5th October 2015

Ref:ha/aiams1/47qg

Your Ref:

Mr M Brumby
Pennington Phillips
16 Spectrum House
32-34 Gordon House Road
London
NW5 1LP

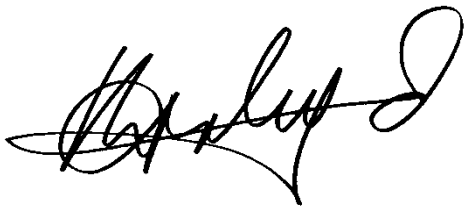
Dear Mr Brumby

**Tree Protection and Management in relation to Construction at:**
**47 Queens Grove, London NW8**

Further to my site visit, please find attached, my arboricultural report 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 Client

***Arboricultural Assessment and Protection Method Statement***

**Site**: 47 Queens Grove, London NW8

**Date**: 5th October 2015

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

**Ref**: ha/aiams1/47qg

**Appendices**:

1. Tree Survey Schedule (BS5837:2012)
2. Tree Protection Plan TPP1_QG
3. Recommended tree protection fencing and ground protection
4. Example of site monitoring record

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## 1.0 Introduction and Scope

1.1 A planning application for the construction of a new basement extension and garden room is to be submitted to the Local Planning Authority for consideration.

1.2 The proposed construction is to be undertaken in the vicinity of trees within a conservation area. The implications upon the trees and the methods for tree protection and preservation during demolition work and construction work are set out in this report and which includes a requisite a tree protection plan.

1.3 I have been appointed on behalf of 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 and retained trees.

1.4 I have inspected the relevant trees on 1st September 2015. The details are provided 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 a detached town house with hard-standing front garden with side borders of trees and shrubs and a rear garden, mostly of lawn, garden features and various trees and shrubs also growing at the site boundaries.

Fig. 1 Front and rear garden (below)

2.2 The BS details of the trees are provided within the tree survey schedule at **Appendix 1** and their corresponding positions are shown on the tree protection plan included at **Appendix 2**.

2.3 The tree stock includes a mature Pittosporum, Leyland Cypress trees, Sycamore and a Purple Leaf Plum. None of the trees is of high quality intrinsically and most are of low to very low quality in terms of their suitability to the location and their contribution to amenity. In spite of this, the development scheme requires the removal of two trees (the Pittosporum and one Leyland Cypress tree) and a further Leyland Cypress is proposed to be replaced to better accommodate the new garden room.

2.4 The Pittosporum, has attained large dimensions for its location. Normally, the species is a modest-growing shrub but this example has been permitted to grow without much intervention and consequently has grown over the buildings and gardens including those in neighbouring land. The tree has been pruned hard back on its eastern side, away from the neighbour's land and is now somewhat one-sided. The tree comprises several stems, which arise from the base and whose structural unions are weakened by the low position and inclusion of bark between. The scheme requires the tree's removal but it is likely that the tree may be removed irrespective of development ambitions, owing to its ill-suited setting now that the tree has become large and over-bearing.

Fig. 2 Pittosporum base with tight stem unions.

2.5 The Leyland Cypress T2, is a relatively small tree, planted to one side of a small garden water feature. Its removal within this scheme would have no significant bearing upon the quality of the conservation area in my view.

2.6 Deeper into the rear garden is a mature Sycamore, which has lost one apparently former co-dominant stem. The pruning site has decayed, quite extensively into the main trunk. I note that the tree is not in vigorous condition by its sparse canopy, small leaves and dead branches.

2.7 A mature Leyland Cypress, no doubt planted as a screen tree has become proportionality large, given the lack of intense maintenance the species demands in the urban garden. It would not be unreasonable to either significantly reduce the size of the tree or to replace it with a specimen, which is more suited to the location such as a Fastigiate Hornbeam; a variety of Norway Maple or Loquat (which is smaller but evergreen). Common Yew would also serve as an effective screen but would not require such intense maintenance as Leyland Cypress. Pruning to reduce the size will adversely alter Cypress's form and I recommend that the tree is replaced in this case.

2.8 A mature Sweet Bay T6, has been somewhat suppressed by the faster growing Leyland Cypress to its west but with the removal of the Cypress, the tree would improve in form to develop a more uniform shape and retaining some seclusion to the rear garden area.

