Arboricultural and Planning Integration Report: 10 Laurier Road, London, NW5 1SG

25th June 2013

Ref: ASH/AIA/PW/6025:13

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Arboricultural Report

Location: 10 Laurier Road, London, NW5 1SG
Ref: ASH/AIA/PW/6025:13
Client: Wilkinson King Architects
Date: 25th June 2013
Date of Inspection: Friday 14th June 2013
Prepared by: Philip Wood BSc(Hons)LAM.

Please note that abbreviations introduced in [Square brackets] *may be used throughout the report.*

Instructions

Issued by – Vanessa Salambassi on behalf of Wilkinson King Architects

TERMS OF REFERENCE – Ashmore Arboricultural Services Ltd. [AAS] were instructed to survey the subject tree within front garden area adjacent to the front boundary, in order to assess its general condition and to provide a planning integration statement for the proposed construction of an extended front garden lightwell and bicycle store. The subject site is located within a conservation area and therefore the tree in the front garden is protected by virtue of growing within the conservation area. The Architects have also requested that the tree be assessed to ascertain its suitability for its current location and the impact of the proposed alterations on site would have on the tree. Therefore, the proposed development should be assessed by an arboricultural consultant to safeguard the long term health and well-being of the tree on the site if it is found to be suitable for retention.

Executive Summary
The proposal for the site is to construct an extended lightwell at the basement level in which there will be a bicycle store constructed. There will also be some hard landscaping on the roof of the proposed bicycle store. The proposed scheme would require the removal of the Laburnum specimen. The tree is not sufficient merit (when assessed in accordance with industry best practice and BS 5837: 2012 – Trees in relation to design, demolition and construction – recommendations), that it should result in planning permission being withheld on tree grounds. The specimen would require extensive detrimental surgery or even removal to comply with current highway regulations and its loss within the street scene is unfortunate, but inevitable. The predominant canopy cover within the street is provided by the local authority street trees and there are only a few trees present within front gardens. The specimen, while very mature for its species it, is not the most substantial or majestic of examples, and its loss would not be vitally detrimental to the streetscene and the aesthetic of the local area.

Documents Supplied

Vanessa Salambassi supplied the following documents:

1. Ground Floor Plan: Existing Dwg No: WK-2130-011
2. Basement Plan: Existing Dwg No: WK-2130-010
3. Basement Plan: Proposed Dwg No: WK-2130-200
4. Upper Ground Plan: Proposed Dwg No: WK-2130-201

1.0 Scope of Survey

1.1 The survey is concerned with the arboricultural aspects of the site only.

1.2 The planning status of the tree was not investigated in detail.

1.3 A qualified and trained Horticulturalist and Arboriculturist undertook the report and site visit and the contents of this report are based on this. Whilst reference may be made to built structures or soils, these are only opinions and confirmation should be obtained from a qualified expert as required.

1.4 Trees in third party properties were surveyed from within the subject property, therefore a detailed assessment was not possible and some (if not all) measurements were estimated.

1.5 No discussions took place between the surveyor and any other party regarding the proposal.

1.6 The trees were inspected on the basis of the Visual Tree Assessment method expounded by Mattheck and Breleor (The body language of tree, DoE booklet Research for Amenity Trees No. 4, 1994)

1.7 The survey was undertaken in accord with British Standard 5837: 2012 Trees in relation to design, demolition and construction – recommendations

1.8 Pruning works will be required to be in accord with British Standard 3998:2010 (Tree work – Recommendations).

1.9 Underground statutory services near to trees will need to be installed in accord with the guidance given in BS5837 together with the National Joint Utilities Group Booklet 4: 2007 Guidelines for the planning, installation and maintenance of utility services in proximity to trees (NJUG4). Smaller subsidiary services where necessary within RPA's will be subject of a detailed method statement for installation and on site supervision.

1.10 Where hard surfacing may be required in close proximity to trees, BS5837: 2012, and the principles of Arboricultural Practice Note 12: Through the Trees to Development (AAIS) 2007 (APN12) with regards to "no dig" surfacing will be employed.

