3rd September 2015

Ref:eb/ms1/SR

Your Ref:



Clive Chapman CCA 4 Eel Pie Island Twickenham Middlesex TW1 3DY

Dear Clive

Tree Protection and Management in relation to Construction at: 45-49 Station Road, Hampton, TW12 2BU

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

EOBulton

Edward Buckton

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



Arboricultural Assessment and Protection Method Statement

Site: 45-49 Station Road, Hampton, TW12 2BU

Date: 5th Sept 2015

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

Ref: eb/ms1/SR

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 to demolish a car showroom and garage with development of residential properties is to be submitted to the Local Planning Authority.
- 1.2 The proposed construction is to be undertaken in the vicinity of trees within the neighbouring properties. The implications upon the trees and the methods for tree protection and preservation during 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 and 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 the garage and show room of Kingsbury Motors on Station Road. The existing buildings flank the eastern boundary and are located next to residential houses. The reminder of the site is utilised as forecourt and parking and is covered entirely with laid concrete hard-standing.
- 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 at included at Appendix 2.
- 2.3 The site does not contain trees, but there are a number which are located in the neighbouring properties. In some instances their canopies over hanging the site and their uniform RPA's also overlap. I have recorded those trees which will have potential influence on the design and construction methodology.
- 2.4 The schemes Arboricultural impact is summarised below;
 - 1) Construction within the RPA of T4 Walnut
 - 2) Elevations close to overhanging canopies of T4 and T6
- 2.5 For T4, the uniform RPA and canopy overlaps into the site and comes close to the eastern flank wall of the proposed building on Thames Street. The Walnut tree has been previously cut back and the canopy spread currently falls just at the proposed elevations. I consider that the impact on the tree is neutral, as there is a current need to prune the tree back in this way, as a means to prevent leaf and debris falling on cars. Future pruning cuts can be limited to the established reduction points and I do not consider that any additional impacts on the health, condition or amenity value will be encountered as a consequence of the development.
- 2.6 With regard to the implications of the footprint falling within the RPA of T4, I consider that this is with tolerable limits, subject to precautions during the ground works phase. I believe that the boundary wall, as well as the existing ground conditions (concrete slab hard standing), will create conditions which are unfavourable to root development with the build area. The trees stem is located



within soft landscaping and the surrounding garden provides sufficient soil volume to sustain the trees growth requirements. In addition, the amount of RPA lost to the scheme is 5% and I do not consider that this loss will have adverse impact on the tree.

- 2.7 As a precautionary measure and prior to the ground works phase, a preliminary trial trench shall be excavated along the footing where this falls within the RPA of T4. The following methodology shall be applied in this area.
 - i) First mark out the area to be manually excavated with marker spray paint
 - ii) Using hand tools remove the existing surfaces e.g. laid concrete
 - 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.
 - 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 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.
- 2.8 The canopy spread of T6 is also in close proximity to the building on Thames Street. Putting aside the low value and inappropriate location of this tree in relation to the building at number 60 Thames Street, the Cherry tree has been heavily pruned in the past. As a result, works to periodically cut back the canopy, will not alter the trees landscape or amenity value.
- 2.9 There are no predicted additional impacts on the remaining trees surrounding the site. All the existing hard standing is to remain as parking areas with improvements provided following the introduction of soft landscaping in many cases. The design has purposely removed built form from within the canopy spread of T1 Sycamore, as a means to limit future impacts. On the whole, the scheme will provide landscape enhancement, which includes new tree planting.



Table 1 Proposed Tree Works

Tree Works (Spec.)	Tree Nos	Visual Landscape Impact of Works*	Available Replacement Planting(Y/N)	Comments		
Cut back canopy to previous pruning points	T4, T6	Low	NA	To facilitate construction		
Total		Low				

^{*}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.



3.0 Recommended Construction Precautions (trees)

- 3.1 In order to afford protection from general construction processes associated with the building of the 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_SR). 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_SR) 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.

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 and ground protection
 - ii) Trail trench within RPA of T4

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:
 - i) erection of tree protection barriers:
 - ii) the installation of ground protection;



iii) lines of communication and incident reporting, 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:
 - Completion of agreed/necessary tree works
 - 2. Erection of tree protection fencing
 - 3. Installation of ground protection
 - 4. Works within RPAs of retained trees
 - 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



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	Υ	Following completion of tree works
3	Installation of Tree protection fencing and ground protection	Y	PRIOR to ground/demolition works
4	Trial trench within RPA of T4	Y	To advise on root treatment

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.

*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.
- Hard landscaping features will be constructed under supervision within the RPA of retained trees and will avoid, where possible, the re-grading of soil.

ACS

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 <u>before implementing any recommendations</u> set out in this report.