2.9 A Purple Leaf Plum has been planted to the west of the site to the front of the existing garden room/house. It is a garden ornamental species and although the tree is likely to possess root system influenced by the western boundary wall, I am confident that the tree can be preserved with normal tree protection measures.

Proposed Construction and associated works

2.10 The proposal will involve excavation to the rear and sides of the site and building and which includes the removal of T1 and T2. The re-construction of the garden room, which is located further into the rear garden is better served by the replacement of the Leyland Cypress tree T5. The proposed construction is likely to encounter some Cypress tree roots and the juxtaposition would be uncomfortable

in my view, owing not only to the current tree's size but its propensity to shed leaves and debris through the year.

Table 1 **Proposed Tree Works**

| Tree Works (Spec.) | Tree Nos | Visual Landscape Impact of Works* | Available Replacement Planting(Y/N) | Comments |
|---|---|---|---|---|
| Fell (Sp6) | 1,2,5 | Low | Y | Replacement tree (for T6) to be of a size and species suited to the location i.e. no less than 25cm girth. |
| Crown reduce by 1-2m (Sp1); Crown Clean (Sp3) | 4 | None | - | Pruning to maintain tree commensurate to setting |
| Total | | Low | Min. 2 x new tree | Refer to landscape submissions |

*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.

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.

Table 2 Summary of Implications of Construction on Trees*

| Tree Ident. | Landscape Contribution | Implications/Impact | Mitigation measures | Impact Assessment** |
|---|---|---|---|---|
| T1,T2 | Low | Fell to enable construction | 1. Replacement planting of new tree minimum x 1 | Neutral |
| T5 | Medium | Fell and replace to improve garden quality | 1. Replacement planting of new tree minimum x 1 | Neutral |

* Main trees selected for comment included above. Refer to previous notes on other trees.
** Negative – adverse impact upon trees and landscape; Neutral – no material impact (negative or positive); Positive – improvement (potential) to tree quality and landscape

2.11 In summary, none of the trees have outstanding qualities and most are mediocre quality trees, which are typical of an urban garden. The proposed scheme requires the removal of two trees and a further Leyland Cypress is proposed to be removed and replaced. The removal and replacement of the trees as part of this proposal, coupled with standard tree protection measures, will have a low impact upon the quality of the conservation area and opportunities for enhancement are created through new tree planting and landscaping.

## 3.0 Recommended Construction Precautions (trees)

3.1 In order to afford protection from general construction processes associated with the building of the basement extensions and the construction of the garden room, 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_QG). 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_QG) 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 Following removal of the identified and selected trees, new trees should be planted as soon as possible in the course of the development program in order that these become established.

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

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

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 The details pertaining to tree protection as set out in this method statement, specifically include:

i) erection of tree protection barriers:

ii) the installation of ground protection;

iii) lines of communication and incident reporting (Appendix 4),

are to be explained to the Site Agent at the pre-commencement site meeting. It will be the responsibility of the Site Agent to ensure that all personnel working on site are aware to the tree protection measures processes. 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.

3.7 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 RPAs of retained trees
5. Landscaping

3.8 Effective site monitoring will be undertaken from the outset of the project and at agreed intervals thereafter. The frequency of monitoring may well decrease following the proper installation of all tree protection measures. Below is a recommended programme of arboricultural supervision. (This programme may alter dependent upon site circumstances or by agreement.)

3.9 The process for recording the tree protection measures will involve:

i) Site Agent to contact Arboricultural Supervisor with a minimum of 5 days' notice of any site work commencement.
ii) Arboricultural Supervisor to monitor site to agree tree protection fencing
iii) When all tree protection is installed in accordance with the tree protection plan, the Arboricultural Supervisor is to arrange with LPA tree officer and relevant contractors **the pre-commencement site meeting** in order to agree the tree protection and subsequent works within RPAs of retained trees and importantly the lines of communication between the on-site contractors, the Arboricultural Supervisor and the LPA tree officer and incident reporting,
iv)Arboricultural Supervisor to record all site visits and distribute reports to LPA tree officer and contractors for their records
v)Subsequent to completion, Arboricultural Supervisor to sign-off and complete.
vi) Any incidents resulting in potential tree damage are to be reported in line with the 'Incident Reporting Flow Chart in **Appendix 4**.