1.11 Reference is made to the National House Building Council Standards, 2003, chapter 4.2: Building near trees (NHBC).

1.12 The client's attention is drawn to the responsibilities under the Wildlife and Countryside Act (1981).

2.0 Survey Method

2.1 The survey was conducted from ground level with the aid of binoculars, where required.

2.2 No tissue samples were taken nor was any internal investigation of the subject trees undertaken.

2.3 No soil samples were taken.

2.4 The height of each subject tree was estimated using a clinometer.

2.5 The stem diameters were measured in line with the requirements set out in BS5837:2012 - Trees in relation to design, demolition and construction recommendations.

2.6 The crown spreads were measured with an electronic distometer or steel tape measure. Where the crown radius was notably different in any direction this has been noted on the Plan (appendix A), or in the tree table (Appendix B).

2.7 The Root Protection Area (RPA) for each tree is included in the tree table, both as a radius of a circle, and as an area.

2.8 All of the trees that were inspected during the site visit are detailed on the plan at Appendix A. Please note that the attached plans are for indicative purposes only, and that the trees are plotted at approximate positions. The trees on this plan are categorised and shown in the following format: COLOUR CODING AND RATING OF TREES:
Category A – Trees of high quality with an estimated life expectancy of at least 40yrs. Colour = light green crown/trunk outline on plan.

Category B – Trees of moderate quality with an estimated life expectancy of at least 20yrs. Colour = mid blue crown/trunk outline on plan.

Category C – Trees of low quality with an estimated life expectancy of at least 10yrs. Colour = uncoloured crown/trunk outline on plan

Category U – 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 10years. Colour = red crown/trunk outline on plan.

The crown(s) of those tree(s) that are proposed for removal, or tree(s) where the crown spread is deemed insignificant in relation to the proposed development are not always shown on the appended plan; however their stem locations are marked for reference.

All references to tree rating are made in accordance with British Standard 5837:2012 Tree in relation to design, demolition and construction – Recommendations Table 1.

3.0 The Site

3.1 The site is located on Laurier Road in the Camden Area of North London, however, the tree is located adjacent to the front boundary growing through the front garden hedge.

3.2 The front garden is primarily paved with a Privet hedge running the length of the front boundary. The Privet hedge has grown excessively wide, currently overhangs the public highway and is in need of having its width reduced to decrease the amount of overhang that blocks the public footway.

3.3 Despite the very built up central London location the street feels quite leafy. This leafy feel is primarily due to the good provision of street trees and lower level hedges within front gardens rather than extensive tree cover in private ownership.

4.0 The Subject Trees

4.1 The details of the subject tree is set out in the Schedule at Appendix B.

4.2 The overall quality of the tree is good for a tree of its type and age. Though, the tree has now passed the peak of its increasing benefit to the local amenity and is now entering the phase were Laburnum's start to decline in health and longer term contributional value. The tree leans from the base but has recovered a good crown form, but significant structural limbs are present at very low levels over the public footway, only protecting pedestrians from colliding with the structural limbs by virtue of the presence of the overgrown hedge.

4.3 The one tree inspected in the front garden of the property is assessed as BS 5837 category C.

5.0 The Proposal

5.1 The proposal for the site is to construct an enlarged light well at the basement level to provide a storage area for the provision of a bicycle store.

5.2 There will also be some hard landscaping over the roof area of the bicycle store.

5.3 The proposed location of the above structures can be seen on the appended plan.

6.0 Arboricultural Impact Assessment

TREE REMOVAL / RETENTION:

6.1 The proposed development layout requires the removal of the tree T1, it would not be possible to excavate in the location proposed and to the depth proposed without the likelihood of destabilising and/or damaging the root system of the tree. Unless it can be demonstrated that there is a current underground structure that has deflected the root system of the tree thus limiting the root development.

6.2 It could be possible to undertake careful arboriculturaly supervised excavation work using an airspade/airlance to identify the exact location of the roots and any underground structures that may be restricting root development on the side closest to the existing light well and house. However, given the condition of the tree, the need to extensively prune the tree and the limited life expectancy of the tree this would be an unnecessary burden on the owner of the property at this point in time.