Edward Buckton Date: 5th Sept 2015

Tree Survey Schedule

Page 1



Site:45-49 Station Road

Date: Aug 2015

Surveyor:EB Ref:ts1/SR

Tree No.	English Name	Height	Crown Spread	Ground Clearance	Age Class		Protection Multiplier	Protection Radius	Growth Vitality	Structural Condition	Landscape Contribution	B.S. Cat	Sub Cat	Useful Life	Observations
T1	Sycamore	15	6 6 6	3/2s	Mature	500e	12	6.0	Normal	Good	Low	В	1	20-40	Pollard (Old) Reduced in past
G2	Holly, Common	7	2 2 2 2	3/3n	Middle Aged	200e	12	2.4	Normal	Good	Low	С	1	10-20	Boundary screen tree Off-site tree
Т3	Sycamore	8	3 4 3 3	2/2s	Mature	260	12	3.1	Normal	Fair	Low	С	1	10-20	Bark death (decay entry point) Boundary screen tree 18/20cm
T4	Walnut, Common	9	3 4 4	3/3w	Mature	300e	12	3.6	Normal	Fair	Medium	В	1,2	20-40	Reduced in past Overhang reduced
T5	Cherry, Wild	8	2 2 2 3	3/4n	Mature	250e	12	3.0	Moderate	Fair	Medium	С	1	10-20	Inspection limited by ivy/access Reduced in past
T6	Cherry, Wild	8	3 4 3 3	3/3e	Mature	350e	12	4.2	Moderate	Fair	Medium	С	2	10-20	Inspection limited by ivy/access Reduced in past overhanging boundary by 2.5 m
T7	Sycamore	6	2 1 1 2	2/2n	Middle Aged	200e	12	2.4	Moderate	Fair	Low	С	1	10-20	Multi stem weakness Self sown

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.
- 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.

Tree Survey Schedule

Page 2



Site: 45-49 Station Road

Date: Aug 2015

Surveyor:EB Ref:ts1/SR

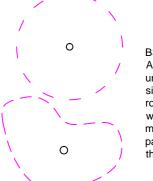
Tree No.	English Name			Ground Clearance	Age Class		Protection Multiplier	Protection Radius	Growth Vitality	Structural Condition	Landscape Contribution			Useful Life	Observations
T8	Ash, Common	8	4 4 3 4	3/3n	Middle Aged	180e	12	2.2	Normal	Fair	Low	В	1	20-40	Unprofessionally topped/lopped
G9	Walnut, Common	8	3 3 2 4	3/4n	Mature	250e	12	3.0	Normal	Fair	Low	В	1	20-40	Stubs and snags previously cut back
T10	Sycamore	8	4 4 4 4	2/2n	Mature	300e	12	3.6	Normal	Fair	Low	В	2	20-40	Reduced in past
G11	Magnolia	6	3 3 3 3	0	Mature	250E	12	3.0	Normal	Good	Medium	В	1	20-40	Compact group Off-site

Notes

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- 12. Useful Life is the tree's estimated remaining effective contribution in years.

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).



C grade tre



0



Recommended area for effective

tree protection fencing

ground protection

Recommended position for fixed



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.

Tree Protection Methods to be adopted on site.

- Undertake pre-commencement site meeting to agree tree protection methods and timings.
- Carry out any permitted tree works ask before beginning.
- Fix in place all tree protection fencing to conform with BS 5837 (see Appendix).
- 4. Install ground protection see Tree report Appendix 4.
- Undertake demolition in accordance with contractor's specification
- Clear debris from site.
- 7. Construction phase.
- 8. Remove fencing and ground protection.
- Undertake landscaping.

T: 0208 687 1214 E: info@acstrees.co.uk W: acstrees.co.uk

TREE MANAGEMENT

CONSULTING

URBAN & RURAL

0 31.25 m 62.5 m 125 m
Scale: 1:1250

Tree Protection Plan

Scale: 1:250 A2

Date: Sept 2015

Dwg No: TPP_SR A

T: 0208 687 1214 B

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.