Table 3 Preliminary site supervision schedule

| Stage | Action | Arboricultural Supervisor (AS) (Required – Y/N) | Notes |
|---|---|---|---|
| 1 | Pre-commencement meeting* | Y | Site Agent(SA) and LPA tree officer, contractor to attend |
| 2 | Tree works | Y | Following completion of tree works |
| 3 | Installation of Tree protection fencing and ground protection | Y | PRIOR to ground/demolition works |
| 4 | Construction phase | Y | AS to monitor tree protection at agreed and appropriate intervals |
| 5 | Remove tree protection fencing/ground protection | N | No tree protection is to be removed without agreement of the LPA or AS |
| 6 | Tree planting/landscaping | Y | Brief landscape company and sign off |

3.9 The frequency of tree protection monitoring depends upon the nature of the project. In this case it will be appropriate for the SA to organise with the AS monitoring visits to be twice in the initial 28 days from commencement and thereafter once every 28 days for two months and then by agreement.

Contact List (to be completed **PRIOR** to commencement)

| Interested Party | Name | Company/LPA | Contact Number(s) | Comment/ Responsibilities |
|---|---|---|---|---|
| **Site Agent** | TBA | | | Day to day site management; co-ordination of timings; **contact with project Arboriculturist** |
| **Main Contractor** | TBA | | | Legal and administrative running of the project; finance; appointment of and liaison with all project consultants |
| **Arb. Supervisor** | TBA | | | Tree protection and management; dissemination of tree-related information |
| **LPA Tree Officer** | Mr J Remington | L B Camden Council | 020 7641 2922 | Tree protection and management |
| **Site Engineers** | TBA | | | Technical advice and design |
| **Architects** | M Brumby | Pennington Phillips | 020 7267 1414 | Design |

TBA – to be advised

***Pre-commencement means i) before any works including tree felling or pruning and ii) before any ground works or demolition commences and upon completion of the initial installation of the tree protection, including ground protection.**

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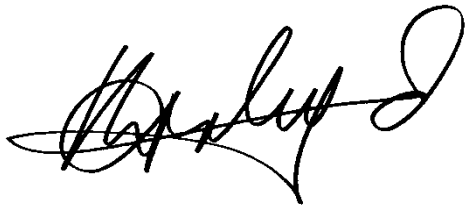
Please note that all relevant planning approvals and approval to planning conditions must first have been issued by the relevant planning authority in order for this report to become effective. We strongly advise that you consult your planning advisors before implementing any recommendations set out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



Hal Appleyard
Date: 5th October 2015

# APPENDIX 1

ACS Consulting (London)
Tree Management Consultants
T: 020 8687 1214

**ACS Consulting (London)**
**Tel: 020 8687 1214**

# Tree Survey Schedule



**Site: 47 Queens Grove, London NW8**

**Date: 1st September 2015**

**Surveyor:H. Appleyard**
**Ref:ts1/47queensgrv**

| 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 | Pittosporum | 9 | 4<br>4 2<br>4 | 2/W3 | Mature | 420 | 12 | 5.0 | Normal | Fair | Low | C | 2 | 10-20 | Included bark in main stem unions<br>Shrubby specimen at site boundary |
| T2 | Cypress, Leyland | 7 | 2<br>2 2<br>2 | 0 | Young | 250 | 12 | 3.0 | Normal | Good | Low | C | 1 | 20-40 | Leaning (slightly) west; suppressed |
| T3 | Sycamore | 11 | 4<br>4 5<br>5 | 5/E4 | Mature | 450 | 12 | 5.4 | Moderate | Fair | Low | C | 1 | 20-40 | A sparser than normal canopy<br>Decay in trunk<br>One stem removed; decay in pruning site |
| T4 | Plum, Purple-leaved | 7 | 3<br>2 3<br>4 | 2/S3 | Mature | 300 | 12 | 3.6 | Normal | Good | Low | C | 1,2 | 20-40 | Garden ornamental<br>Reduced in past<br>Roots deflected by boundary wall to west |
| T5 | Cypress, Leyland | 14 | 3<br>3 2<br>3 | 1.5/ | Mature | 500 | 12 | 6.0 | Normal | Good | Medium | C | 1 | 20-40 | Very dominant screen tree at site boundary<br>Screen properties; will require reduction in time |
| T6 | Sweet Bay | 11 | 3<br>2 3<br>2 | 2/N2 | Mature | 330 | 12 | 4.0 | Normal | Good | Medium | C | 1,2 | 20-40 | Garden ornamental<br>Suppressed by nearby tree(s)<br>Boundary screen tree |
| T7 | Magnolia (M. grandiflora) | 9 | 2<br>2 2<br>2 | 1.5/W2 | Mature | 250 | 12 | 3.0 | Normal | Good | Medium | B | 1,2 | 20-40 | Garden ornamental<br>Roots deflected by structure<br>Boundary screen tree |

