

15th April 2014

Ref:eb/ms1/GIR

Your Ref:

Gloria Campo
European Urban Architecture Limited
195-199 Grays Inn Road
London
WC1X 8UL

Dear Gloria

Tree Assessment and Protection in relation to Construction at:195-199 Grays Inn Road, London

Further to my site visit of the 4th of April 2014, please find attached my arboricultural assessment and method statement as requested to assist with the planning application.

I hope that this is clear and helpful but if I can be of any further assistance, please do not hesitate to contact me.

Yours sincerely

Edward Buckton
BSc (hons) Forestry, A.A. Tech Cert



Arboricultural Assessment and Protection Method Statement

Site: 195-199 Grays Inn Road, London

Date: 15th April 2014

Prepared by: Edward Buckton BSc (hons) Forestry, A.A. Tech Cert

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Appendices:

1. Tree Survey Schedule (BS5837:2012)
2. Tree Protection Plan TPP
3. Recommended example of tree protection fencing
4. Example of site monitoring record

1.0 Introduction and Scope

- 1.1 A planning application for the construction of a new residential development is to be submitted for consideration by the Local Planning Authority (LPA).
- 1.2 The proposed construction is to be undertaken in the vicinity of trees. The implications of the construction works upon the tree are set out here together with methods for tree protection and preservation
- 1.3 I have been appointed by the site owners as a competent and qualified arboricultural consultant to provide this report and to supervise any works that may have the potential to affect the tree.
- 1.4 I have assessed the tree in accordance with the guidance set out in BS 5837:2012 'Trees in relation to design, demolition and construction- Recommendations' (the BS) and an extract from that guidance is appended herewith.

2.0 The Site and Trees

- 2.1 The site comprises an existing single storey property, currently used as offices. I have provided the BS details of the tree in the tree survey schedule at **Appendix 1** and its corresponding position is shown on the tree protection plan at included at **Appendix 2**.

- 2.2 The one tree within influencing distance of the property is a mature Common Lime. This tree is located within the public highway and is surrounded by hard standing. The canopy currently overhangs by approximately 0.5 metres, but has been pruned back in the past. The tree is free of significant defects and is in a good physiological condition.



Proposed Construction

- 2.3 The scheme proposes to excavate within the footprint to create a shallow basement. Although this result in a minor ingress within the trees uniform RPA, this is with the existing footprint, which will be free of roots. As a consequence there are no development issues relating to below ground construction.
- 2.4 The proposed elevations fall below the existing canopy and I do not predict any additional pressure or management requirements will be placed on the tree. I recommend that the tree is pruned back slightly aid construction but this will not harm the tree or effects it amenity value.

Table 1 **Proposed Tree Works**

Tree Works (Spec.)	Tree Nos	Visual Landscape Impact of Works*	Available Replacement Planting(Y/N)	Comments
Partial Reduction by 0.5 to western canopy (sp2)	1	None	NA	Tolerable works within common law right
Total				

*This is a preliminary visual appraisal based upon the opinion of the author having inspected the trees in the context of their current surroundings. – None (no change or beneficial impact) Negligible or indiscernible difference to treed landscape; Low – Noticeable but mitigated by retention of other landscape trees and features; Medium – Obvious but temporary alteration to the treed landscape; High – Obvious and permanent alteration to the landscape.

Visual receptors include the public or community at large, residents, visitors or other groups of viewers together with the visual amenity of potentially affected people.

Specifications for recommended tree works:

General

All work is to conform to BS 3998:2010 'Tree work – Recommendations' and with current arboricultural best practice. Tree works are to be undertaken by a professional and specialist arboricultural contractor, who carries the appropriate experience and insurance cover, equipment and PPE. All works and processes are to comply with all relevant Planning Wildlife, Environmental, Conservation and Health and Safety legislation.

Sp1. Crown reduction will include reducing the height and spread of a tree's canopy (branching structure) whilst retaining the tree's natural tree form (species determined). The amount of reduction is described in linear metres e.g. 2m (from 6m to 4m radial spread) or 3m (from 15m to 12m tree height). Crown reduction work will be undertaken for a specific purpose, which may include containing tree growth in a given location or reducing wind purchase and stress.

Sp2. Part reduction includes pruning back from structures or boundaries and which is normally applied to no more than two sides of a tree's canopy. The amount of pruning is specified in metres. The result form will be even and provide a framework for re-growth in an even form. The extent of pruning will not impinge upon tree condition and seek to preserve so far as possible, the natural outline of the tree, which is species determined. All pruning cuts are to be made to a suitable growing point (secondary shoot) and no inter-nodal cuts are to occur.

