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

Site details:

La Sainte Union School Highgate Road London NW5 1RP

Client details:

Watkinson & Cosgrave c/o La Sainte Union School

Date of Report:

4th March 2019

Report Reference:

AMS/MF/025/19

Report Prepared by:

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1. Introduction

1.1 This report has been commissioned by Watkinson & Cosgrave to provide an Arboricultural Method Statement (AMS) for 1 x early mature to mature Ash tree (T1) being retained as highlighted within the proposed development at La Sainte Union School, Highgate Road, London, NW5 1RP.

1.2 The tree survey, report and recommendations included 1 x tree surveyed within close proximity of the development; there are other trees within the area but with adherence to the AMS construction site activities will be managed away from any other trees. The aim of this report is to ensure tree T1 is both retained and preserved in order to both protect the amenity value provided and also the Conservation Area status. Trees can be retained and comprehensively protected during the proposed redevelopment of the site by clearly setting out tree protection methods, construction techniques and working practices. This report provides this information; principles that are approved and enforced by the local planning authority.

1.3 It should be noted that this is a site specific Arboricultural Method Statement (AMS) produced solely for the physical protection of the tree identified on the plan within La Sainte Union School within the report and is not relevant to any other site or situation.

1.4 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, Professional Tree Inspection Certificate (LANTRA) and a Professional Member of the Arboricultural Association in addition to a degree in History & 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.

1.5 The following documentation has been referred to relating to the tree or the site at this property for the compilation of this report:

Watkinson + Cosgrave LSU dwgs 4803.2, GA-01 November 2018

This information is included within Appendix D.

1.6 The 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 Tree T1 is the only tree located within close proximity of the development which comprises the installation of a lean-to structure within a hard landscape area which currently exists. The implementation of the proposed development can be achieved whilst retaining the tree for the long term by taking into account all information within this report.

2.2 Tree T1 is an early mature to mature Ash tree which is sited within soft landscape ground to the north of the area of proposed development and to the south of an existing access road. The tree, a fair specimen, is rated as 'C2' (BS5837:2012) and has the following key characteristics:

- Tree is generally structurally sound at the base with evenly distributed root flare
- Sited within raised mound within 1m radius (0.5m only to east). Straight main stem and crown lifted to 4-5m (7m to east towards school building) - fair occluding growth
- Significant crown thinning, particularly to north / east recovering although some selective dieback throughout crown. Minor deadwood throughout - some developing major deadwood
- RPA radius of 4800mm which encroaches within development area to south

2.3 For tree T1 the document will give site specific instructions to provide protection. The methods are set out in a logical and coherent sequence for ease of understanding and implementation. The operations that will require comprehensive tree protection include:

- Removal of existing hard landscape feature where new supporting posts are required
- General Construction Site Activities and access
- Ground works, foundations within close / relevant proximity to retained tree for implementation of new supporting posts

2.4 The Tree Protection Plan (TPP), indicates precise locations of protective barriers and ground protection, precautionary areas and general arboricultural solutions where applicable.

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

<u>3. Sequence of Events</u>

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.

3.2 Pre-development stage

- a) Pre Contract / Commencement site meeting between client and contractor. The meeting should take place before any development activity begins to confirm the timing and implementation of the agreed tree protection measures including site storage and any pertinent time scheduled for site operators.
- b) Tree protection measures installed as specified within Tree Protection Plan
- c) Site to be inspected by consulting arboriculturist with contractor meeting held
- 3.3 Development Stage
- d) Implementation of development adhering to tree protection measures as outlined within this AMS
- e) Arboricultural Supervision at key stages as highlighted within AMS
- f) The local authority arboriculturist will have free access to the site and forward any recommendations directly to the consulting arboriculturist.
- g) Tree Protection discharge

4. Tree Protection Specifications

4.1 The implementation of the lean to structure with associated foundations should be implemented with tree protection as outlined within this AMS report. For clarification, an additional summary of the AMS has been provided to ensure tree protection and supervision is applied at all key stages. This document, supplied separately and also as Appendix C is as follows:

LA SAINTE UNION SCHOOL_AMS SUMMARY_040319

4.2 The implementation of tree protection measures including removal of existing hard landscape features and undertaking hand dug excavations must be adhered to at all times during the development process. In addition general construction site activities must adhere to the AMS at all times.

Tree Protection Fencing

4.3 Tree protection for tree T1 is to implemented as follows

- To specification outlined within Tree Protection Plan (TPP) with use of 4 x 2400mm length *Herras* fence panels
- Tree Protection Fencing area to provide Construction Exclusion Zone (CEZ)
- To be implemented prior to the commencement of any development works

RPA Precautionary Zone & Storage Area

4.4 As highlighted within TPP, the RPA requires access for the lightweight construction site activities - this area must be clearly demonstrated to site foreman and incorporated within construction methodology.