6.3 Given the condition of the tree, the need to extensively prune the specimen, its relatively small size, the limited life expectancy and the existing established street trees in the street. The removal of the tree would not have an unduly detrimental impact on the arboricultural landscape character of the site will be retained.

TREE PRUNING TO ACCOMODATE THE PROPOSAL OR ACCESS TO THE SITE

6.4 As the specimen requires removal to facilitate the excavation and construction of the development there is no additional surgery required beyond that identified for the tree.

6.5 The tree would require extensive pruning to prune the crown of the tree away from the street light lamp column and also to avoid the direct obstruction that one of the main trunks of the tree is currently causing over the highway at a low level. The tree's trunk at 1.7m high above ground level projects 900mm from the boundary into the public highway presenting a significant hazard to members of the public. The passing public are only currently protected by virtue of the hedge which currently protrudes 800mm into the highway. This issue with the tree must be addressed regardless of the development to mitigate liability for the current owner by either pruning or removal of the tree.

6.6 The main trunk originally grew with a substantial lean and has formed a more upright crown as it developed, however the trunk/main scaffold extensively impairs movement on the public footway. Removal of this limb/trunk would result in a pruning wound of 250mm diameter, which this species would not be able to form sufficient wound recovery tissue before it would extensively decay. To remove this limb/trunk would result in the loss of approximately 40% of the crown on this side of the tree. The removal of this main scaffold/trunk would have a detrimental impact on the visual amenity and health of the specimen, but it is required to mitigate liability for the current owner or alternatively remove the tree regardless of the development proposal.

6.7 The tree schedule in Appendix B identifies the pruning recommendations.

ASSESSMENT OF RETAINED TREES ROOT PROTECTION AREAS

6.8 Section 4.6.3 of BS 5837: 2012 states that the Root Protection Area (RPA) of each tree should be assessed by an Arboriculturalist considering the likely morphology and disposition of the roots, when known to be influenced by past or existing site conditions.

6.9 The proposed new extended light well and bicycle store is located within the RPA of tree proposed for removal. But due to the current conflict issues and long term amenity and health factors the tree is proposed for removal and should not provide a constraint to the proposed development from an Arboricultural perspective.

6.10 The tree is in the proximity to manmade features such as footpaths, hard landscaping and the nearby public highway. Many of these structures are to remain and clearly these may have affected root growth, however, it is difficult to determine to what extent. With this in mind the theoretical RPA has been provisionally assessed and plotted as a notional circle. Though, it is accepted at this stage that the distribution of the roots of the tree T1 is likely to be contained within the retaining wall of the existing light well the RPA is only plotted to give an indicative idea of the root area normally required by trees of this size.

6.11 In addition to the above the formula for the RPA has been adapted due to the growth habit of the tree's trunk(s). The trunk starts to form into a multi trunk specimen at 1.2m above ground level and forms into 5 branches/trunks by 1.6-1.7m above ground level, therefore the DBH measurement has been taken at 1.1m above ground level. Due to the height and multi-level way in which the tree forks, it was considered appropriate to measure the tree at this lower level, however, this results in a much larger RPA than would otherwise be expected for a tree of this size and age. Because the tree is recommended for removal regardless of the development on site it is not considered necessary to make further adjustments to the RPA at this point in time.

6.12 The RPA of the tree (shown with red dotted line) has been illustrated on the Tree Survey Plan in Appendix A and it can be seen that there is a large incursion into the RPA of T1, though the tree is recommended for removal regardless of the development. This incursion is considered acceptable due to the need for the tree to be removed and planning approval should not be withheld on tree grounds.

6.13 The proposed landscaping on the existing plans is fairly indicative at this stage, but, may provide an opportunity for some form of replacement planting, yet it is considered that tree planting would have greater long term amenity provision if planted within the public highway.

ASSESSMENT OF NEW AND RETAINED HARD SURFACING ON ROOT PROTECTION.

