Treework Environmental Practice

Arboricultural Method Statement

College Gardens, London

Report Reference Number: 181130-1.1-CG-AMS-MW

On behalf of

Bradley-Hole Schoenaich Landscape

30 November 2018

Document Control Sheet

Project Name: **College Gardens, London**

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Report Title: **Arboricultural Method Statement**

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1 Key Contact Details

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2 Background

2.1 Treework Environmental Practice was commissioned by Camden Council on 15/11/2018 to produce an Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) to inform construction contractors on tree protection measures and methods that will be required to safeguard retained trees on site.

2.2 The AMS follows best practice guidelines in accordance with BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations* and practical solutions, based on sound arboricultural knowledge and experience of the author.

2.3 The following documents have been reviewed by Treework Environmental Practice to inform this report:

Document Title	Document/Drawing number	Originator
Topographical Survey	95442-CollegeGardens-SiteSurvey	-
Landscape Masterplan	627.02.01	Architecture and design leit-werk ltd
Tree Protection Plan	181130-1.1-CGL-TPP-NC	Treework Environmental Practice

2.4 The RIBA Stage 2 'Concept Design' Tree Survey, which informs the Root Protection Areas (RPAs), Construction Exclusion Zones (CEZs) and the position of tree protection fencing and other prescribed technical construction measures, was undertaken by Treework Environmental Practice in 25/10/2018.

2.5 This AMS provides a set of task tables with detailed methodology, which are to be complied with at all times. Any proposed works within Construction Exclusion Zones (CEZs) that are not covered within this AMS are to be 'agreed' with the Local Planning Authority and/or the Arboricultural Consultant, and appropriate additional methodology provided.

2.6 The Document should be read along with the following appendices:

- Appendix A: Tree Protection Plan – Drawing Number: 181130-1.1-CGL-TPP-NC
- Appendix B: Tree Schedule
- Appendix C: Example Site Monitoring Form

3 General Tree Welfare

3.1 When working near trees, it is important to be aware that the majority of tree roots are normally located in the top 600 mm of soil and can spread out horizontally to a distance at least equal to the height of the tree.

3.2 The distance from the tree in which damage is likely to occur is calculated by the Root Protection Area (RPA), which represents the minimum area around a tree deemed to contain sufficient roots and soil volume to keep the tree viable. RPAs should be treated as a precautionary area within which activities such as ground compaction, excavation, the storing of materials, ground stripping, raising of levels and building are likely to cause damage to trees and therefore should not take place. Usually, barriers are erected around the RPA to physically exclude such activities. The area within these barriers is known as the Construction Exclusion Zone (CEZ). Unavoidable activity within the CEZ must be carefully executed, and must be guided by this detailed method statement.

3.3 Damage can sometimes be avoided, or at least minimised, by suitable technical measures which can be devised with consultation with an Arboricultural Consultant. The protection measures and technical construction measures, applicable to this site, are included within this document.

3.4 The stem of T9 will be protected to prevent physical injury during the works. This is illustrated within the Tree Protection Plan at Appendix A and details provided in task 2, below. It is not practical to fence off other trees due to the nature of the works, however, these trees are as equally valuable as T9 and works close to them should be undertaken with care and all works in accordance with the tasks detailed below

4 General Precautions

4.1 In general, the following procedures will also be followed.

- No materials that are likely to have an adverse effect on tree health will be stored or discharged within the CEZ.

- Where storage of such materials is upslope of the trees, barriers will be put in place at ground level to minimise the risk of spillages leaching down-slope and contaminating the Root Protection Area of a tree. Such materials include:
    - Fuel and oil
    - Bitumen
    - Cement
    - Sand

- Fires on sites should be avoided if possible. Where they are unavoidable, they should not be lit in a position where heat could affect foliage or branches. The potential size of a fire and the wind direction should be taken into account when determining its location in relation to trees, and it should be attended at all times until safe enough to leave.

- Concrete will not be mixed or transported over unprotected ground within the CEZ.