Sp2.1 Any branch shortening work, (including as part of crown reduction work) will be conducted by pruning back to a suitable growing point, e.g. a shoot or smaller branch, which can continue to support branch growth.

Sp3. Crown Cleaning involves the removal of all dead wood small and large diameter, stubs and broken branches. Some small, densely arranged shoots (including epicormic shoots) will be thinned out or removed as recommended.

Sp4. Crown lifting includes the removal of the lowest lateral branches and shoots, (which would not result in irrevocable tree injury), to a specific height above ground level measured in metres.

Sp5. Crown thinning involves the removal of sub-lateral (secondary) branches to appropriate branch/shoot unions, removal of dead and damaged (crossing branches) with a view to reducing the crown density by a specified %, normally no higher than 30%.

Sp6. Felling involves the careful removal of a tree to ground level (or other specified height), either in sections or in one unit (straight felling). The method of felling will be suited to the constraints of the site and judged by the competent operator undertaking the task. Removing the stump may be part of the requirements and this will be carried out using a mechanical stump grinder where accessible.

Sp7. Pollarding means the removal of all stems and branches to a given point above ground level. Re-pollarding means removal of all re-growth to but not beyond the point of previous pollarding.

SP8. Root pruning is to be carried out or supervised by a competent person (arboricultural contractor). Only sharp and specific pruning tools will be used for the root pruning exercise. No roots are to be pruned if it is considered that their loss (or shortening) will adversely impact upon tree condition or anchorage, immediately or in the future. Any exposed roots will be covered with a material to prevent desiccation. All exposed cut root surfaces will be made as small as possible. If possible roots will be pruned back to side shoot.

3.0 Recommended Construction Precautions (trees)

- 3.1 In order to afford protection from general construction processes associated with the building of the development, it will be necessary to erect a robust tree protection box in the position indicated on the Tree Protection Plan at **Appendix 2** (TPP1_GIR). A recommended example of the type BS grade tree protection is included at **Appendix 3**.

NOTE: THE APPOINTED ARBORICULTURAL SUPERVISOR IS TO BE CONSULTED BEFORE ANY WORK, EITHER SCHEDULED OR UNSCHEDULED, IS UNDERTAKEN WITHIN THE EXCLUSION ZONE OR ROOT PROTECTION AREAS OF ANY RETAINED TREE. FAILURE TO DO SO MAY LEAD TO ENFORCEMENT ACTION.

- 3.4 In order to ensure that the tree protection measures are implemented effectively, a site monitoring exercise will be undertaken to confirm:

- i) The efficacy and accuracy of the fencing

An example of a site record (tree protection) is provided at **Appendix 4**. In this case, the form will be used as confirmation that all practical precautions have been undertaken in accordance with this method statement.

- 3.5 A copy of this method statement is to be retained on site for the duration of the build process together with a scaled, colour copy of the Tree Protection Plan.

- 3.6 Key times for site supervision include:

- 1. Completion of agreed/necessary tree works
- 2. Erection of tree protection fencing
- 3. Installation of ground protection
- 4. Works within RPA's of retained trees
- 5. Landscaping

- 3.7 Site monitoring will be at regular intervals, (beyond that stated above) and at minimum 12-week intervals (subject to development scale). Below is a recommended programme of arboricultural supervision. (This program may alter dependent upon site circumstances or by agreement.)

4.0 Precautions during Landscape Work

- 4.1 The following steps (both general and site specific), are advisable in relation to implementing any landscape works, which may have the potential to affect retained and or protected trees:
1. Advise arboricultural supervisor of intended time frame of landscape work in advance of commencement.
 2. Re-locate existing tree protection fencing/ground protection to enable landscape work to proceed.
 3. With bio-degradable spray paint or site pins with plastic tape, mark out the position of the relevant tree root protection areas (RPA) as per the tree protection plan.
 4. Within the RPAs, avoid using any mechanical tools or vehicles (e.g. tracked or wheeled machinery).
 5. Spread any mulch or top soil manually, with the use of wheel barrows and hand tools. It will be acceptable to use of the back actor of a tracked excavator to spread piled top soil or mulch into the RPAs of protected trees provided the bucket does not come in contact with the ground and that the power unit is positioned outside of the RPAs at all times.
 6. Any planting pits are to be excavated manually within the RPAs of any retained trees.
 7. Multiple passes within the RPAs along one route, pedestrian and with wheel barrows will require some ground protection to be installed prior to working. Ground protection can be scaffold boards over wood chip for example.
 8. A record of the landscape working method is to be made and provided to the Council for their file.
 9. Hard landscaping features will be constructed under supervision within the RPA of retained trees and will avoid, where possible, the re-grading of soil.