4.5 Based on setting out of site as above, the designation of a site storage area outside of the RPA must be provided with agreement from the arboricultural consultant. This area should incorporate the following:

- Delivery of materials and chemicals
- Storage of materials and chemicals
- Mixing of Chemicals
- Construction site Infrastructure
- Construction site welfare

Guidance in relation to Excavations & Root Severance

4.6 Excavations are required within the RPA of this tree for supporting posts and foundations only but will be selectively located only as shown within the *Watkinson* + *Cosgrave* LSU dwgs 4803.2, GA-01 - see extract below:



Watkinson + Cosgrave LSU dwgs 4803.2, GA-01 - Annotated Extract by MF - 040119 DO NOT SCALE FROM EXTRACT

4.7 The implementation should be undertaken by hand digging only. It is important to note that in the case of major roots being discovered the following points should be closely adhered to:

- The severance of any tree roots encountered larger than 25mm in diameter MUST NOT occur
- If at any point it is deemed not possible to continue with excavations without having to damage very significant tree roots
 - in excess of 25mm diameter - the Local Authority Tree Officer and / or the appointed Arboricultural Consultant must be contacted
- With the encountering of large roots in a area where posts are required structural engineering solutions to accommodate the roots with lintels or similar methods must be applied

Implementation of foundation works within RPA of retained tree

4.8 For supporting posts works the below protective measures must apply where carried out within the RPA of tree T1 and as specified within contractor drawings - *Appendix D*:

- Removal of existing hard landscape pavers by hand only
- Hand digging for installation of posts close adherence to Excavations and Root Severance Guidance (*Section 4.3*) is required at all times
- No amendment to existing hard landscape surface other than where holes have been hand dug to construct fence posts
- No build up / increase of levels of the underlying soil surface will occur during final landscaping works within the RPA of retained tree T1 for the landscape process
- Undertaking of works to be under arboricultural supervision

4.9 For installation of concrete foundations for the posts where located in positions where significant roots are not affected the sheathing of the minimal concrete post foundation is recommended to avoid any leaching of the material within the subsoil.

Installation of Utility Services

4.10 No utility services are specified within the RPA. However, if for any reason installation of utility services within the Root Protection Area of tree T1, the consulting arboriculturist and Local Authority must be notified prior to implementation 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. Hand dug excavations are also permissible if undertaken to specifications outlined within *Section 4.3*.

4.11 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.

5. Communication, Monitoring and Compliance

5.1 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.

5.2 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

Arboricultural Supervision Schedule

5.3 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 problems or solutions required in order to ensure close adherence to the AMS is provided at all times.

5.4 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:

Agreement of Construction Methodology / Site Storage / Pre-Commencement Meeting

Arboricultural supervision (1 x site visit) undertaken as pre-commencement check to ensure tree protection correctly installed

Supervision of Hand Dug Foundation holes

Arboricultural supervision (1 x site visit and further as deemed appropriate) undertaken during installation of works requiring excavations

Discharge of Tree Protection

Arboricultural supervision (1 x site visit and further as appropriate) to inspect tree and ground conditions upon completion of development

5.5 In addition to the implementation of arboricultural supervision as above, the Local Authority Tree Officer will have open site access at any point during the development to undertake inspections as deemed appropriate

6. Tree Works Schedule

6.1 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.

6.2 The works specified below are recommended to be carried out as part of or independently of the proposed development as are recommended in line with good Arboricultural practice - these can be implemented upon completion / within 6 months of this report.

6.3 Tree Works Specification

T1 Ash *Remove any major deadwood*

7. Appendices

Appendix A

Tree survey (BS5837:2012) February 2019

La Sainte Union School Highgate Road London NW5 1RP



BS5837:2012 TREE SURVEY La Sainte Union School, La Sainte Union Convent, Highgate Road, London, NW5 1RP Arboricultural Impact Assessment - Tree Schedule (BS5837:2012) - 270219												
Tree No	Species	Height (m)	DBH (mm)	Spread (m)	Age	Structural Condition	Vigour	BS5837 (2012) Rating	Remaining Contribution (years)	Comments / Structural Condition	Root Protection Area (RPA) m2	Root Protection Area (RPA) Radius (m)
T1	Ash	13	410	N: 5 E: 4 S: 6 W:5	М	F	F	C2	10 years +	Tree is generally structurally sound at the base with evenly distributed root flare - raised mound within 1m radius (0.5m to east). Straight main stem and crown lifted to 4-5m (7m to east towards school building) - fair occluding growth. Significant crown thinning, particularly to north / east recovering although some selective dieback throughout crown. Minor deadwood throughout	76.06	4.8

Appendix B

T001 Tree Protection Plan (TPP)

La Sainte Union School Highgate Road London NW5 1RP

Tree Canopy Colour Key: BS5837: 2012 (see Section 2.6)