6.14 The front garden is predominantly hard surfaced with the small area of open ground providing the location of the subject tree and hedge. The front path is to be retained or replaced it its current location. Given that the tree T1 is recommended for removal, regardless of the proposed development, there is no constraint placed on the hard surfaces in the root protection area, shown on the plan, from an arboricultural point of view.

6.15 Given the predominant hard surfaced nature of the site and if the tree were being retained the existing hard surfacing would be acceptable as root protection for the retained tree within its RPA, as long as it was not removed or disturbed. But should there be any reason to disturb, excavate, remove or alter the paved areas within an RPA beyond that approved as part of the planning permission. An Arboricultural Consultant must be contacted prior to any works be planned or implemented. However, the only tree on site is proposed for removal.

6.16 Retained hard surface areas within RPA's for tree protection must still be treated as sensitive site zones. There can only be storage of clean lightweight materials, non-corrosive or hazardous liquids must still be kept away from the area(s).

7.0 Post Development Pressure

FUTURE TREE AND STRUCTURE RELATIONSHIPS

7.1 The specimen T1 would require removal to facilitate the development due to the need for excavations very close to the base of the tree. However, if the tree were to be removed this would result in there being no post development pressure in the future.

7.2 If the tree is not removed and retained, the subject tree requires major pruning work removing extensive structural limbs leaving a substantial wound that would not provide sufficient wound recovery tissue sufficient enough to heal the cut surface, within a suitable timescale, that would avoid decay on the main trunk of the tree.

7.3 The tree would require removal to implement the proposed scheme, however to comply with the requirements of the highways act the pruning work required would be detrimental to the long term health of the tree. Extensive pruning would be required to both cut back the crown from the lamp column on the highway and also where the tree has a low main structural limb/trunk growing out across the highway,

major extensive pruning is required to eliminate this hazard to passing members of the public. The tree has received very little surgery in the past. The work required to mitigate this issue with the highway would have a significant and detrimental impact on the long term health and amenity value of the tree and, as such, removal would have to be given positive consideration as an alternative solution to the highway conflict issue.

7.4 If pruning were to be carried out on the tree to mitigate the conflict with the highway, which would be required to limit the liability of the current owners of the site, the tree would then not be worth of the imposition of a tree preservation order, as its long term health and amenity will have been extensively impaired.

7.5 The BS3998: 2010 – Recommendations for Tree Work discusses and endorses various methods of pruning that can alleviate the minor inconveniences trees can cause, whilst retaining them in a healthy condition. Methods such as crown reductions (section 13.4) partial or whole, crown lifting (section 13.5) and crown thinning (section 13.6) can be used to both increase light to properties, as well as improve clearances from buildings. Trees in towns are often cited in close proximity to buildings; however residents concerns' can be readily appeased with the implementation of regular, well-planned, sensitive pruning. Unfortunately as minor limb removal was not undertaken on the tree when it was a very juvenile specimen following the principles above. This has meant that to comply with the current regulations the surgery now required is far more extensive and the specimen would be better served by removal.

REMEDIATION / REPLACEMENT PLANTING AND SOFT / HARD LANDSCAPING

7.6 Any new trees that are planted should be selected to ensure they do not become a nuisance and that the level of routine maintenance is low.

7.7 The soil type and proximity may require the guidance of NHBC as far the building foundations are concerned. Clearly the planting schedule must be available to assist with foundation design, but any potential for subsidence damage in the future will be designed out.

7.8 All new pathways and soft landscaping areas within the Root Protection Areas (RPA's) of the retained trees should be designed using no-dig, up and over construction and in close co-ordination with the retained Arboriculturalist using porous materials. Where hard surfaces or foundations are to be removed within the RPA's, site specific method statement(s) should be produced with direct input from the retained Arboriculturalist and appropriately monitored with onsite supervision of the Arboriculturalist for tree/tree root sensitive stages.

