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**Arboricultural Implications Assessment
for
extensions, alterations and landscaping at
42 Stradella Road,
London,
SE24 9HA.**

by
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*AC-TS-SR
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INFORMATION.

DAMAGE TO TREES.

A. General:

1. Trees that have good health and stability are well adapted to their surroundings. Any development activity which affects the adaptation of trees to a site could be detrimental to their health, further growth and safety. Tree species differ in their ability to tolerate change but all tend to become less tolerant after they have reached maturity or suffered previous damage or stress.
2. The part of a tree most susceptible to damage is the root system, which, because it is not immediately visible, is frequently ignored. Damage to, or death of the root system affects the health, growth, life expectancy and safety of the entire tree. The effects of such damage may only become evident several years later. Damage may be the result of a number of insignificant but compounding factors that can accumulate over time.

B. Extent and Form of the Root System.

1. **The root system is typically concentrated within the uppermost 600mm of the soil** although it may be deeper within the dense mass of roots and soil close to the base of the tree. Within a short distance of the stem the roots are highly branched, so as to form a network of small diameter woody roots, which typically extend radially for a distance much greater than the height of the tree, except when impeded by unfavorable conditions. All parts of this system bear a mass of fine, non-woody absorptive roots.
2. The root system does not generally show the symmetry seen in the branch system. The development of all roots is influenced by the availability of water, nutrients, oxygen, and soil penetrability. As far as these conditions allow, the root system tends to develop sufficient volume and area to provide physical stability.
3. **The uptake of water and nutrients by the root system takes place via the fine roots, typically less than 0.5mm in diameter. Their survival and functioning – which are essential for the health of the tree as a whole – depend on the maintenance of favorable soil conditions.** The fine roots are short – lived, with the majority dying each winter and with fresh ones developing in response to the needs of the tree.
4. **All parts of the root system, but especially the fine roots, are vulnerable to damage.** Once roots are damaged, water and nutrient uptake is restricted until new ones have grown. Depending on the time this may take, if at all, and the volume of roots able to grow back due to changed soil conditions, such damage may result in decline or ultimately the death of the tree. Mature and over-mature trees respond slowly, if at all, to damage to their woody roots.
5. Damage to the stem and branches of a tree is not usually sufficient to kill the tree directly but may make it unsafe by affecting the weight distribution of the crown or by facilitating decay in the long term. Such damage may also be disfiguring.

1 INTRODUCTION

1.1. **Brief:** I am instructed by RDA Architects to make an assessment regarding trees in conjunction with a planning application for alterations and extension to the property.

I am to provide an arboricultural assessment of any relevant trees along with any recommendations I consider relevant for the proposed development in accordance with the guidance in BS 5837:20012 *Trees in relation to design, demolition and construction Recommendations*.

1.2. **Purpose of this report:** The primary purpose of this report is for the architect and council to review the tree information pertaining to the site so as to inform and support both the design development and the planning application process. The report can be used as the basis for issuing a planning consent or engaging in further discussions towards that end. Within this planning process, it will be available for inspection by people other than tree experts so the information is presented in a way to be understood and helpful to those without a detailed knowledge of the subject.

1.3. **Qualifications and experience:** I have based this report on my site observations and the provided information, and I have come to conclusions in the light of my 40+ years arboricultural experience. I hold the Royal Forestry Society's certificate in Arboriculture and the LANTRA Professional Certificate for Tree Inspection.

1.4. **Documents and information provided:** I was provided with the information: Planning Brochure -Draft, which included the existing and proposed site plans. Current photographs of the of the property and the gardens. These were provided by RDA Architects

1.5. **Scope of this report:** This report is only concerned with the trees which may have an effect on or be affected by the proposed development. This will also include any trees in surrounding areas or properties which may be relevant to a proposed development.

1.6. **Ecological constraints:** The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000, provides statutory protection to birds, bats and other species that inhabit or nest in trees. Although the presence or relevance of such wildlife may be noted within this report these issues are beyond my area of expertise, so advice from an ecologist must be sought to check if any relevant constraints may apply to this site.

