

# ACS

CONSULTING

URBAN & RURAL

TREE MANAGEMENT

17<sup>th</sup> April 2012

Ref:ha/ms1/40chesterter

Your Ref:

Mr R Parker  
Kerr Parker Associates Ltd  
The Granary  
Coppid Hall  
North Stifford  
Essex  
RM16 5UE

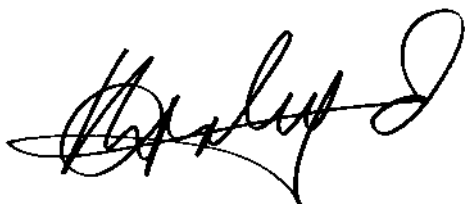
Dear Mr Parker

**Tree Assessment and Protection in relation to Construction at:  
40 Chester Terrace**

Following my site visit of November 2011 and the production of your plans, 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



Hal Appleyard  
Dip. Arb. (RFS), F.Arbor.A, MICFor.  
*Arboricultural Association Registered Consultant*



 Institute of  
Chartered Foresters  
Registered Consultant

enc.

cc Mr V Segal

**Arboricultural Assessment and Protection Method Statement**

**Site:** 40 Chester Terrace, London, NW1

**Date:** 17<sup>th</sup> April 2012

**Prepared by:** Hal Appleyard Dip. Arb. (RFS), F.Arbor.A, MICFor.

**Ref:** ha/ms1/40chesterter

**Appendices:**

1. Tree Survey Schedule (BS5837:2005)
  2. Tree Protection Plan TPP1\_CT
  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 basement extension 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 retained trees. The implications of the construction works upon the trees 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 protected trees.
- 1.4 I have assessed the trees in accordance with the guidance set out in BS 5837:2005 'Trees in relation to construction- Recommendations' (the BS) and an extract from that guidance is appended herewith.
- 1.5 A site meeting with the Council's Arboricultural Officer was carried out on 8<sup>th</sup> November 2011.

## 2.0 The Site and Trees

- 2.1 The site comprises an open garden area adjacent to the four storey dwelling plus basement. No 40 is the end terrace building and consequently has a sizeable garden area. The site is abutted on all sides, bar the south by publicly-used roads and pavements. There are two prominent trees within the garden, whose trunks



adjoin the base of the boundary railings to the garden.

- 2.2 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**.
- 2.3 The primary tree is the mature London Plane tree T2. The Norway Maple T1 is smaller and slightly sparse. There is an ornamental False Acacia between the two trees of little landscape merit but nonetheless an attractive garden feature.
- 2.4 The London Plane is quite dense, having been pruned in the past. It would not be unreasonable, and I have recommended, that some tree pruning work be carried out to improve the relationship between this large tree and the neighbouring buildings and the garden space.
- 2.5 The Norway Maple T2 has an open canopy and some dead branches have developed, which are best removed.

### Proposed Construction

2.6 Following a site meeting and consideration of both trees in relation to the development, the proposed layout has been drawn away from the trees to an agreed extent. With reference to the literature<sup>1</sup>, I note that both Norway Maple and London Plane, whose roots extend to the footprint of the proposed basement, are tolerant to a degree of root disturbance and loss. In this scheme, the amount of potential rooting area loss is less than 2.5% of the standard BS rooting area for both trees and I am confident that subject to the implementation of the protection measures, both trees will not be harmed as a consequence of the construction.

<sup>1</sup>Matheny, N., Clark, J.R., 1998 'Trees and Development' ISA

2.7 I have inspected the trees and the proposals and I have consulted with the architect and the Council's tree officer in respect of the design and the impact this may have upon the trees. Consequently, I consider that these proposals have taken full account of the trees and their safe keeping. I am satisfied that they will be preserved for the future with the implementation of the protection measures that I have set out below, coupled with the designs prepared by the architect.

### **Recommended Tree Pruning Works**

<b>Tree Works (Spec.Ref.)</b>	<b>Tree Nos</b>	<b>Visual Landscape Impact of Works*</b>	<b>Available Replacement Planting(Y/N)</b>	<b>Comments</b>
Crown reduce by 15% (3-4m) (Spec. 1)	2	Low	-	Tree has become over-grown in location; prune back from buildings
Crown thin by 25% (Spec.5)	2	None	-	Increase light filtration
Crown Clean (Spec.5)	1	None	-	
Root treatment	1,2	None	-	Negligible amount of rooting lost to development; initial manual dig to expose and prune roots accordingly.
Total		Low		Boundary hedging proposed.