8.0 Tree Protection Measures and Preliminary Method Statement for Development Works

8.1 TREE PRUNING / REMOVAL

A list of all tree works that are required is included in the tree table at Appendix B. Pruning / removal has only been specified for the following reasons:

- Where work is necessary to implement the proposed scheme.
- Where works are required for safety reasons.
- Where work is needed to mitigate a legal responsibility or duty.
- Where work is required to improve tree form, or improve the appearance of overgrown areas of the site.

Where any tree work is needed, this work will be in accordance with British Standard 3998: 2010 (Tree Work – Recommendations).

8.2 TREE PROTECTION BARRIERS

8.2.1 Given that tree T1 is the only tree in the front garden and it is recommended, and requires, removal to implement the proposed scheme. There would not be a need to protect the tree.

8.3 DELIVERY AND STORAGE OF BUILDING MATERIALS

Due to the limited on-site storage space, it may be necessary for bulk deliveries to be split into smaller deliveries. The use of a "just in time" delivery method can also be adopted to reduce the time materials are stored on site before use.

8.4 SITE HUTS, WELFARE FACILITIES AND STORAGE OF EQUIPMENT, MATERIALS AND CHEMICALS

All site huts will be positioned outside of the retained trees RPA's.

8.5 MIXING OF CONCRETE

All mixing of cement / concrete must be undertaken outside of the RPA of all of the retained trees and areas proposed for any replacement tree planting to avoid soil compaction or contamination. This includes the washing out of cement mixers and rendering tubs etc.

8.6 USE CRANES, RIGS AND BOOMS

Precautionary measures must be observed to avoid contact of any retained trees when manoeuvring cranes rigs or booms into position.

8.7 INCOMING SERVICES AND SOAKAWAYS

The existing drainage system and location for any proposed services is unknown at the time of preparing the report. Any new underground statutory services near to trees will however need to be installed in accord with the guidance given in BS5837 together with the National Joint Utilities Group Booklet 4: 2007 Guidelines for the planning, installation and maintenance of utility services in proximity to trees (NJUG4). When within the RPA of any retained tree, any new service trenches should be excavated using an airspade or pneumatic/hydraulic mole to avoid any damage to roots. Care must then be taken to ensure the new services are installed so as to avoid any roots present. Any proposal will be agreed with AAS prior to submission to the LPA Arboricultural Officer and where required by the LPA Arboricultural Officer any excavations or soil disturbance within the RPA's of retained trees will require appropriate supervision as detailed by the LPA's Arboricultural Officer.

8.8 ON SITE SUPERVISION

Due to T1 being the only tree within the front garden area, no onsite supervision is required, because the tree is being recommended for removal.

8.9 OTHER TREE PROTECTION PRECAUTIONS

- No fires will be lit on site within 20 metres of any tree to be retained.
- No fuels, oils or substances damaging to the tree(s) shall be spilled, poured on site without the appropriate safety bunding or site specific environmental safety safeguard measures, but never within retained tree RPA's
- No storage of any materials within the root protections zone.

8.10 HARD / SOFT LANDSCAPING NEAR RETAINED TREES

All new pathways and hard landscaping areas within the Root Protection Areas (RPA's) of the retained trees should be designed using no-dig, up and over construction techniques, and be specified in close co-ordination with the retained Arboriculturalist. Porous materials should also be used when surfacing near the trees but the careful attention must be given to the pH of the material and guidance should be obtained from the retained Arboriculturalist prior to specification preparation and/or installation. No machinery will be used for this work, which must all be carried out by hand.

8.11 LEVEL CHANGES

No level changes should occur within the root protection area of any of the retained trees. From the details provided it is believed there are no proposed significant level changes within the RPA's of the retained trees.

8.12 DISMANTLING PROTECTIVE BARRIERS

Protective barriers must only be completely removed when all machinery, and equipment have left site. A minimum of seven days notice must be given to the local planning authority prior to dismantling works begin.

9.0 Conclusion

9.1 The proposed extended lightwell and bicycle store are located within the RPA of tree T1, However, due to the need to extensively and detrimentally prune the tree to accommodate the requirements of the highways act it would **not** be appropriate to retain the tree unpruned.