1.7. **Limitations of use and copyright:** All rights in this report are reserved. No part of it may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in any retrieval system of any nature without our written permission. Its contents and format are for the exclusive use of the addressee in dealing with this site. It may not be sold, lent, hired out or divulged to any third party not directly involved in this site without the written consent of M. Jones Arborist Consultancy Ltd.

2 SITE VISIT and OBSERVATIONS

2.1. **Site visit:** No site visit was carried out as it was deemed that the information given, the photographs and further street views from Google Earth were sufficient to make a desktop assessment of the trees in conjunction with the development.

2.2. **Identification and location of the trees:** One tree within the rear garden of 42 Stradella Road and one shrub within the neighboring property of 40 Stradella Road was considered as relevant to the proposed works and are plotted on the site plans, an edited section of which is included within this report.

Dead trees, trees of below 75mm trunk diameter at 1.5m height or trees and large shrubs that have little or no landscape or amenity value either now or in the future have not been included within this survey.

2.3. **Restrictions:** A search of the Southwark Council Mapping web site in November 2023 showed that a Birch tree to the front of the property is subject to any Tree Preservation Order. TPO number: 641, made on 330/11/2021.

Explanatory Notes

- **Species:** I base the species identification on visual observations and list the common English name of what the tree appeared to be first, with the botanical name after in italics. In some instances, it may be difficult to quickly and accurately identify a particular tree without further detailed investigations. If I am unsure of the precise species of tree, I indicate the botanical name followed by the abbreviation sp indicating only the genus is known, in order to avoid delay in the production of the report. The species listed for groups and hedges represent the main component and there may be other minor species not listed.
- **Measurements/estimates:** All height and branch spread measurements are estimates unless otherwise indicated. A diameter tape is used to calculate the stem diameter. In cases where the tree is inaccessible when the diameter is estimated. This will be indicated by a * before the measurement. Any other measurements specific to a site or a particular tree will be indicated by ** and referred to as *additional observations*.
- **Height:** I estimate height to the nearest meter.
- **Stem diameter:** These figures relate to 1.5m above ground level and I record them in millimeters rounded up to the nearest five millimeters. Where a tree branches into two or more stems below 1.5m the measurement is taken immediately above the root flare. 'M' indicates trees or shrubs with multiple stems.
- **Branch spread:** I pace out to the measurement from the centre of the trunk to the tips of the live lateral branches to the four compass points.
- **Crown height:** This is the height of crown clearance from ground level to the lowest branches.
- **Age Class:** I estimate age from visual indicators and I assess the grades of maturity as follows. Young = less than one third life expectancy. Middle aged = one third to two thirds life expectancy. Mature = trees within their last third of normal life expectancy. Overmature = trees towards the end of their last third of normal life expectancy that are in an obvious state of decline. Veteran = notably old or ancient tree of a particular species that, by recognized criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving the typical age range for the species concerned.
- **Health:** This refers to the physiological condition of the tree and is categorized as follows. Poor = obviously in poor health. Fair = some visible evidence of decline or lack of vigor. Good = Appears to be healthy and vigorous.
- **Structural condition:** Poor = obviously in a dangerous, or potentially dangerous condition. Fair = some visible defects, but no significant hazards. Good = sound, healthy condition.
- **Remaining contribution:** Estimated remaining contribution in years (e.g. less than 10, 10-20, 20-40, more than 40).
- **Grading:** Category U = trees of very limited arboricultural value due to condition. Category A = trees of high quality and value. Category B = Trees of moderate quality and value. Category C = trees of low quality and value. *Trees are further graded into subcategories 1-3 in compliance with the cascade chart for quality assessment in BS 5837:2012.*

3 TREE SCHEDULE.

Tree Survey: The results of the survey are recorded in the table below.
 N.B. *This table should be read in conjunction with the explanatory notes*