- Any incidents involving potential damage to retained trees will be recorded on site using a monitoring form similar to that shown in Appendix C and a copy made available to the Local Authority Tree Officer.

5 Tables of Tasks and Detailed Method

5.1 The tables below provide detailed method on each task and how they are to be undertaken, along with methods for other tasks which may be required to complete the works. Any deviation from the methods set out in the tables below will be discussed and agreed with the Arboricultural Consultant and/or the Local Authority before being implemented.

Task 1: Securing the Site – Installation of Boundary Fence/Site Hoarding and Access Gates

Method and Action Required	Appendix Reference
If the site is to be secured with fencing, the following methodology will apply. 1) The alignment of the boundary fencing/site hoarding will be set out. 2) Consideration of conflict between tree parts and the fencing will then be reviewed. 3) Where there is conflict with trees, the fencing will be realigned. The trees are within Jeffery's Street Conservation Area and are therefore protected by law and must not be pruned without the correct consent, which can take up to 6 weeks.	**A, B, C**

Task 2: Installation of Tree Protection Fencing

Method and Action Required	Appendix Reference
1) Stem protection will be installed to avoid damage to tree T9. This should comprise: 2) Robust plywood-sided (min. 15 mm gauge) crate, reaching from ground level to a minimum height of 2m. 3) The crate should be free standing and mounted on a frame (min. 50 mm x 50 mm thickness), boxed around the trunk 4) A separation of at least 50 mm must be maintained between the outer face of the stem and the inner framework of the crate. 5) No part of the crate should be attached to the tree. 6) The stem protection will be installed before any other works commence on site, including the arrival of machinery, plant and materials. 7) The stem protection will remain in place and kept in good condition until all works are complete, unless otherwise agreed with the AC.	**A, B, C**

Task 3: Temporary Access of Plant and Equipment over Soft Ground within the RPA

Method and Action Required	Appendix Reference
1) Any temporary access over soft ground within the RPA will require a suitable material or bridging arrangement to prevent compaction and contamination to the ground below. 2) Ply-board sheeting is not to be used in any circumstances where machinery will be tracking over an area. However, this is acceptable for pedestrian use only. 3) An alternative for pedestrian use only is a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane; 4) For plant and equipment <5t. 150-200mm of woodchip, with an impermeable barrier below will be installed upon existing soft ground and a suitable temporary interlinked load spread system above, such as Trackway or Ground Guards. 5) For larger plant and equipment >5t. either: o A suitable 3D cellular matrix filled with clean granular fill over a suitable membrane. Must be suitable for heavy plant; o 200mm of woodchip with impermeable barrier below and pre-fabricated reinforced concrete installed above to form the upper surface of temporary haul route; or o A bridging arrangement, cantilevered from outside of the tree root area. 6) Any such design will be engineered and constructed in consultation with the Arboricultural Consultant. 7) Any other proposed system will be agreed in consultation with the Arboricultural Consultant and provided to the Local Authority Tree Officer for approval before installation. 8) The Arboricultural Consultant will monitor any temporary access areas over soft ground to ensure that it is well maintained and suitable for the task.	**A, B**

Task 4: Removal of Existing Hard Surfacing Within the RPA

Method and Action Required	Appendix Reference
Where removal of hard surfacing is required, the works should comply with the following: 1) Removal of hard surfacing should be programmed to take place immediately before the laying of new surfacing to avoid premature removal of the protective surface. 2) The Arboricultural Consultant will oversee this work and complete and submit a monitoring form on completion. 3) Removal of the existing surface within the RPAs will be performed using hand tools. In exceptional cases where the hard surface can only be broken up using machine, the machine will be positioned on existing hard surface outside of the RPA, operate under the direct instruction of the AC and will not operate on areas within the RPA where the surface has been removed. 4) Any exposed roots that may be present will either be pruned to a clean face using disinfected sharp secateurs or pruning saw, or, if they are to be recovered, kept damp and out of direct sunlight whilst exposed, as directed by the Arboricultural Consultant. 5) Exposed roots will wrapped in a damp hessian or similar where left exposed for more than 1 hour and in hot conditions be dampened down within 1 hour 6) Woody roots >25mm diameter will not be pruned unless judged by the Arboricultural Consultant not to be essential to the tree's health and stability. Any roots will be pruned to a clean face by the Arboricultural Consultant using disinfected sharp secateurs or pruning saw. 7) Where possible, the existing base stone will be retained to minimise the potential damage to tree roots from excavation. 8) New surfaces will be installed within 48hrs of removing the old material. Where this is not possible, then a temporary surface, such as woodchip will be installed over the exposed area of the RPA. The temporary material will be suitable for purpose – as directed by the AC.	**A, B**