\*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 Wildlife, Environmental, Conservation and Health and Safety legislation.

01. 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 will be referred to as a percentage of the whole (canopy) combined with guidance on metre length e.g. 20% (up to 2m) for a 10m high canopy (excludes the ground clearance). 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.
03. 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.
05. 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%.
07. 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 basement extension, it will be necessary to erect a robust tree protection fence (normally wire mesh panels) in the position indicated on the Tree Protection Plan at **Appendix 2** (TPP1\_CT). A recommended example of the type BS grade tree protection fencing is included at **Appendix 3**.

- 3.2 Following erection of the tree protection fencing, I recommend installing some ground protection (refer to TPP1\_CT) to ensure that roots under the surface are not damaged by compaction during regular passing by operatives and light machinery. I have included recommended examples of ground protection at **Appendix 3** also.
- 3.3 As a precaution I have recommended that some limited manual excavations be undertaken prior to the main piling work for the basement construction.

Preliminary trial pit work and rooting area treatment.

- i) First mark out the area to be manually excavated with marker spray paint
  - ii) Using hand tools remove the existing surfaces e.g. paving, turf
  - iii) Using the hand tools and compressed air (Air Spade) if necessary, remove the soil from the trial trench to a depth of min. 800mm. The width of the pit should be sufficient to for one person work in safely. All roots over 10mm diameter should be retained for inspection.
  - iv) Place the spoil beyond the RPA of the tree in question.
  - v) Arboricultural supervisor will inspect the roots/soil and advise upon root pruning. Any root pruning will carried out using sharp and specialised pruning tools (not spades or mattocks).
  - vi) The exposed face of the trench (tree side) is to be covered with a sacking-type material, which can be dampened with water and fixed in position with small stakes or weighted down along the upper ridge of the trial trench.
  - vii) The soil within the immediate area of the trunk and within the remaining RPA or any tree protection fencing, is to be an exclusion area and where appropriate dressed in a depth of rotted wood chip mulch, and regularly irrigated during the course of the construction period, sufficient to retain moist but not water-logged soil.
  - viii) The tree in question is to be monitored for condition and any changes are to be noted and acted upon where appropriate.
- 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 and ground protection
  - ii) The root assessment process

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.

#### **4.0 General site care (trees)**

- 4.1 No fires will be lit on site.
- 4.2 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.
- 4.3 No materials, equipment or debris will be stored within the fenced areas unless agreed with the arboricultural supervisor.
- 4.4 Areas for mixing are to be located beyond RPAs of trees and contained to prevent leaching into the soil.
- 4.4 A copy of this report and the Tree Protection Plan is to remain on site at all times.

#### Liability Limitation

This report has been prepared for the sole use and benefit of the Client. ACS Consulting shall not extend its liability to any third party. No part of this report is to be reproduced without authorisation from ACS Consulting (London).



Hal Appleyard *Dip. Arb. (RFS), F.Arbor.A, MICFor.*  
*Chartered Arboriculturist & Arb. Assoc. Registered Consultant*

17<sup>th</sup> April 2012

## APPENDIX 1



# Tree Survey Schedule

Surveyor: H. Appleyard

Ref: ts1/40chesterter

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	Maple, Norway	16	5 6 4 4	4	Mature	620	12	7.4	Normal	Good	High	B	1,2	20-40	Reduced in past Root pattern affected by structures Canopy errs west; pruned back off garden east; high canopy; fused branches
T2	Plane, London	25	9 8 10 6	4	Mature	1250	12	15.0	Normal	Good	High	A	1,2	>40	A tree with insignificant defects Root pattern affected by structures Dense canopy; pruned back south side;
T3	False Acacia (Frisia)	5	2 2 2 2	1.5	Young	120	12	1.4	Normal	Good	Low	C	1,2	20-40	Garden ornamental

**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.
- Stem Diameter is the diameter of the stem measured in millimetres at 1.5m from ground level or just above ground level 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 and 10 for multi-stemmed trees.

