: 2012 (see Section 2.6)







## Appendix C: Tree Protection Notice

# Tree Protection Notice (BS5837: 2012):

6 Belsize Avenue London NW3 4AU

Notice to be clearly shown on tree protection fencing AT ALL TIMES



### **Appendix D: Example of Basal Shuttering**

Basal shuttering offers immediate protection for the lower main stem and initial root plate of a tree where exposed with a porous surface. This method of tree protection does not offer protection to the root plate of a tree where surfaces are exposed / development works are being undertaken within the Root Protection Area of a tree. however, it does offer immediate protection to the main stem and provides vital clearance between the tree and construction site activities such as storage of materials, ad hoc toilet usage and compaction of exposed soft landscaped ground (in addition to many other additional construction site activities.



Photograph taken by Marcus Foster within City of Westminster, 2015

## <u>Appendix E:</u> Existing Site Photographs

Taken by M Foster 5th March 2018

6 Belsize Avenue London NW3 4AU Tree T1 (Bay Laurel) as viewed in north easterly direction from public highway



Tree T1 (Bay Laurel) as viewed in westerly direction from public highway



Main stem of tree T1 within front garden - 6 Belsize Avenue



Tree T1 (Bay Laurel) as viewed in southerly direction from public highway



Tree T1 (Bay Laurel) as viewed in northerly direction from front of property



### **Appendix F: References**

- 1. Arboricultural Practice Note 12: Driveways Close to Trees (APN12) as provided by the Arboricultural Advisory and Information Service (2007)
- 2. BS5837: British Standard: Trees in relation to construction -Recommendations, British Standard (2012)
- 3. *Principles of Tree Hazard Assessment and Management,* Lonsdale, D. (Department for Transport, Local Government and the Regions, 1999)
- 4. *The Body Language of Trees*, Mattheck, C. and Breloer, H. (HMSO, 1994)
- 5. Trees in Britain, Philips, R. (Pan Books, 1978).
- 6. *Diagnosis of III Health in Trees,* Strouts, R. and Winter, (TSO, 1994)
- 7. NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Issue 2), (November 2007)