Task 5: Installation of Permanent Hard Surfacing Within the RPA

Method and Action Required	Appendix Reference
Where installation of hard surfacing is required, the works should comply with the following: 1) No reductions in levels will be made, unless suitable investigations and additional methodology has been provided by the Arboricultural Consultant and agreed with the Local Authority Tree Officer. 2) Exploratory investigations may be undertaken if not done already to establish the presence absence of significant tree roots. The results of these exercises may be used to inform the final surface, in consultation with the Arboricultural Consultant. 3) Where existing hard surfacing is to be replaced, the existing subbase will be reused where possible to avoid root disturbance. 4) Removal of the existing subbase where this is required will be supervised by the Arboricultural Consultant, who will follow the methodology for hard surface removal set out in Task 4. 5) New surfaces installed on soft ground will comprise of a 3D cellular confinement system, built up from the natural ground level, filled with irregularly sized clean granular fill, over a permeable geo-textile. The cellular system must be suitable for the application which will be identified by the supplier. This is likely to be at least 150mm where traffic is to pass over or 100mm for pedestrian use. 6) Where possible, the surface to be installed over the filled 3D cellular system is to be porous, to allow air and water to penetrate into the root system. 7) The cellular system will be unloaded outside of the RPAs and via the designated haul routes (tbc). The material will be installed by hand within the RPAs. Once installed and filled with stone, vehicles/plant machinery can operate within the RPA and install the final surface above. 8) Where ground levels are to be changed and new hard surfacing introduced, the methods used will need to meet the following performance criteria: o Ensure that significant tree roots are not damaged. o Ensure that soil is not compacted to avoid mechanical impedance to tree root growth and to ensure that gaseous exchange can take place within the soil around tree roots. o Ensure that sufficient water reaches tree roots	**A, B**

Method and Action Required	Appendix Reference
9) Where minor excavation is unavoidable to match levels, detailed assessment will be carried out by the Arboricultural Consultant of the presence, location and significance of tree roots in the affected area, such as: o Visual ground assessment o Ground Penetrating Radar assessment o Trial excavation 10) Where the impact can be kept to an acceptably low level to ensure that the tree remains viable, the excavation work will be carried out under the following conditions: o Supervision of the Arboricultural Consultant, who will submit a monitoring form on completion. o All operations by hand/using hand operated tools only. 11) Where the impact cannot be kept to an acceptably low level, the design will be revised.	

Task 6: Installation of Underground Services within the RPA

Method and Action Required	Appendix Reference
Where possible, the Installation of underground services in RPAs will be avoided, however, where this is not possible the following methodology will be applied. 1) The Arboricultural Consultant will review site-specific operations that involve the installation of underground services within RPAs of retained trees and input additional methodology where necessary. Additional methodology may be agreed with the Local Authority Tree Officer before proceeding with the work. 2) In normal circumstances, there will be no excavation within 1 m of the stem of a tree and, beyond this *prohibited zone,* trenching within the RPA is still considered to present a high potential to harm the tree. Where service installation within the RPA is required, the potential impact to trees will be assessed by the Arboricultural Consultant on a case-by-case basis and detailed specifications will be developed in consultation with the project engineer to ensure that any service installation does not result in significant damage to retained trees. Alternative locations for underground services outside of RPAs will be considered. *Where underground services are to be laid within the RPAs of trees, the following measures may be employed to ensure that trees are not significantly affected.* 3) Detailed assessment of the presence, location and significance of tree roots in the affected area, including: o Visual ground assessment o Ground Penetrating Radar assessment o Trial excavation 4) Where the impact can be kept to an acceptably low level to ensure that the tree remains viable, the work will be carried out under the following conditions: o Supervision of the Arboricultural Consultant, who will submit a monitoring form on completion. o All operations by hand/using hand operated tools only 5) Where the impact cannot be kept to an acceptably low level, the following measures will be implemented: o Move the location of services outside of the RPA o Hand dig trenches and feed services through roots that are present o Excavate trenches using an AirKnife (compressed air hose) and feed	**A, B**