5.0 General site care (trees)

- 5.1 No fires will be lit on site.
- 5.2 No access will be permitted to within the fenced or otherwise protected areas (unless for site accommodation or Authorised agreement) at any stage during construction.
- 5.3 No materials, equipment or debris will be stored within the fenced areas unless agreed with the arboricultural supervisor.
- 5.4 Areas for mixing are to be located beyond RPAs of trees and contained to prevent leaching into the soil.
- 5.5 A copy of this report and the Tree Protection Plan is to remain on site at all times.

Liability Limitation

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Please note that all relevant planning approvals and approval to planning conditions must first have been issued by the relevant planning authority in order for this report to become effective. We strongly advise that you consult your planning advisors before implementing any recommendations set out in this report.

April 2014

APPENDIX 1

Tree Survey Schedule

Surveyor: E Buckton

Ref: ts1/GIR

Tree No.	English Name	Height	Crown Spread	Ground Clearance	Age Class	Stem Diameter	Protection Multiplier	Protection Radius	Growth Vitality	Structural Condition	Landscape Contribution	B.S. Cat	Sub Cat	Useful Life	Observations
T1	Lime, Common	11	4 4 4	4/3e	Mature	330	12	4.0	Normal	Good	High	B	1,2	>40	Street tree A tree with insignificant defects

Notes:

- Height describes the approximate height of the tree in meters from ground level.
- The Crown Spread refers to the crown radius in meters from the stem centre and is shown above on each of the four compass points (i.e. N, E, S, W) clockwise.
- Ground Clearance is the height in meters of crown clearance above adjacent ground level together with the height and direction of the lowest branch
- Stem Diameter is the diameter of the stem measured in millimetres at 1.5m from ground level or adjusted for multi stemmed trees. The diameter may be estimated (e), where access is restricted. An average (a) may be taken for tree groups. A full inspection is always recommended.
- Protection Multiplier is 12 for single-stemmed trees; for multi-stemmed a cross-sectional area is calculated to derive the DBH, which in turn is multiplied by 12.

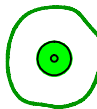
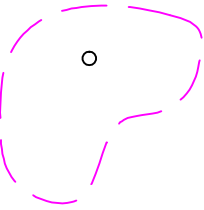
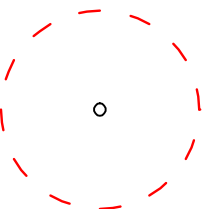
- Protection Radius is a radial distance measured from the trunk centre and is used to calculate the BS RPA.
- Growth Vitality - Normal growth, Moderate (below normal), Poor (sparse/weak), Dead (dead or dying tree).
- Structural Condition - Good (no or only minor defects), Fair (remediable defects), Poor - Major defects present or suspected.
- Landscape Contribution - High (prominent landscape feature), Medium (visible in landscape), Low (secluded/among other trees).
- B.S. Cat. refers to British Standard 5837:2012 Table 1 category and refers to tree/group quality and value; 'A' - High, 'B' - Moderate, 'C' - Low, 'U' - Remove or very poor quality.
- Sub Cat refers to the retention criteria values where 1 is Arboricultural, 2 is Landscape and 3 is Cultural including Conservation/ecological, historic and commemorative.
- Useful Life is the tree's estimated remaining effective contribution in years.

APPENDIX 2

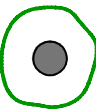
ACS CONSULTING LEGEND



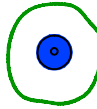
BS Root Protection Area, (RPA) shown uniform (above left) but site features such as roadways, retaining walls and foundations, may modify root patterns and therefore the RPA shape (left).



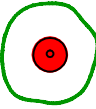
A grade trees



C grade trees (clear)