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

Appendix C

AMS TREE PROTECTION SUMMARY DOCUMENT

La Sainte Union School Highgate Road London NW5 1RP



Marcus Foster Arboricultural Design & Consultancy BA (Hons) | NDArb | AATechcert (ArborA)

LA SAINTE UNION SCHOOL LEAN-TO TREE PROTECTION METHOD STATEMENT SUMMARY: <u>AMS/MF025/19</u>

The following document is a supplementary summary of tree protective measures should be read, understood and signed by all operatives working on site and should be available for reference AT ALL TIMES

Reference should be made to T001 - Tree Protection Plan as included within AMS/MF/025/19

Tree Protection Measure 1 Implement Tree Protection Fencing



<u>Tree Protection Measure 2</u> Agreement of Site Storage & Construction Methodology

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Tree Protection Measure 3 Implementation of supporting posts for lean to under arboricultural supervision

↓

<u>Tree Protection Measure 4</u> Site Discharge / Tree Inspection upon completion of development

Arboricultural Supervision should be undertaken at all times where specified

Consulting Arboriculturist - Marcus Foster : Tel: 0781 202 4070 Email: mail@marcus-foster.com Local Authority - London Borough of Camden Tel: 020 7974 5939 Email: nick.bell@camden.gov.uk

SUMMARY OF TREE PROTECTION GUIDELINES

Tree Protection Measure 1: Implement Tree Protection Fencing

Refer to T001 - TPP for position of fencing and specification To be agreed with consulting arboriculturist further to tree protection measure 2 below

Tree Protection Measure 2: Agreement of Site Storage & Methodology Implement Arboricultural Supervision

The storage area for materials, plant machinery, chemicals and aggregates is recommended to be outside of the RPA as recommended within the Tree Protection Plan and therefore tree T1 will not be affected by this factor. The location should be agreed with the consulting arboriculturist

<u>Tree Protection Measure 3: Implementation of Supporting Foundations</u> <u>Implement Arboricultural Supervision</u>

For supporting post implementation the below protective measures must apply where carried out within the RPA of tree T1 and as specified within contractor drawings - Appendix D within AMS and under arboricultural supervision:

Hand digging for installation of fencing / hard landscape features for all works to determine existence and/or location of larger roots in this area and avoid damage for foundation pads. Close adherence to Excavations and Root Severance Guidance is required at all times - see AMS and where deemed appropriate structural engineering solutions MUST be applied as agreed with consulting Arboriculturist and LB Camden.

No amendment to existing hard landscape surface other than where holes have been hand dug to construct supporting posts. for the posts where located in positions where significant roots are not affected the sheathing of the minimal concrete post foundation is recommended to avoid any leaching of the material within the subsoil.

No build up / increase of levels of the underlying soil surface will occur during final landscaping works within the RPA of retained tree T1 $\,$

Tree Protection Measure 4: Tree Protection Discharge Implement Arboricultural Supervision

Arboricultural site visit to inspect tree and ground conditions upon completion of development

Page 2 of 2 END OF SUMMARY REPORT

Consulting Arboriculturist - Marcus Foster : Tel: 0781 202 4070 Email: mail@marcus-foster.com Local Authority - London Borough of Camden Tel: 020 7974 5939 Email: nick.bell@camden.gov.uk

Appendix D

Related Drawings

La Sainte Union School Highgate Road London NW5 1RP

Watkinson + Cosgrave LSU dwgs 4803.2, GA-01 November 2018

WATKINSON + COSGRAVE

UNIT 1

17 LEIGHTON PLACE

LONDON NW5 2QL

020 7485 6016

info@watcos.co.uk

LA SAINTE UNION SCHOOL, HIGHGATE ROAD, LONDON NW5 1RP

NOVEMBER 2018

DWG No. 4803/2

SCALE 1:100

GROUND FLOOR – HALLION BUILDING NORTH ELEVATION

PROPOSED LEAN-TO/SHELTER





<u>Appendix E</u> <u>Tree Protection Notice</u>

Generic Tree Protection Notice (BS5837: 2012):

La Sainte Union School Highgate Road London NW5 1RP

Notice to be clearly shown on site AT ALL TIMES



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

Tree Protection Fencing as outlined in Diagram 2(BS5837: 2012):

Applicable for:

La Sainte Union School Highgate Road London NW5 1RP



- 1 Standard scaffold poles
- 2 Uprights to be driven into the ground
- 3 Panels secured to uprights with wire ties and, where necessary, standard scaffold clamps
- 4 Weldmesh wired to the uprights and horizontals

- 5 Standard clamps
- 6 Wire twisted and secured on inside face of fencing to avoid easy dismantling
- 7 Ground level
- 8 Approx. 0.6m driven into the ground

Appendix G: 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)