9.2 The tree would require extensive pruning to prune the crown of the tree away from the street light lamp column and also to avoid the direct obstruction that one of the main trunks/limb of the tree is currently causing over the highway at a low level. The tree's trunk at 1.7m high above ground level projects 900mm from the boundary into the public highway presenting a significant hazard to members of the public. The passing public are only currently protected by virtue of the hedge which currently protrudes 800mm into the highway. If the hedge is cut back to the boundary, as intended by the owner, the hazard of the limb/trunk will be even more evident. This issue with the tree must be addressed regardless of the development to mitigate liability for the current owner by either pruning or removal of the tree.

9.3 The main trunk and originally grew with a substantial lean and has formed a more upright crown as it developed, however the trunk/main scaffold extensively impairs movement on the public footway. Removal of this limb/trunk would result in a pruning wound of 250mm diameter, which this species would not be able to form sufficient wound recovery tissue before it would extensively decay. To remove this limb/trunk would result in the loss of approximately 40% of the crown on this side of the tree. The removal of this main scaffold/trunk would have a detrimental impact on the visual amenity and health of the specimen, but it is required to mitigate liability for the current owner or alternatively remove the tree regardless of the development proposal.

9.4 The tree is currently a significant feature of the site but its extensive lean from within the site to outside the site, limits the appropriateness of the tree for retention within its current surroundings and its category grading under the BS5837:2012. The tree will not be of sufficient amenity value, when pruned, to merit refusal of the proposal based on tree retention grounds.

9.5 The specimen is at its limit of significant increase in its provision of amenity to the local area, has limited long term amenity value, and its condition/pruning requirements render the tree not be worthy of the imposition of a Tree Preservation Order.

9.6 If the Laburnum T1 is removed it would open up the opportunity for the local authority to plant a street tree in the highway similar to those they have already planted in many other locations within the street.

10.0 Recommendations

10.1 The Planning approval should not be withheld on Arboricultural grounds and site works should progress as follows to enable the implementation of the proposed scheme subject to planning approval.

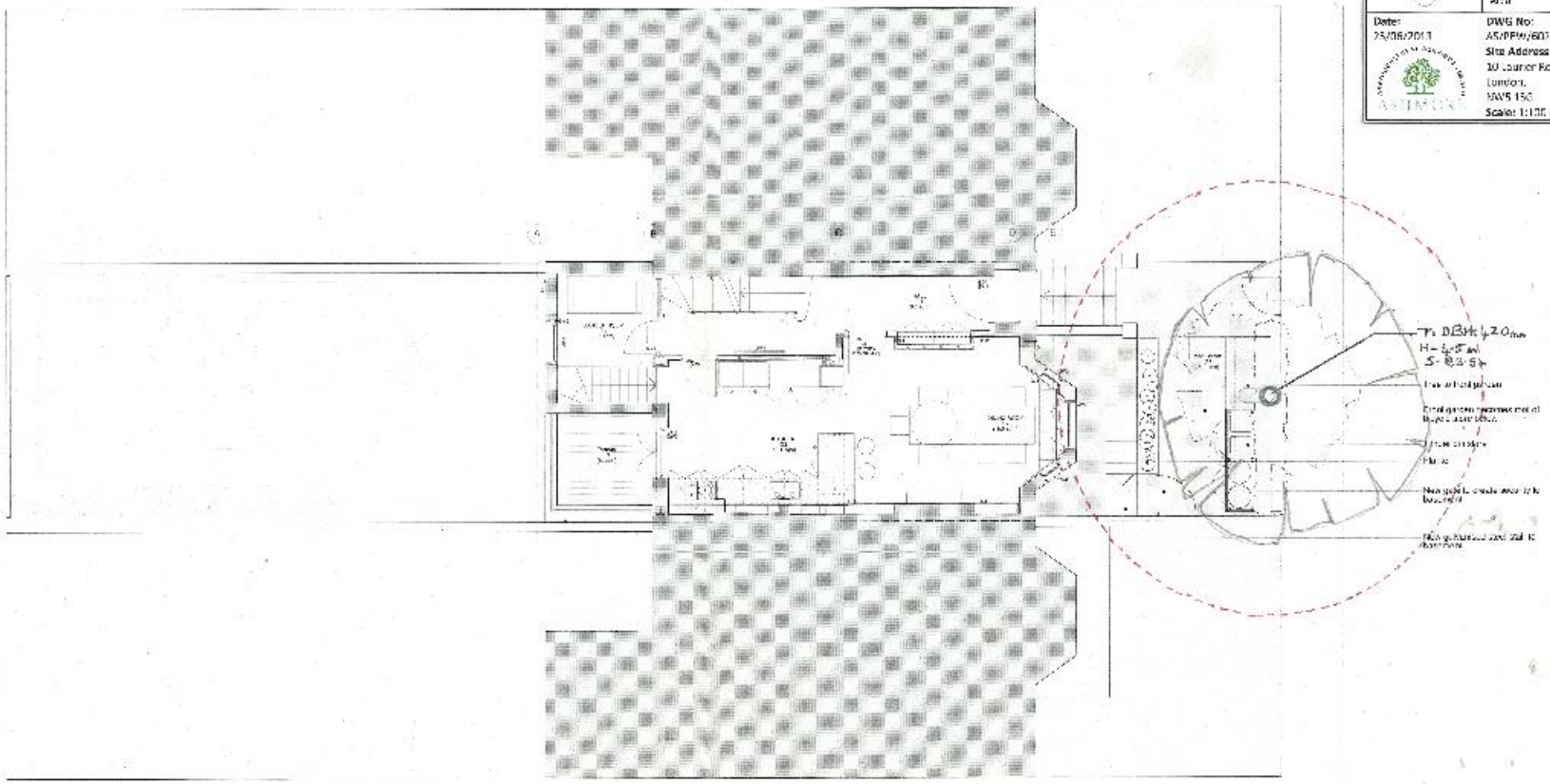
a. Tree felling, in accordance with BS3998
b. Excavation and Construction.
c. Hard & Soft landscaping.