**Notes:**

1. Height describes the approximate height of the tree in meters from ground level.
2. 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.
3. Ground Clearance is the height in meters of crown clearance above adjacent ground level together with the height and direction of the lowest branch
4. Stem Diameter is the diameter of the stem measured in millimetres at 1.5m from ground level. 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.
5. 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.
6. Protection Radius is a radial distance measured from the trunk centre and is used to calculate the BS RPA.
7. Growth Vitality - Normal growth, Moderate (below normal), Poor (sparse/weak), Dead (dead or dying tree).
8. Structural Condition - Good (no or only minor defects), Fair (remediable defects), Poor - Major defects present or suspected.
9. Landscape Contribution - High (prominent landscape feature), Medium (visible in landscape), Low (secluded/among other trees).
10. 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.
11. 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.
12. Useful Life is the tree's estimated remaining effective contribution in years.

**ACS Consulting (London)**
**Tel: 020 8687 1214**

# Tree Survey Schedule



**Site: 47 Queens Grove, London NW8**

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**Date: 1st September 2015**

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| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T3.1 | Hawthorn | 5 | 3<br>1 3<br>1 | 3/N1 | Mature | 250 | 12 | 3.0 | Poor | Poor | Low | U | 1 | <10 | Dying back |

**Notes:**

1. Height describes the approximate height of the tree in meters from ground level.
2. 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.
3. Ground Clearance is the height in meters of crown clearance above adjacent ground level together with the height and direction of the lowest branch
4. Stem Diameter is the diameter of the stem measured in millimetres at 1.5m from ground level. 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.
5. 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.
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12. Useful Life is the tree's estimated remaining effective contribution in years.

Table 1 **Cascade chart for tree quality assessment**

| Category and definition | Criteria (including subcategories where appropriate) | | | Identification on plan |
|---|---|---|---|---|
| **Trees unsuitable for retention** (see Note) | | | | |
| **Category U**<br>Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years | • 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 category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)<br>• Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline<br>• Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality<br>*NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.* | | | See Table 2 |
| | **1 Mainly arboricultural qualities** | **2 Mainly landscape qualities** | **3 Mainly cultural values, including conservation** | |
| **Trees to be considered for retention** | | | | |
| **Category A**<br>**Trees of high quality** with an estimated remaining life expectancy of at least 40 years | Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue) | Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features | Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture) | See Table 2 |
| **Category B**<br>**Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years | Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation | Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality | Trees with material conservation or other cultural value | See Table 2 |
| **Category C**<br>**Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm | Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories | Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits | Trees with no material conservation or other cultural value | See Table 2 |

 