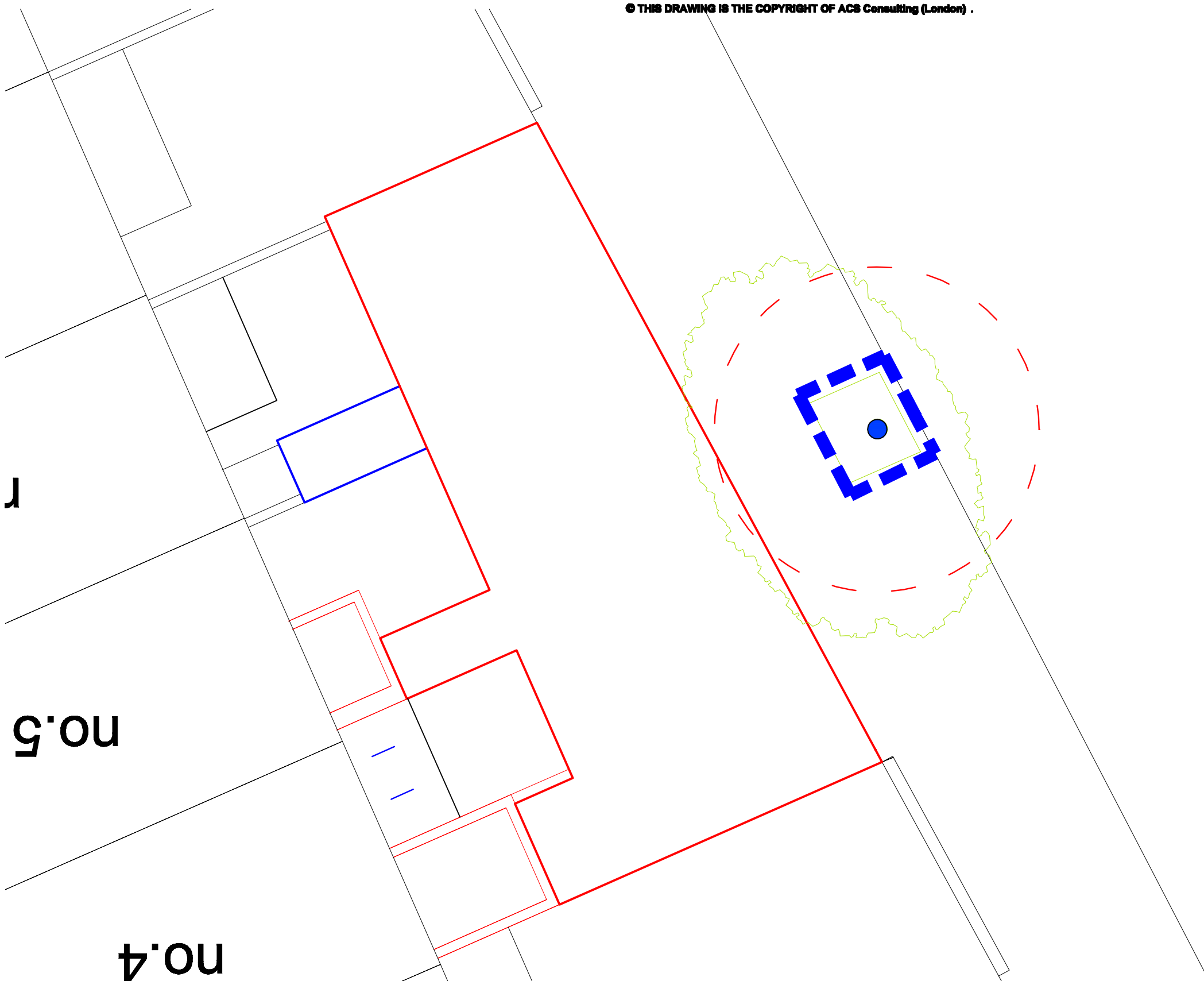
B grade trees



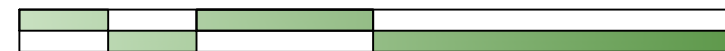
U grade trees



Recommended position for fixed tree protection fencing



0 2.5 m 5 m 10 m



Scale: 1:100

Client : -		
Project : 195-199 Greys Inn Road		
Title : Tree Protection Plan		
Scale : 1:100 A3	Dwg No : TPP01_GIR	Rev : -
Date : April 2014		
Do not scale from this drawing. Any discrepancies are to be reported to ACS Consulting. This drawing is to be used when printed to scale & in colour.		

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APPENDIX 3

Example of Tree Protection Box Frame

Designed to provide immediate protection from impacts and damage to the trunk and root crown.



Specification:

Uprights x 4, min. 100 X 100 treated wood

Batons top, middle and base min. 25mm x 75mm

45° angled batons to and base for rigidity 25mm x 75mm

Fix 12mm OSB sheeting to framework

Affix 'Tree Protection' signage.

APPENDIX 4

Arboricultural Site Supervision

Site: 1 Hyde Park, London
Inspected By: H .Applevard
Client: RPC
Site Agent: Shaun Clark

Date of Inspection: 15/02/2007
Time of Inspection: 3:30pm

Tree Protective Fencing

Tree protection in correct location

Comments/Action

No action at this time

Agreed Construction Exclusion Zone

No debris within construction exclusion zone

Comments/Action

No action at this time

Amendments to Documentation Required

No amendments required

Comments/Action

Building works outside scope of Method Statement

Remedial Works

General Comments

Tree protection and on-site supervision effective and understood.



Effective fencing in position



Fencing with signs