Method and Action Required	Appendix Reference
services through roots that are present. ○ Trenchless boring. 6) Excavation of trenches will conform to the following criteria: ○ Where roots are exposed, they will either be pruned to a clean face using disinfected sharp secateurs or pruning saw, or, if they are to be pushed aside and re-covered, kept damp and out of direct sunlight whilst exposed, as directed by the Arboricultural Consultant. ○ The trench will be backfilled within 6 hours with soil of a suitable quality to encourage rooting. ○ All operations will be supervised and signed off by the Arboricultural Consultant. 7) Trenchless boring will meet the following criteria: ○ No excavation will occur above 2 m depth within the RPAs of the trees unless agreed by the Arboricultural Consultant ○ The plant required to carry out the excavation will be able to gain access to and operate in the work area without causing damage to the trees or requiring the major pruning of tree branches. ○ Entry and exit pits will be located outside of the RPAs of retained trees unless they can be excavated without significant damage to trees ○ All operations will be overseen and signed off by the Arboricultural Consultant.	**A,B**

Task 7: Installation of Street Furniture including lamp Stands

Method and Action Required	Appendix Reference
The installation of street furniture and lamp stands that require foundations to hold them in place will follow the methodology below. Any proposed methodology not provided, should be agreed with the Arboricultural Consultant before implementing. 1) All furniture should be at least 1m from the base of any tree. 2) Consideration will need to be given to the above ground size of the structure to be installed, ensuring it will not conflict with tree parts resulting in pruning. 3) The foundation depth and width is to be minimised to reduce the likelihood of conflict with roots and the following criteria applied. • The foundation will be excavated carefully, using hand tools only • Where roots are exposed >25mm diameter, the hole will be backfilled and the furniture re-positioned. • Where roots <25mm are exposed, they will either be pruned to a clean face using disinfected sharp secateurs or pruning saw, or, if they are to be pushed aside and re-covered, kept damp and out of direct sunlight whilst exposed, as directed by the Arboricultural Consultant. • Where material other than the excavated soil, such as concrete is to be used as backfill, all sides of the hole and the base will need to be protected with a non-permeable membrane, leaving a couple of inches above ground, to be trimmed once the concrete has set. All joins of the membrane to be taped up to prevent leaching into the soil. • Concrete should be mixed, outside of RPAs, or where this is not possible, in an area where the ground is suitably protected. • Concrete should be mixed as dry as possible to minimise leaching and spills in the RPA and transported over protected ground or existing hard surfaces. • Any deviation from the above, to be agreed with the Arboricultural Consultant before implementing.	**A, B, C**