# APPENDIX 2

ACS Consulting (London)
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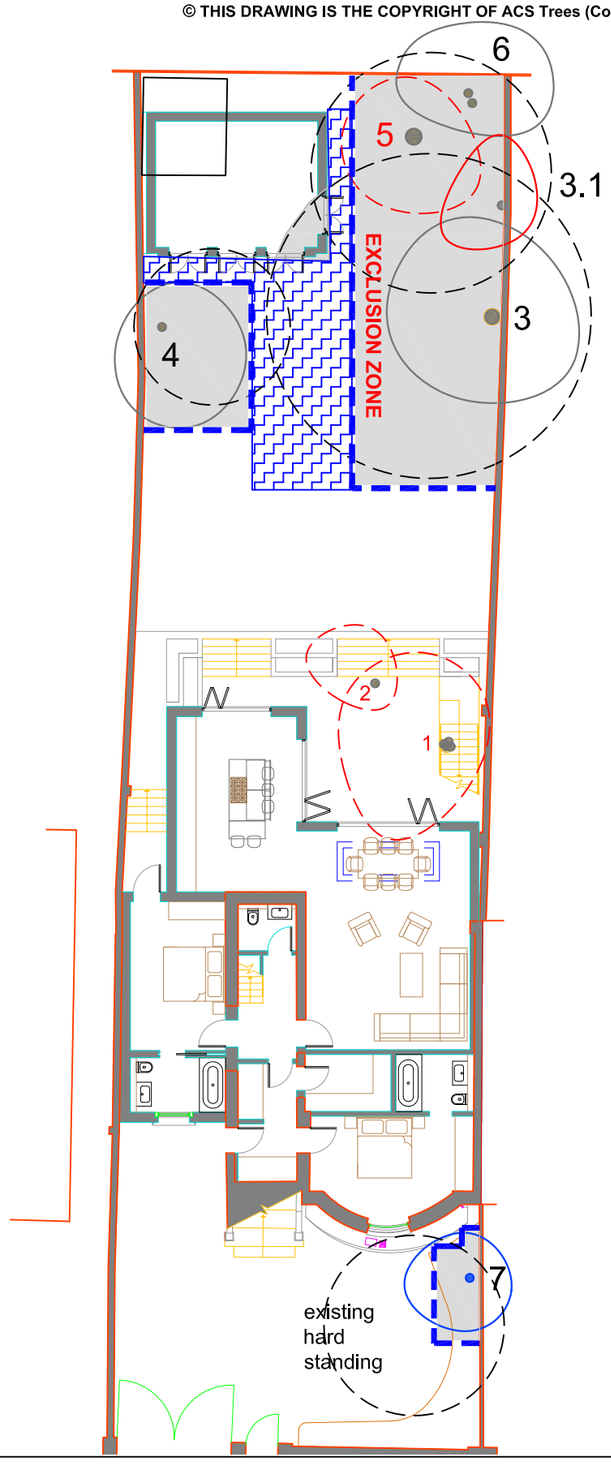


## ACS Trees (Consulting) LEGEND

Indicative

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 (below left).

A grade trees

C grade trees

B grade trees

U grade trees

Trees to be removed

Recommended position for fixed tree protection fencing; denotes construction exclusion zone.

Position of fixed tree protection, denotes construction exclusion zone.

Area for effective ground protection suitable for the project

## Tree Protection Methods to be adopted on site.

1. Undertake pre-commencement site meeting to agree tree protection methods and timings.
2. Carry out any permitted tree works - ask before beginning.
3. Erect and fix in place all tree protection (see Appendix 3).
4. Undertake ground works in accordance with contractor's specification
5. Clear spoil from site.
6. Construction phase.
7. Remove tree protection.
8. Undertake new landscaping.

0 5 m 10 m 20 m

Scale: 1:200

Client :
-

Project :
47 Queens Grove
London NW8

Title :
Tree Protection Plan

Scale : 1:200 A3

Date : Sept. 2015

Dwg No : TPP1_QG

Rev : A

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.