25th June 2013

Philip Wood
For and on behalf of Ashmore Arboricultural Services Ltd

Appendix A

Tree Survey Site Plan



Appendix B

Tree No.	Tree species	Height (m)	Multi-stem? (Enter MS)	Trunk / stem count dia. (mm)	Radius of RPA if circle	RPA -Root Protection Area sq.m.	Branch spread				Height of first significant branch (m)	Height of Crown Clearance (m)	Age class	Comments / Recommendations	Estimated remaining contribution	Assessed BS 5837: 2005 Value category
							N	E	S	W						
T1	Laburnum	4.5	M/S	420	5.04	80.01	2.5	3.5	4.0	3.0	1.5	2.0	M	The trunk starts to form into a multi trunk specimen at 1.2m above ground level and forms into 5 branches/trunks by 1.6m above ground level, therefore the DBH measurement has been taken at 1.1m above ground level. Access around the base was restricted due to the presence of the hedge. Pocket of Decay on North side of trunk near root collar.	10-20	C1
Comments / Recommendations Continued				Specimen has been lifted and thinned in the past, but there are signs of branch dieback within crown due to seclusion. The main trunk and originally grew with a substantial lean and has formed a more upright crown as it developed, however the trunk/main scaffold extensively impairs movement on the public footway. Removal of this limb/trunk would result in a pruning wound of 250mm diameter, which this species would not be able to form sufficient wound recovery tissue before it would extensively decay. The tree's trunk at 1.7m high above ground level projects 900mm from the boundary into the public highway presenting a significant hazard to members of the public. The passing public are only currently protected by virtue of the hedge which currently protrudes 800mm into the highway. If the hedge is cut back to the boundary, as intended by the owner, the hazard of the limb/trunk will be even more evident. To remove this Limb/trunk would result in the loss of approximately 40% of the crown on this side of the tree. There is some cankered die-back on a couple of the pruning points. RECOMMENDATIONS: Fell to ground level and remove stump.									