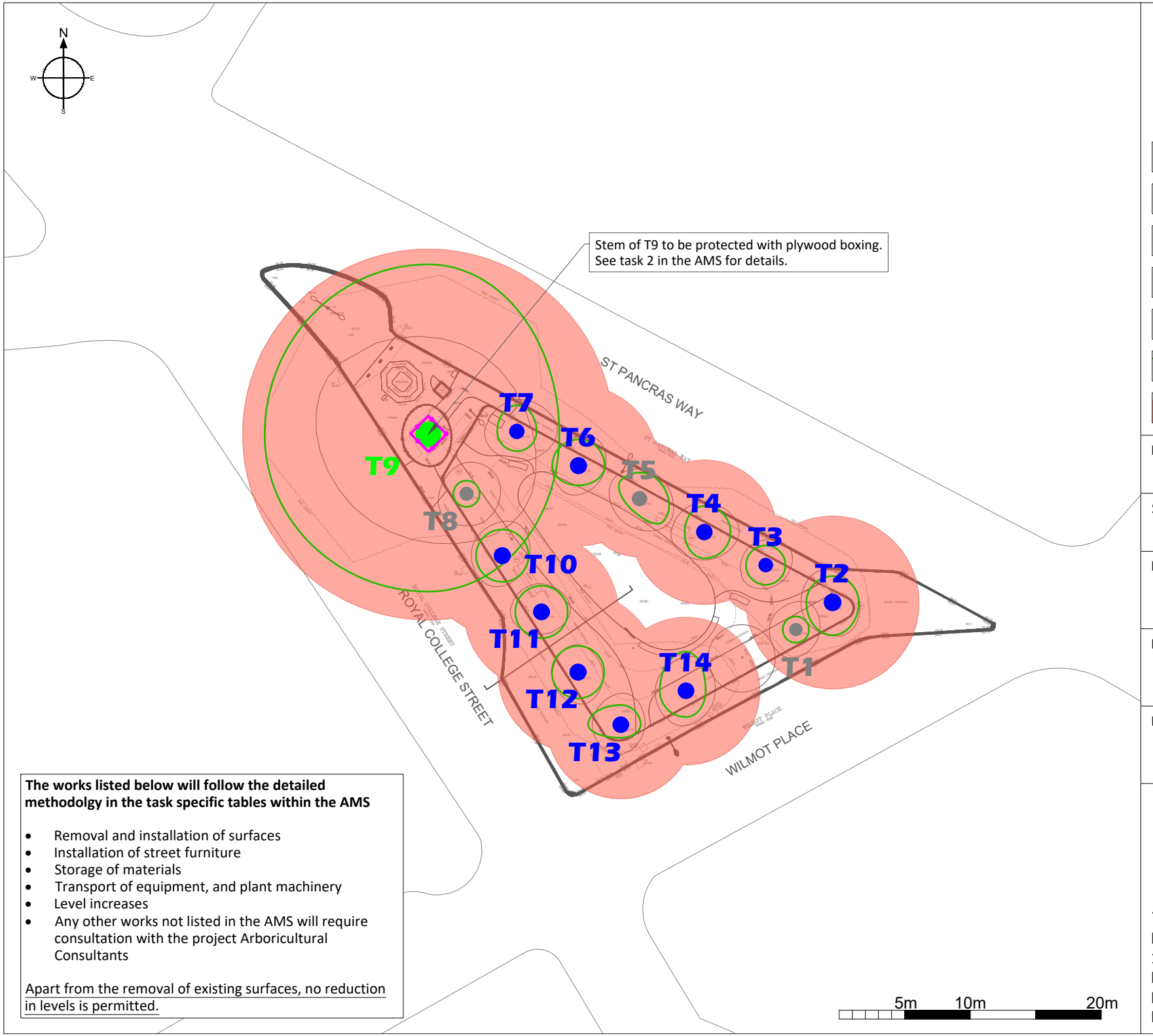
Task 8: Landscaping Operations

Method and Action Required	Appendix Reference
Soft landscaping operations within the RPA will follow the methodology below. Any proposed methodology not provided, should be agreed with the Arboricultural Consultant before implementing. 1) The Arboricultural Consultant will review any landscape operation that involves works within the RPAs of retained trees and input additional site specific methodology where necessary. Additional methodology will be agreed with the Local Authority Tree Officer before proceeding with the work. 2) The Arboricultural Consultant will oversee any soil removal and replacement work, and will complete and submit a monitoring form on completion. 3) No plant or vehicles will enter soft areas of ground within the RPA. 4) Installation of paving or other hard surfaces within RPAs will follow the principles set in task 5, above. 5) Existing unwanted vegetation within the RPA will be removed using hand-held tools, or exceptionally, by the application of non-contact herbicide such as glyphosate. 6) No excavation will occur within the RPA, with the exception of small localised post holes for fencing. 7) Post holes will be dug by hand and if significant roots are encountered (>25mm), the hole will be backfilled and an adjacent location found. 8) Small roots can be pruned flush with the soil profile with clean disinfected secateurs or a pruning saw. 9) If concrete is to be used to secure posts in holes, then an impermeable barrier is to be used between the concrete and the soil profile to prevent potential toxicity to tree roots, with joints taped to prevent leaching. 