Tree No.	Species	Height	Stem Dia.	Branch Spread	Crown Height	Age Class	Health	Structural Condition	Preliminary Recommendations	Remaining Contribution	Grade
T1	Ornamental tree unidentified from the given photo's. Presumed to be a Crab Apple <i>Malus spp:</i>	* 15M	* 200mm	* 2.5m -3m radius	* 3m average	Middle / Mature	Good	Good	Requires an estimated Root Protection Area (RPA) radius from the tree centre of 2.4 m However as this tree is growing within a raised bed it is likely that the roots of this tree are contained within the retaining walls and at a greater depth than the existing landscaping.	>10yrs	C2
S1 Shrub	Firethorn <i>Pyracantha Var:</i>	* 3.5M+	N/A	As shown on the site plan	1.8m Fence height	Mature	Good	Fair	A large overgrown and vigorous shrub encroaching over and onto the existing and proposed property. Will benefit the owners of the property to prune this back to the boundary line and maintain as a more formal hedge.	>10yrs	U
TA	Birch <i>Betula pendula</i>	N/A	N/A	N/A	N/A	N/A	Good	Good	Outside of the property development area, but subject to a Tree Preservation Order and will require protection during the development works.	N/A	N/A

4. ARBORICULTURAL IMPLICATIONS ASSESSMENT (AIA)

A study was carried out to consider, identify, evaluate and possibly mitigate the extent of direct and indirect impact on or from the trees that may occur as a result of any proposed new development being constructed on the site.

4.1 Tree Constraints.

- **Tree Categorizing:** The trees have been categorized using the BS 5837:2012 Cascade Chart for tree quality and assessment and these have been given in the Tree Schedule and are shown on the plans included in the *appendix* and represented as a shape and a color.
 - Light Green = Category A trees: trees of high quality and value.
 - ◆ Mid Blue = Category B trees: trees of moderate quality and value.
 - Grey = Category C trees: trees of low quality and value.
 - U Red = Category U trees: trees that do not merit a grade.
- Subcategory Criteria:
1. Mainly arboricultural values.
 2. Mainly landscape values.
 3. Mainly cultural values including conservation.
- **Root protection areas:** The root protection areas (RPA) for all the significant trees in the vicinity of the development have been plotted in accordance with the formula given in BS 5837:2012 and are shown along with the circle radius for the area on the plan included in the *appendix*. The BS 5837 recognizes that an RPA is influenced by other on site factors and states in **5.2.4** that it *'may change shape but not reduce its area whilst still providing adequate protection for the root system'*. This can be due to, *'b) The morphology and disposition of the roots, when known to be influenced by past or existing site conditions (e.g. the presence of roads, structures and underground services)*.
 - **Tree shadow/ shade:** Shade and shadow is not a relevant constraint towards this development and has not been represented further within this report.
 - **Crown Spreads:** The indicative crown spreads of the trees surveyed are shown on the *Tree Constraints Plans* included in the *appendix*. Any proposed development design must consider the proximity and possible nuisance or damage to the fabric of the building from the crowns and branching system. The future crown spreads of younger retained trees must also be taken into consideration but have not been represented graphically within the scope of this survey report.

4.2. Tree Considerations: *Items*;

1. The birch tree indicated as TA to the front of the house is outside of the proposed development area but shall be protected from damage during the construction phase of the development.
2. The pyracantha shrub indicated as S1 is overgrown and touching the property.
3. This shrub will be cut back to the boundary line between 40 & 42 Strandella Road where it can then be maintained as this position in the future for a screening hedge. This is something that is recommended to do regardless of the proposed development and is a common law right for the owner of number 42.
4. It is reasonable to presume that the foundations of the new boundary wall that is proposed may sever some roots from this shrub that have started to encroach under the side passage path, however as a species pyracantha are very hardy and can tolerate pruning both above and below ground and as there appears to be suitable space still available to the shrub to feed and grow, this pruning will not be detrimental towards the shrub and shall not be considered as a constraint towards this development.
5. The ornamental tree within the raised bed planting area is likely to have the majority of it's rooting area contained within this bed area with deeper roots extending out under the existing patio area.
6. As the proposed landscape works are just to raise up the height of the patio and the wall surrounding the tree, there will be no change towards the living environment of this tree.
7. The height of soil /cobbles surrounding the tree within the planter will be retained as it currently exists, with no increase of soil / cobble depth after the surrounding wall height is increased. That is, no burying of the base of the tree.

5. CONCLUSIONS:

1. After considering the constraints of these trees and the area available for the development design, I consider it is feasible to construct the development within this area whilst adequately providing for the wellbeing of the trees
2. If adequate precautions to protect and manage the tree are further detailed and specified within an Arboricultural Method Statement and implemented in conjunction with the construction of the development, the development will have no adverse impact to the adjacent trees or the local landscape amenity in the future.