KEY:

Tree No: Tree number (T= individual tree, G= group of trees, W= woodland)

Crown = the leaf bearing part of the tree

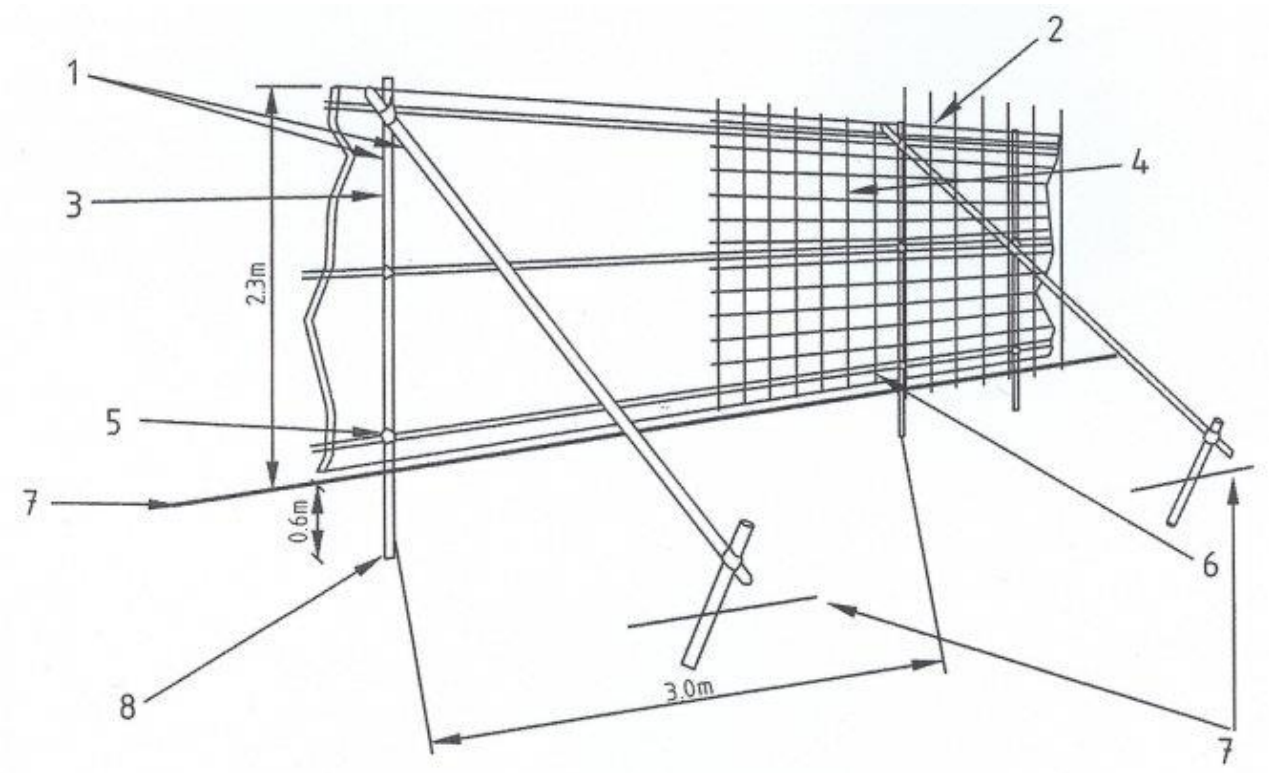
Diameter: MS = Multi-stemmed

Age class: Young (Y), Middle aged (MA), Mature (M), Over mature (OM), Veteran (V)

Height (Ht): Measured in metres +/- 1m

Appendix C

BS 5837: 2012
Tree Protection Barrier/Fencing



1 Standard scaffold poles
2 Uprights to be driven into the ground
3 Panels secured to uprights with wire ties and, where necessary, standard scaffold clamps
4 Weldmesh wired to the uprights and horizontals
5 Standard clamps
6 Wire twisted and secured on inside face of fencing to avoid easy dismantling
7 Ground level
8 Approx. 0.6m driven into the ground

Figure 2. – Protective fencing for RPA