Tree Protection Fencing

Specifications (specifically identified by outline box)

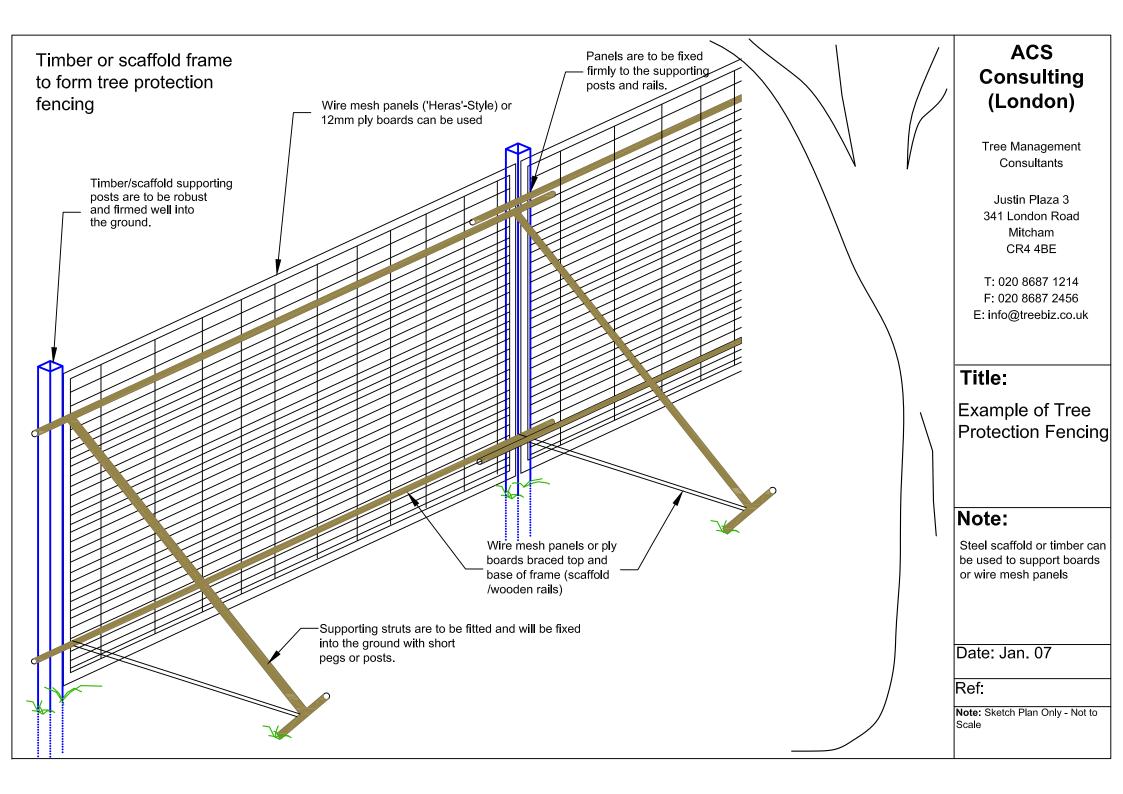
2.4m Hoarding

- 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.





Tree Protection Fencing

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



Wooden Framework with 'Heras' type panels attached.





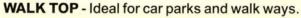


Tel: 0113 267 6000 Fax: 0113 267 2222



Example of ground protection, which is best laid over 50mm of a compressible material such as woodchips or sharp sand for optimum tree root protection.









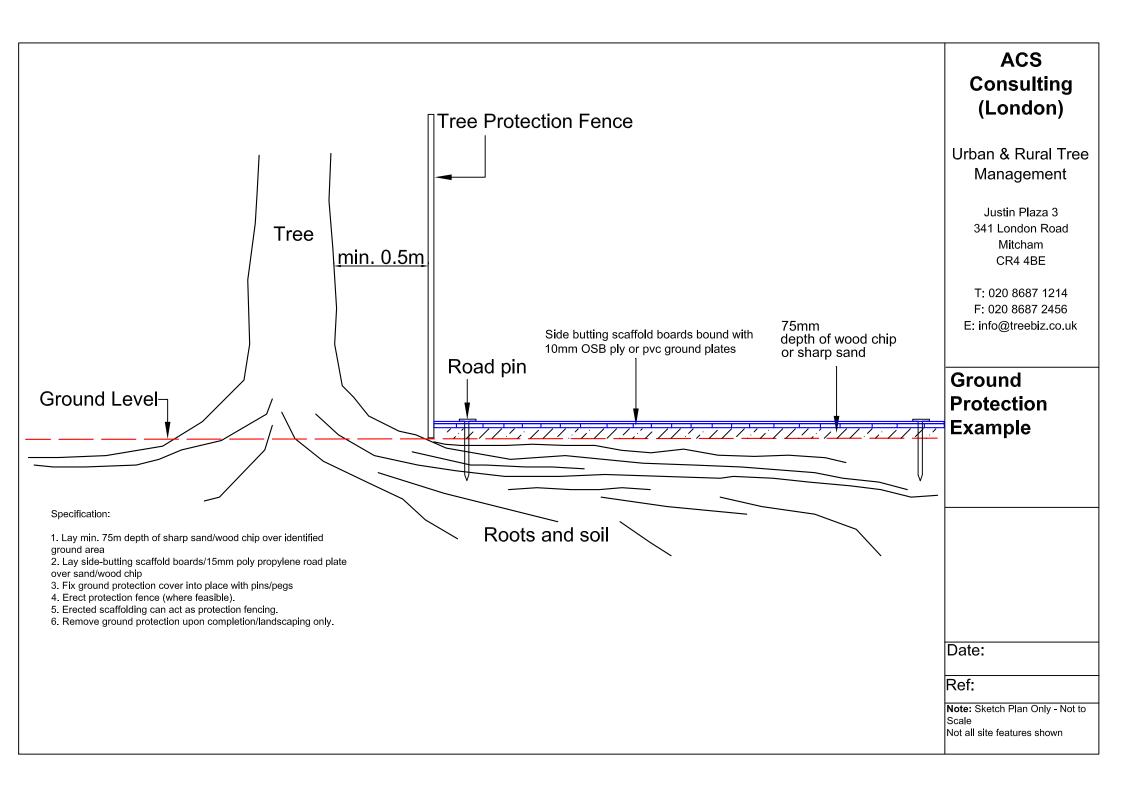
Ground plates can be useful for dissipating loads, at sensitive construction locations.