A handwritten signature in black ink, appearing to read 'Mick Jones', with a large, stylized flourish extending to the left.

Mick Jones. Cert Arb. RFS.

Appendices

PHOTOGRAPH

PROPOSED SITE PLAN (EDITED FOR TREE CONSTRAINTS AND TREE PROTECTION)

ARBORICULTURAL METHOD STATEMENT.



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Arboricultural method statement (AMS): a method for any aspect of the development that has the potential to result in loss or damage to a retained tree. This will include the details of on site protection and the style and installation of tree protection barrier fencing.

A.1. Awareness:

- All personnel engaged on site with the development and its construction works shall be briefed at the outset of any works, so that they are clear as to the nature and extent of the tree protection measures required on the site.
- Personnel are to be made aware that the protection measures are required as a condition of a planning approval, assuming that such conditions have been made, and that the failure to comply with the approved Arboricultural Method Statement and stated protection could lead to the issuing of a site stop notice and possibly the revoking of a planning permission.
- Personnel are to be made aware with which the ease a tree can be damaged during a development, even if this damage or the effects from it are not apparent at the time of the development works.

A.2. General:

- Care must be taken not to damage retained trees with wide or tall loads, construction machinery and plant.
- Vehicles and plant shall not run on or park on a retained trees un-protected Root Protection Area (RPA) or Construction Exclusion Zone.
- Construction materials will not be stored within the RPA or Construction Exclusion Zones.
- Waste and demolition material will not be stored within or anywhere where contaminants from this can be spread or washed into a RPA or Construction Exclusion Zone.
- Soil contaminants e.g. concrete mixings, cements, fuels, and any washing's will not be emptied within 10meters of a tree stem (or outside a tree RPA if that is shown to be greater) or outside that distance where contaminants from this can be spread or washed into a RPA or Construction Exclusion Zone.
- The positioning of site toilets and wash facilities shall be outside the trees RPA and any waste or run off from these shall not be allowed to flow into a RPA or Construction Exclusion Zone.
- Fencing, signs, site level pegs or overhead services shall not be attached to the trees.
- Fires shall not be lit where they can damage any parts of the tree or spread within the ground to the RPA.
- Ground levels shall be maintained within an RPA.

A.3. Recommended tools & protection for excavations by roots:

- Pruning secateurs, loppers, pruning saw.
- Roll of hessian cloth (for wrapping exposed roots or covering root filled soils).
- Clean sharp sand (covering and protecting roots and in-filling around roots).
- Water spray / hose, to keep roots / soils damp in dry weather.
- Small (garden) hand spade, forks & trowel for careful excavations around and under roots.

Tree Works.

Prior to any development works tree surgery works will be required to allow access to the site and for the installation of tree protection fencing barriers. These works will be carried out to BS 3998:2010. *Recommendations for tree work.*

B.1. Tree Schedule:

1. Prune back to the boundary line the crown of S1.
2. All timber and arisings will be removed from site.

B2. Post- tree Works:

After construction completion the retained trees shall be inspected by a competent arborist. Any accidental damage found from the works will be noted and a schedule of remedial works drawn for the approval by the Local Authority and undertaken before the site is `signed ` off as finished.

Tree Protection.

Prior to any construction works tree protection barriers are to be installed around retained trees or to exclude access to areas which may require protection from compaction or contamination from construction works, (construction exclusion zones, C.E.Z.). These barriers are to be maintained in good order during the construction stages. The recommendations within *BS 5837 2012* are for the fencing to consist of:

1. A framework of 1.8m high `heras` style weld mesh fencing, braced where necessary. *see figure 3.*
2. For this site will be suitable to use 1 meter high chapter 8 road work barriers, *see figure 4.* This will provide a more practical barrier in this situation to protect both the front and rear trees, TA & T1.
3. The positioning of the fencing is indicated in the Tree Protection Plan (TPP) included in the *appendix.*
4. If a separate cement mixing area is set up or an area for the treatment of timbers with a preservative, within the working site/ storage area, then this will have a non porous membrane base and will be bunded to prevent run off.
5. Any protection removed or damaged during works will be replaced in good order on completion of the particular works or immediately after damage is noted.
6. Any Protection Barriers will remain in place until the construction works are complete and all construction equipment, materials, waste and spoil have been removed from site.