**ACS (Trees) Consulting**
**Consultants In Tree & Woodland Management**

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ACS CONSULTING
URBAN & RURAL
TREE MANAGEMENT

# APPENDIX 3

ACS Consulting (London)
Tree Management Consultants
T: 020 8687 1214

# Tree Protection Fencing

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

**2.4m Hoarding**

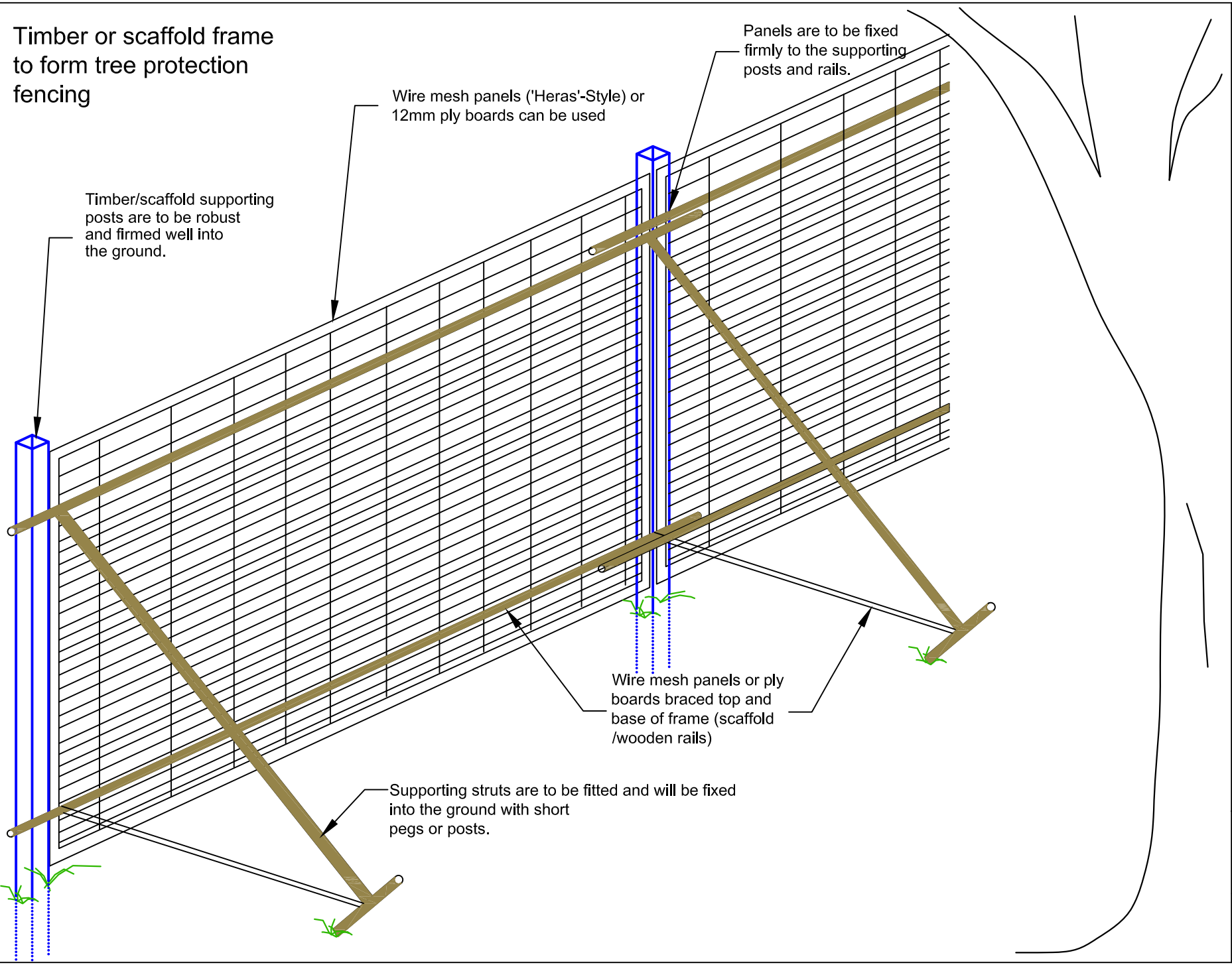
3.0m 100 X 100mm square wooden posts
3 X 38 X 87mm wooden rails affixed to posts
2.4m X 1200 outside grade ply panels (12mm) affixed to rails.
50 X 100mm angled supporting struts affixed internally (quantity as required).