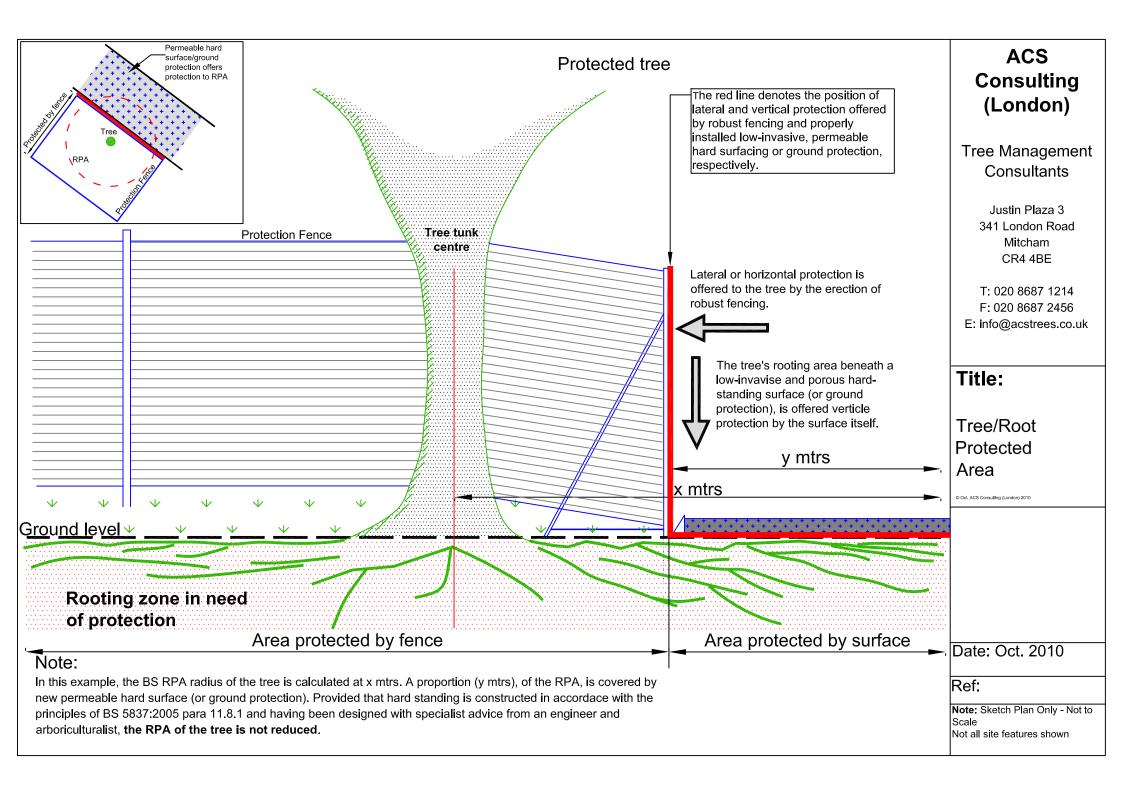


Guards into one large working platform.



OSB boarding fixing scaffold Boards below can be very effective ground protection for lighter traffic such as pedestrians, wheel-barrow and occasional passes with light dumper vehicles for example.





ACS Consulting T: 020 8687 1214

Site Agent:

Arboricultural Site Supervision

CONSULTING

1 Hyde Park, London Site:

H .Appleyard **Inspected By:**

RPC Date of Inspection: 15/02/2007 Client: Shaun Clark

Time of Inspection: 3:30pm

Page 1

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



Effective fencing in position

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



Fencing with signs

General Comments

Tree protection and on-site supervsion effective and understood.