10) Turf and other soft surfaces to be introduced within the RPA will be kept to a minimum thickness (maximum 100 mm) and laid upon existing soft ground. 11) If undulations need to be levelled, then sharp sand (not marine-derived sand, e.g., builders' sand, which is too alkaline) will be used and no excavation will be	**A, B**

Method and Action Required	Appendix Reference
undertaken. 12) No strip foundations will be installed. 13) Shrubs will not be planted within 1 m of the stems of trees. Planting holes for shrubs should be dug by hand and should be repositioned if significant woody roots are encountered.	**A, B**

Appendix A

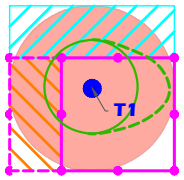
Tree Protection Plan



The works listed below will follow the detailed methodolgy in the task specific tables within the AMS

- Removal and installation of surfaces
- Installation of street furniture
- Storage of materials
- Transport of equipment, and plant machinery
- Level increases
- Any other works not listed in the AMS will require consultation with the project Arboricultural Consultants

Apart from the removal of existing surfaces, no reduction in levels is permitted.



T1 Tree or Group Reference Number	Tree Protection Fencing
Tree Stem Position A Category Tree	Initial Tree Protection Fencing
Tree Stem Position B Category Tree	Ground Protection
Tree Stem Position C Category Tree	Special Engineering /Supervised Excavations
Tree Stem Position U Category Tree	Construction Exclusion Zone
Tree Crown	Pruning/Tree Removal
Root Protection Area	Site Boundary