Figure 3 Examples of above-ground stabilizing systems

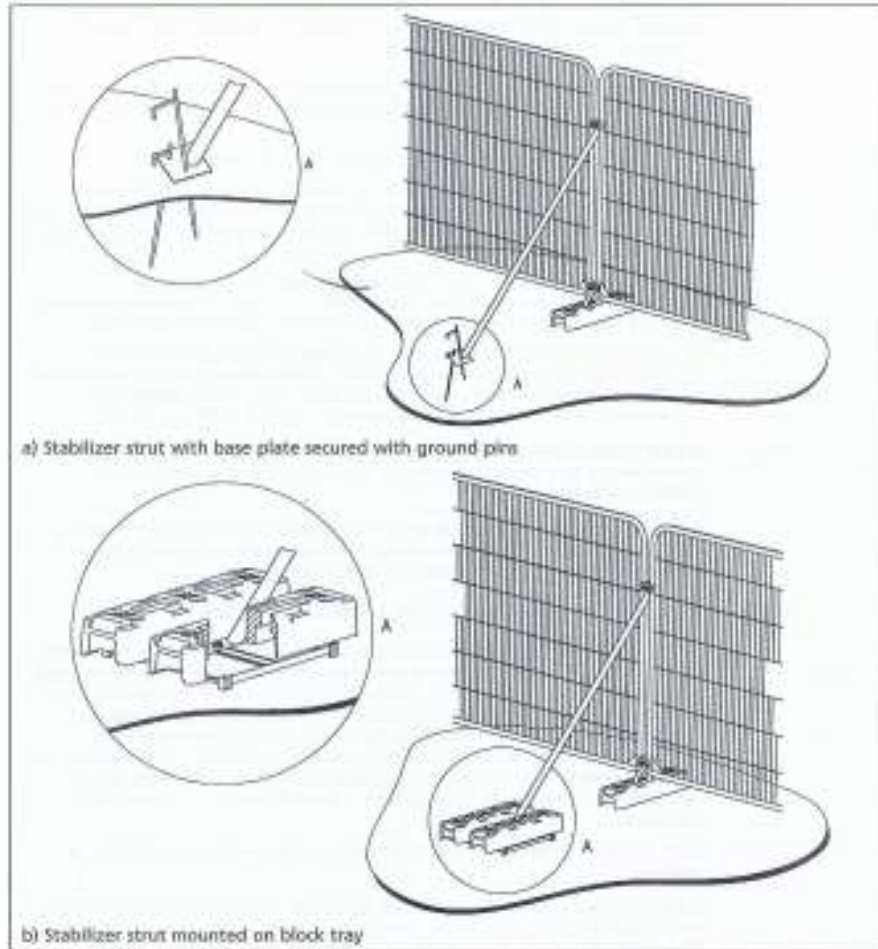


Figure 4.

Underground Services / Foundations:

1. If additional underground services are required these shall be positioned away from the trees RPA or in a position which will cause the minimum impact towards the rooting system of adjacent trees.
2. If it is considered that trenching is necessary for the new services to run through a RPA, then they shall be hand dug and kept as narrow as possible and installed under National Joint Utilities Group (NJUG). *Guidelines for the planning, installation and maintenance of utility services in proximity to trees.*
3. Any roots exposed by foundation excavations will be protected from drying out with clean sharp sand and hessian and pinned in place, with any damaged roots pruned back to a suitable position within the retained soil level.
4. Roots smaller than 25mm diameter may be pruned back, preferably to a side branch using sharp tools such as bypass loppers or hand saws.
5. If significant larger roots (above 25mm diameter) or large amount of smaller roots are found then a best practice of root retention and protection will be adopted at the recommendations of the site arborist.
6. Where possible, roots to the edge of excavations will be left in place and carefully re-directed back into the surrounding soil.
7. Roots larger than 25mm shall only be cut following consultation with the site arborist as these may be essential to the trees health or stability, otherwise they are to be retained.