- 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 5837:2005 Table 1 category and refers to tree/group quality and value; 'A' - High, 'B' - Moderate, 'C' - Low, 'R' - 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.

Table 1 — Cascade chart for tree quality assessment

TREES FOR REMOVAL				
Category and definition	Criteria			Identification on plan
<b>Category R</b> Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management	<ul style="list-style-type: none"><li>• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other R category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)</li><li>• Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline</li><li>• Trees infected with pathogens of significance to the health and/or safety of other trees nearby (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality</li></ul> <p>NOTE Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of bat box in nearby tree).</p>			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	Criteria — Subcategories			Identification on plan
	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation	
<b>Category A</b> <b>Those of high quality and value:</b> in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested)	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
<b>Category B</b> <b>Those of moderate quality and value:</b> those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage)	Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	MID BLUE
<b>Category C</b> <b>Those of low quality and value:</b> currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150 mm	Trees not qualifying in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit	Trees with very limited conservation or other cultural benefits	GREY
	NOTE Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150 mm should be considered for relocation.			

Permission to reproduce extracts from British Standards is granted by the British Standards Institution (BSI). No other use of this material is permitted. British Standards can be obtained in PDF or hard copy formats from the BSI online shop: <http://shop.bsigroup.com> or by contacting BSI Customer Services for hard copies only: Tel: +44 (0)20 8996 9001, Email: [cservices@bsigroup.com](mailto:cservices@bsigroup.com).

## APPENDIX 2

The BS rooting areas are to remain free from construction works which has the potential to damage or remove roots to an extent which may affect the condition of the tree.

C grade trees  
(clear)

R grade trees

Recommended position of  
■ fixed 'Heras' style tree  
protection fencing.

Recommended area for effective ground protection

Area identified for hand excavations prior to construction of foundations. All work to be supervised by an arborist to advise upon root treatment where necessary.

---

Project:

40 Chester Terrace  
London  
NW1

Drwg Title:

## Tree Protection plan

Date: April 2012

Drawn By:HA

Drawing No:

Rev:

TPP1\_CT

New hedge  
planting  
following  
construction

Area of effective ground protection. Storage of materials can be loaded but no mixing of cement or concrete.

Line of basement and  
piling work.

**EXCLUSION AREA**

EXCLUSION AREA

PAVED

T2

T3

T1

1

## DINING ROOM

KITCHEN

DEN ROOM

— Re-fit Guest WC

GD10

GD11

New Balcony  
to match existing (incl. handrail)

GARAGE

B-B  
19  
+

## APPENDIX 3

# Tree Protection Fencing

**Specifications** (specifically identified by outline box)

## 2.4m Hoarding

3.0m 100 X 100mm square wooden posts

3 X 38 X 87mm wooden rails affixed to posts

2.4m X 1200 outside grade ply panels (12mm) affixed to rails.

50 X 100mm angled supporting struts affixed internally (quantity as required).

(Supporting posts fixed into position using concrete. All post holes to be hand excavated. Post holes to be no larger than 300 X 300mm.)