Date:
November 2018

Scale:
1:400 @ A4

Project Name:
College Gardens, London, NW1 9NB

Drawing Title:
Tree Protection Plan

Drawing Number:
181130-1.1-CGL-TPP-NC

Treework Environmental Practice

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Appendix B

Tree Schedule

College Gardens, London, NW1 9NB
Tree Survey BS5837-2012

Treework Environmental Practice

Tree/Group Reference	Tree Count	Species	Height (m)	Stem Count	Stem Diameter (cm)	Crown Radius (m)	Crown Clearance Height (m)	Lowest Branch Height (m)	Life Stage	Physiological Condition	Observations and Recommendations	RPA (m^2)	RPR (m)	Remaining Contribution (Years)	Retention Category	Retention Sub-category
T1	1	Tilia x vulgaris Common Lime	8.0	1	21	N E S W 1.0 1.0 1.0 1.0	2.0	2.0	Semi Mature	Good	Epicormic growth - Crown. Epicormic growth - Base / bole / principal stems. Pollard - Recently cut.	20.0	2.5	40+	C	1
T2	1	Tilia x vulgaris Common Lime	11.0	1	55	N E S W 2.0 2.0 2.5 2.0	2.0	5.0	Early Mature	Good	Epicormic growth - Crown. Epicormic growth - Base / bole / principal stems. Pollard - Recently cut. Raised surface roots.	136.8	6.6	40+	B	1
T3	1	Tilia x vulgaris Common Lime	10.0	1	32	N E S W 1.5 1.5 1.5 1.5	2.0	6.0	Early Mature	Good	Altered ground level - Suspected. Bark wound - Major. Epicormic growth - Crown. Epicormic growth - Base / bole / principal stems. Pollard - Recently cut.	46.3	3.8	40+	B	1
T4	1	Tilia x vulgaris Common Lime	10.0	1	46	N E S W 2.0 2.0 2.0 1.5	2.0	6.0	Early Mature	Good	Epicormic growth - Crown. Epicormic growth - Base / bole / principal stems. Pollard - Recently cut. Structural impact - Footpath / highway / drive disturbance.	95.7	5.5	40+	B	1
T5	1	Tilia sp. Lime sp.	10.0	1	37	NW NE SE SW 2.0 2.0 2.5 1.0	2.5	3.0	Early Mature	Fair	Bark wound - Major. Decay / structural defect in crown limb / limbs - Localised. Decay / structural defect - Localised. Epicormic growth - Base. Epicormic growth - Crown. Pollard - Recently cut. Appears to be lower vitality than adjacent limes with less epicormic growth.	61.9	4.4	10-20	C	1
T6	1	Tilia x vulgaris Common Lime	10.0	1	51	N E S W 2.0 2.0 1.5 2.0	2.0	6.0	Early Mature	Good	Epicormic growth - Crown. Epicormic growth - Base / bole / principal stems. Pollard - Recently cut.	117.7	6.1	40+	B	1
T7	1	Tilia x vulgaris Common Lime	10.0	1	38	N E S W 2.0 1.5 1.5 1.5	2.0	6.5	Early Mature	Good	Epicormic growth - Crown. Epicormic growth - Base / bole / principal stems. Pollard - Recently cut.	65.3	4.6	40+	B	1

College Gardens, London, NW1 9NB
Tree Survey BS5837-2012

Treework Environmental Practice

Tree/Group Reference	Tree Count	Species	Height (m)	Stem Count	Stem Diameter (cm)	Crown Radius (m)	Crown Clearance Height (m)	Lowest Branch Height (m)	Life Stage	Physiological Condition	Observations and Recommendations	RPA (m^2)	RPR (m)	Remaining Contribution (Years)	Retention Category	Retention Sub-category
T8	1	Tilia x vulgaris Common Lime	8.0	1	28	N 1.0 E 1.0 S 1.0 W 1.0	2.0	6.5	Semi Mature	Good	Epicormic growth - Crown. Epicormic growth - Base / bole / principal stems. Pollard - Recently cut.	35.5	3.4	40+	C	1
T9	1	Platanus x hispanica London Plane	25.0	1	118	N 13.0 E 10.0 S 12.0 W 12.5	3.5	9.0	Mature	Good	Arboricultural work - Historic. Epicormic growth - Base. Epicormic growth - Remove from base.	629.9	14.2	40+	A	1
T10	1	Tilia x vulgaris Common Lime	10.0	1	51	N 2.0 E 2.0 S 2.0 W 2.0	2.0	3.5	Early Mature	Good	Epicormic growth - Crown. Epicormic growth - Base / bole / principal stems. Pollard - Recently cut. Raised surface roots.	117.7	6.1	40+	B	1
T11	1	Tilia x vulgaris Common Lime	10.0	1	49	N 2.0 E 2.0 S 2.0 W 2.0	2.0	6.0	Early Mature	Good	Epicormic growth - Crown. Epicormic growth - Base / bole / principal stems. Pollard - Recently cut.	108.6	5.9	40+	B	1
T12	1	Tilia x vulgaris Common Lime	10.0	1	51	N 2.0 E 2.0 S 2.0 W 2.0	2.0	2.5	Early Mature	Good	Epicormic growth - Crown. Epicormic growth - Base / bole / principal stems. Pollard - Recently cut.	117.7	6.1	40+	B	1
T13	1	Tilia x vulgaris Common Lime	10.0	1	47	N 1.5 E 1.5 S 1.0 W 2.5	2.0	3.0	Early Mature	Good	Epicormic growth - Crown. Epicormic growth - Base / bole / principal stems. Pollard - Recently cut.	99.9	5.6	40+	B	1
T14	1	Tilia x vulgaris Common Lime	10.0	1	47	N 3.0 E 1.5 S 2.0 W 2.0	2.0	4.5	Early Mature	Good	Epicormic growth - Crown. Epicormic growth - Base / bole / principal stems. Pollard - Recently cut. Structural impact - Footpath / highway / drive disturbance.	99.9	5.6	40+	B	1