(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




**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

**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.



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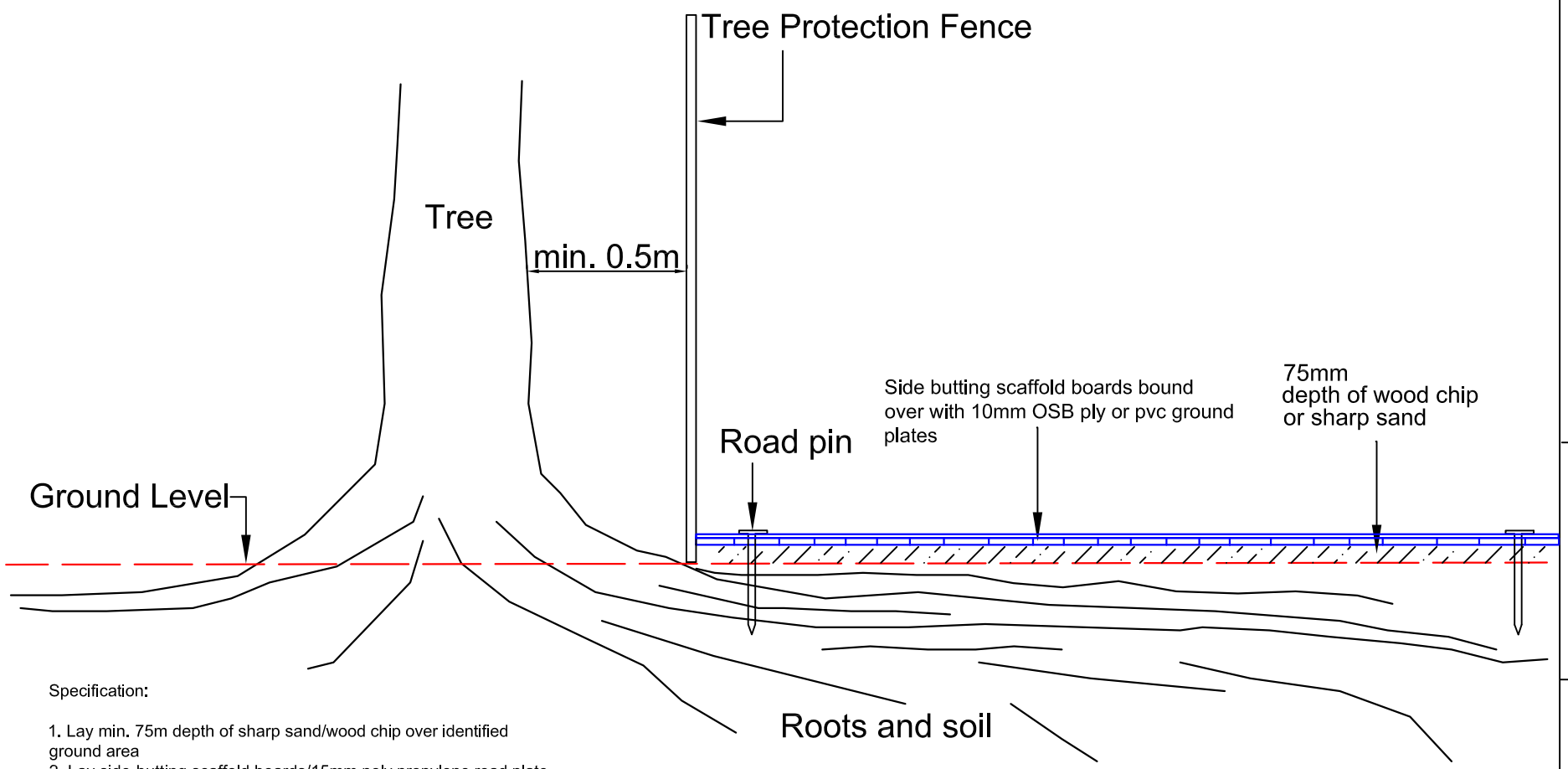
www.treebiz.co.uk




Specification:

1. Lay min. 75m depth of sharp sand/wood chip over identified ground area
2. Lay side-butting scaffold boards/15mm poly propylene road plate over sand/wood chip; cover with OSB boarding and affix with scews
3. Fix ground protection cover into place with pins/pegs
4. Erect protection fence (where feasible).
5. Erected scaffolding can act as protection fencing.
6. Remove ground protection upon completion/landscaping only.

**ACS (Trees) Consulting**

Urban & Rural Tree Management

Pilgrims Court
15-17 West Street
Reigate
Surrey

T: 020 8687 1214
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E: info@acstrees.co.uk

# Ground Protection Example

Date:

Ref:

**Note:** Sketch Plan Only - Not to Scale
Not all site features shown

# APPENDIX 4

ACS Consulting (London)
Tree Management Consultants
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ACS Consulting
T: 020 8687 1214

# Arboricultural Site Supervision



ACS CONSULTING

**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


Effective fencing in position

## 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


Fencing with signs

## Remedial Works

## General Comments

Tree protection and on-site supervsion effective and understood.

**Procedure for reporting and action following inadvertent damage to a protected or retained tree(s) on a construction site.**

*Tree Damage is defined as: any unauthorised/accidental exposure of tree roots; any accidental or unauthorised branch removal; any exposure of fresh wood (pruning or accident); any removal of bark.