## Heras Fencing

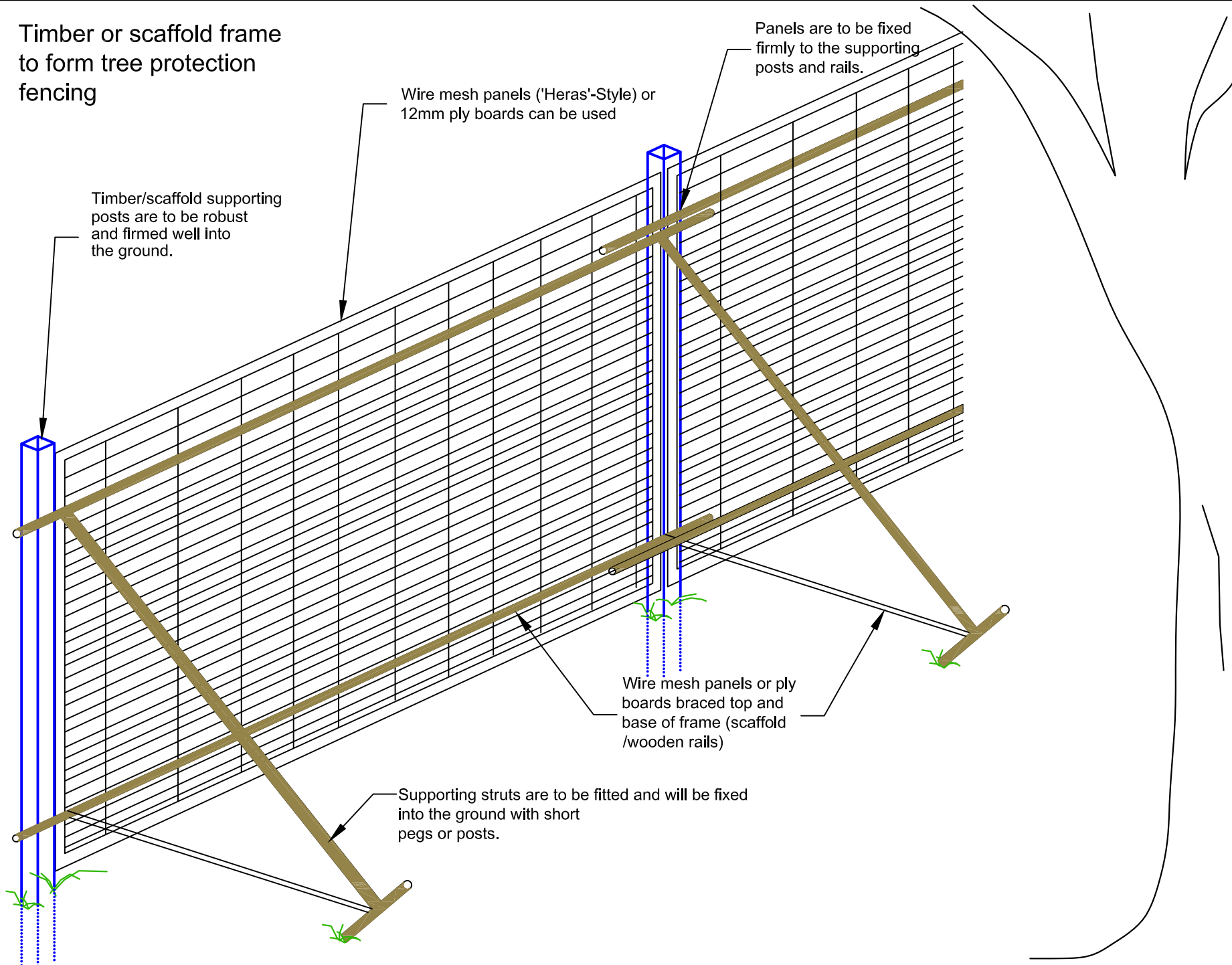
Heras fencing describes the 2.4m galvanised steel mesh panelled fencing normally supplied with pre-cast concrete bases. **Bases are to be replaced with a fixed frame to which panels are clamped/ firmly fixed.** For extra stability, scaffold poles/4x4 wooden posts are to be firmed into the ground as supporting posts and supporting struts are to be attached at a 45 degree angle on the 'tree-side' of the fencing and fixed into the ground. Supporting posts will be braced at the top and base for added support.

Timber or scaffold frame  
to form tree protection  
fencing

Wire mesh panels ('Heras'-Style) or  
12mm ply boards can be used

Panels are to be fixed  
firmly to the supporting  
posts and rails.

Timber/scaffold supporting  
posts are to be robust  
and firmed well into  
the ground.



## ACS Consulting (London)

Tree Management  
Consultants

Justin Plaza 3  
341 London Road  
Mitcham  
CR4 4BE

T: 020 8687 1214  
F: 020 8687 2456  
E: [info@treebiz.co.uk](mailto:info@treebiz.co.uk)

### Title:

Example of Tree  
Protection Fencing

### Note:

Steel scaffold or timber can  
be used to support boards  
or wire mesh panels

Date: Jan. 07

Ref:

**Note:** Sketch Plan Only - Not to  
Scale



## Tree Protection Fencing

Scaffold Framework supporting 'Heras' type panels with signs attached.



Wooden Framework with 'Heras' type panels attached.





## APPENDIX 4

# Arboricultural Site Supervision

**Site:** 1 Hyde Park, London  
**Inspected By:** H .Appleyard  
**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