Tree Schedule Key

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Tree/Group Reference	Reference number for individual trees or groups of trees, prefixed by T (Tree), G (Group), W (Woodland), H (Hedge) or S (Shrub) to indicate the type of feature.
Tree Count	Number of trees of a particular species recorded within a group feature, with the default value of 1 for single trees.
Species	Scientific name followed by common name (where available).
Height (m)	Tree height to the nearest metre, either measured with a device or estimated. Tree height for group records refers to the estimated average height of trees within the group (unrepresentative trees may be excluded from this estimate).
Stem Count	Number of stems. Stem count indicates whether the tree is single-stemmed or multi-stemmed and informs the RPA calculation.
Stem Diameter (cm)	Stem diameter, measured at 1.5m above ground level in accordance with Annex C of BS5837:2012. Diameters of multi-stemmed trees are presented as a combined stem diameter calculated in accordance with the formulae in Section 4.6.1 of BS5837:2012. Stem diameter for group records refers to the estimated average stem diameter of trees within the group (unrepresentative trees may be excluded from this estimate).
Crown Radius (m)	Distance from stem position to crown periphery in either the four cardinal or four ordinal directions, estimated to the nearest half metre. Crown spreads for group records refer to the estimated average spreads of trees within the group (unrepresentative trees may be excluded from this estimate).
Crown Clearance Height (m)	Distance between the ground and the lowest point of the crown periphery, estimated to the nearest half metre.
Lowest Branch Height (m)	Height of the lowest branch, the removal of which is considered likely to have a significant negative effect on the tree in terms of physiology or in terms of the size of wound created.
Life Stage	Young, Semi-mature, Early Mature, Mature, Late Mature, Ancient or Veteran.
Physiological Condition	Good, Fair, Poor, Dead.
Observations	General description of the tree or tree group, including basic features and morphology, structural and physiological condition, growing conditions and surroundings.
Recommendations	Management recommendations for tree works to address immediate unacceptable risks, or to facilitate development proposals.
RPA (m^2)	Minimum area around a tree deemed to contain sufficient roots and rooting soil volume to maintain the tree's viability, in which the protection of roots and soil structure is treated as a priority. Calculated from the stem diameter according to the formulae in BS5837:2012. RPA for group records is based on the estimated average stem diameter of trees within the group (unrepresentative trees may be excluded from this estimate).
RPR (m)	Radius of the RPA, in metres, when this is plotted as a circle around the tree stem.
Remaining Contribution (years)	Estimated number of years for which the tree will continue to make a positive contribution to the site, banded as < 10, 10-20, 20-40, 40 +.
Retention Category	Quality and value category (A, B, C or U) as defined in Table 1 of BS5837: 2012 (reproduced below), where A = high quality and value; B = moderate quality and value; C = low quality and value and U = tree identified for removal due to poor condition regardless of development proposals.
Retention Sub-category	One or more sub-categories (1-3) as defined in Table 1 of BS5837: 2012 (reproduced below), assigned for Categories A, B or C where 1 = arboricultural qualities, 2 = landscape qualities and 3 = conservation and cultural value.

Appendix C

Example Monitoring Form

Treework Environmental Practice

Site Inspection Report
Completion of Arboricultural Operations – Monitoring Form

Site Name:		
Site Address:		
Client Name:	**Instructed By:**	
Site Manager:		
Arboricultural Operation Checked By:	**Date:**	**Approved / Not Approved**
Operation Completed / Additional Works Required:		**Number of Photographs Supplied:**
Completed By (Contractor Name):		**Contractor / Subcontractor**
Copied to LPA	**Yes / No**	**Contact Name:**
Copied to Client	**Yes / No**	**Contact Name:**
Copied to Site Manager	**Yes / No**	**Contact Name:**